APPENDIX A

Maps

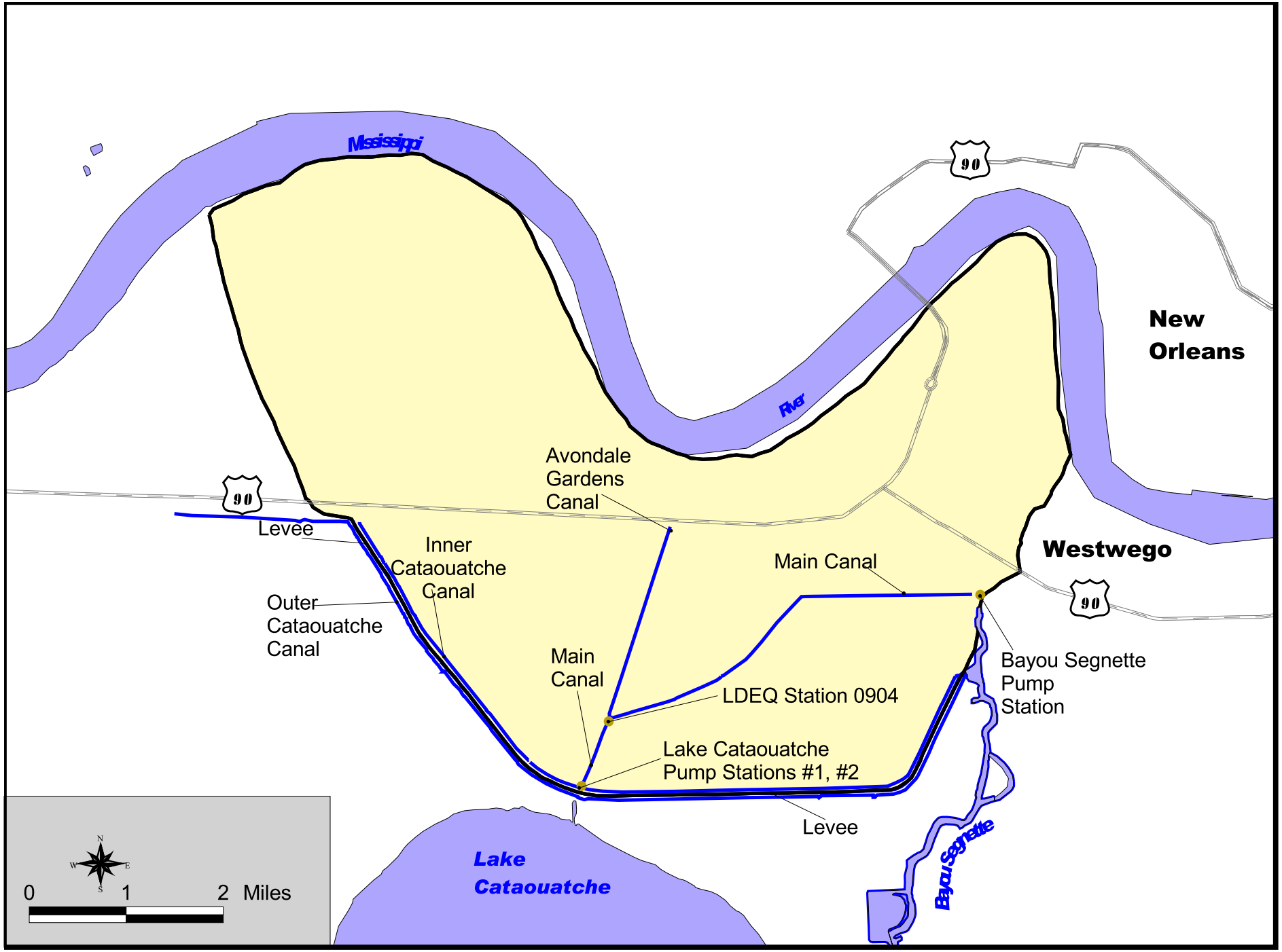


Figure A.1. Map of subsegment 020501 and vicinity.

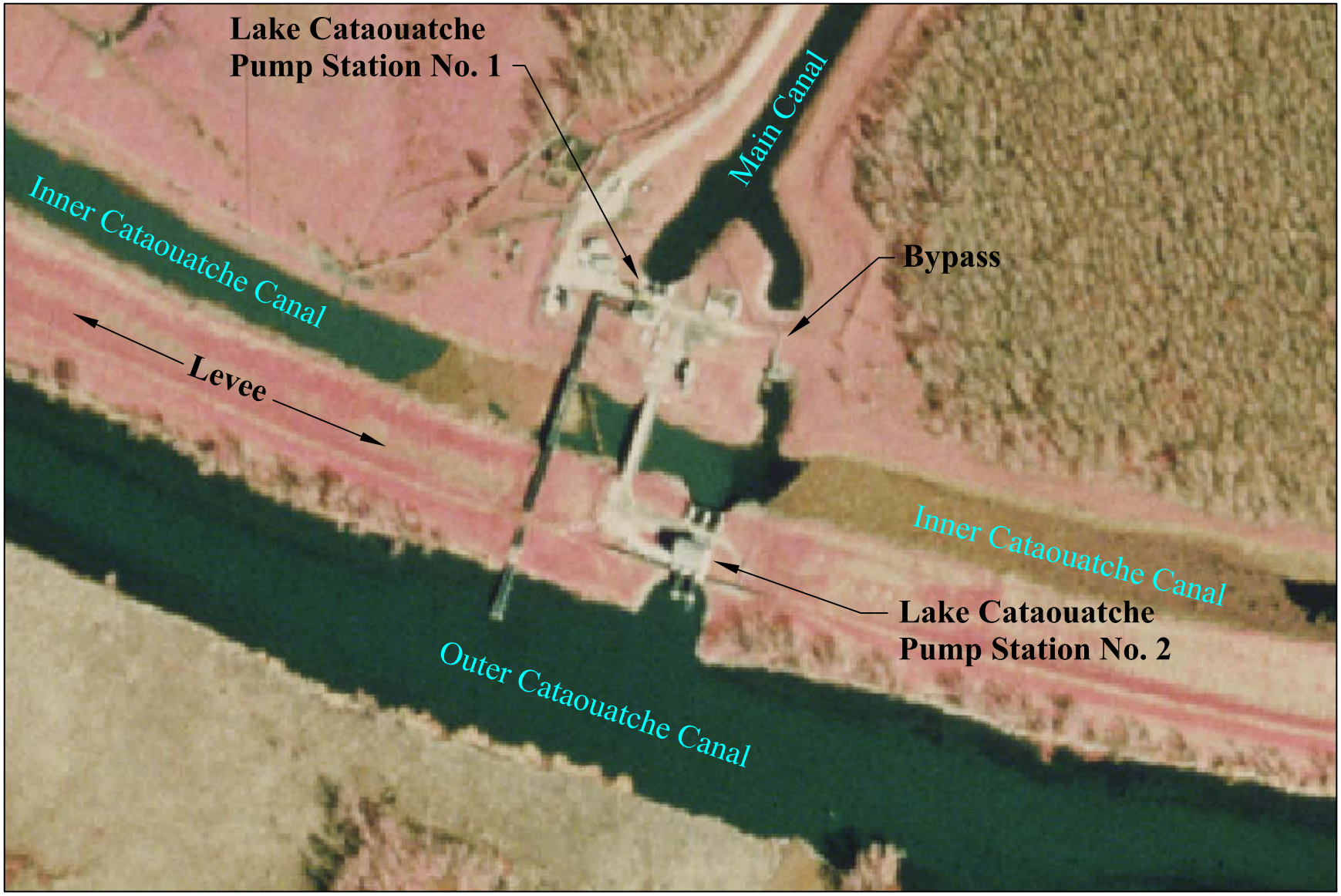


Figure A.2. Aerial view of Lake Cataouatche pump stations.

LDEQ BASIN SUBSEGMENT 020501

USGS Louisisna GAP Land Cover

St.Charles Parish Canals and Bayous

Map Date: 12/11/03
Map number: 200301136
Map sources: LDEQ basin-subsegment data.
USGS Louisiana GAP Data
Map projection: UTM Zone 15; NAD83

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

0 0.5 1 2 3 Miles

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.

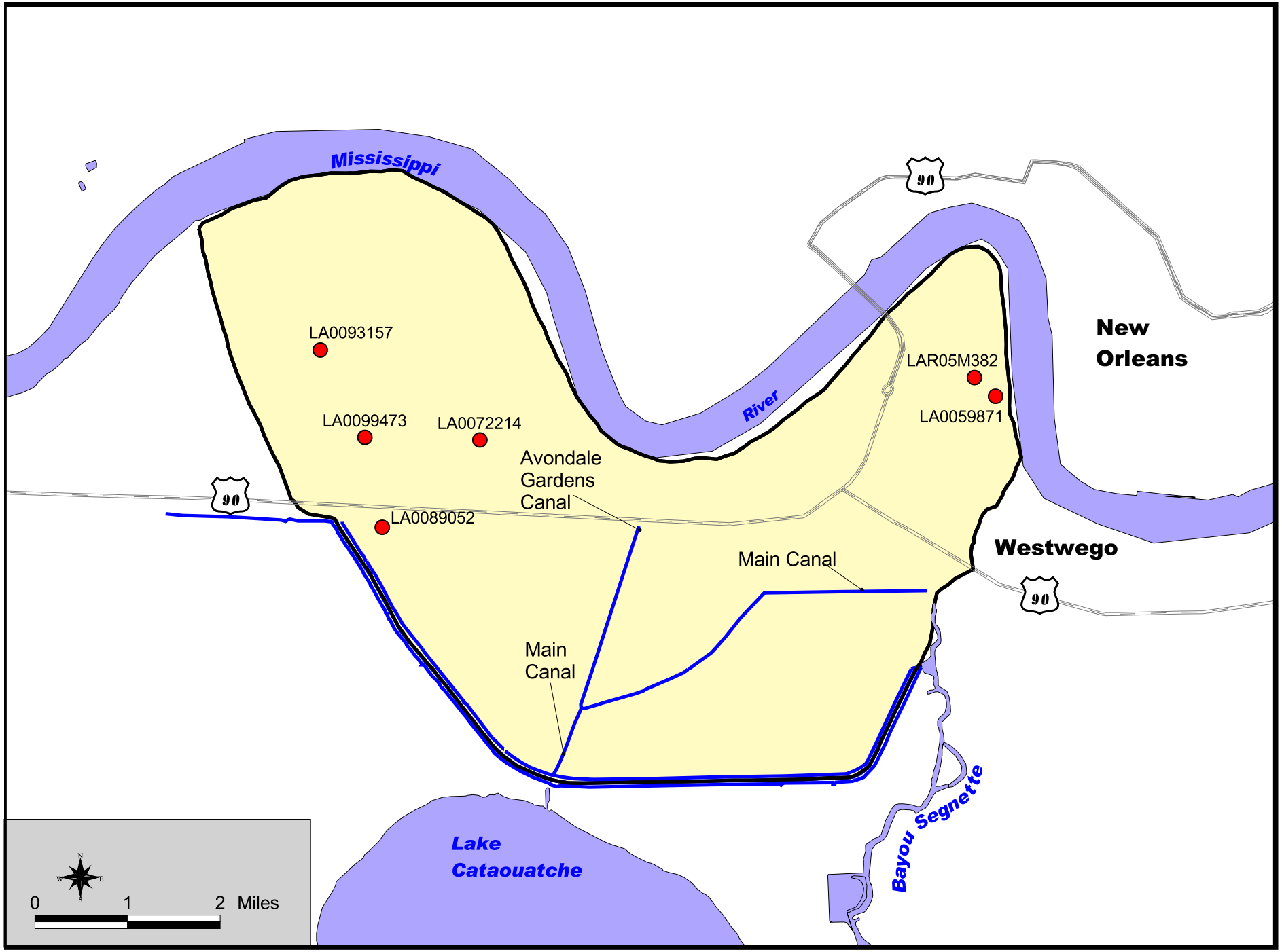


Figure A.4. Locations of point source discharges in subsegment 020501.

APPENDIX B1

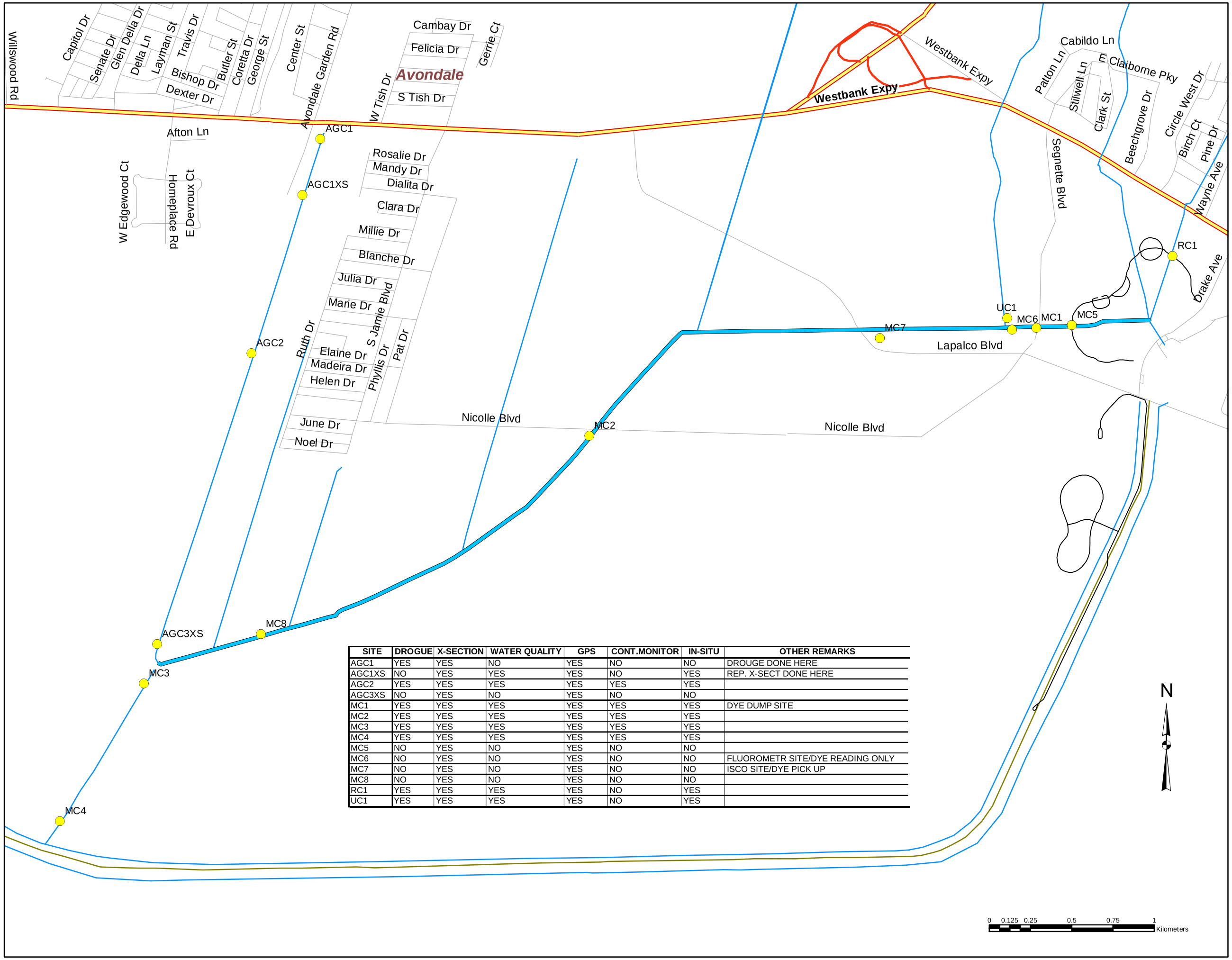
Field Data Collection Sites

St. Charles Parish Canals and Bayous in Segment 0205

Legend

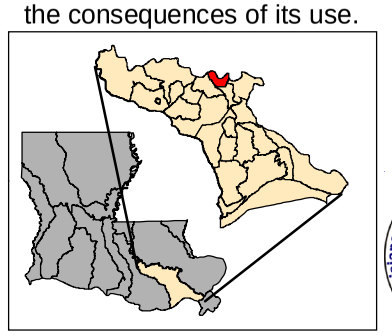
- State Park Roads
- Levee
- Significant Tributaries
- Main Canal
- 24_oct_02_survey_gps

Map Date: 8 January 2003
Map Number: 200303001
Map Sources: StreetMap USA
Watershed Survey Group GPS Data
Digitized State Park Streets and Canal routes from USGS DOQQ



SITE	DROGUE	X-SECTION	WATER QUALITY	GPS	CONT.MONITOR	IN-SITU	OTHER REMARKS
AGC1	YES	YES	NO	YES	NO	NO	DROUGE DONE HERE
AGC1XS	NO	YES	YES	YES	NO	YES	REP. X-SECT DONE HERE
AGC2	YES	YES	YES	YES	YES	YES	
AGC3XS	NO	YES	NO	YES	NO	NO	
MC1	YES	YES	YES	YES	YES	YES	DYE DUMP SITE
MC2	YES	YES	YES	YES	YES	YES	
MC3	YES	YES	YES	YES	YES	YES	
MC4	YES	YES	YES	YES	YES	YES	
MC5	NO	YES	NO	YES	NO	NO	
MC6	NO	YES	NO	YES	NO	NO	FLUOROMETR SITE/DYE READING ONLY
MC7	NO	YES	NO	YES	NO	NO	ISCO SITE/DYE PICK UP
MC8	NO	YES	NO	YES	NO	NO	
RC1	YES	YES	YES	YES	NO	YES	
UC1	YES	YES	YES	YES	NO	YES	

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 map or data set, and does not accept any responsibility for the consequences of its use.



DESCRIPTIONS OF MAIN CANAL FIELD DATA COLLECTION SITES (Subsegment 020501)

Station Name	Station Location	Purpose for Modeling	Data that were collected:				
			In Situ	Lab	Velocity	Contin. Monitor	Cross section
MC-1	Main Canal at Segnette Blvd.	Calibration target	X	X	X	X	X
MC-2	Main Canal at Nicolle Blvd.	Calibration target	X	X	X	X	X
MC-3	Main Canal immediately downstream of confluence with Avondale Gardens Canal	Calibration target	X	X	X	X	X
MC-4	Main Canal at Lake Cataouatche Pumping Station No. 1	Calibration target (outflow at downstream end)	X	X	X	X	X
AGC-1	Avondale Gardens Canal at Hwy 90	Inflow (headwater)	X	X	X		X
AGC-2	Avondale Gardens Canal halfway between Hwy 90 and confluence with Main Canal	Calibration target	X	X	X	X	X
RC-1	Railroad Canal in state park	Inflow (headwater)	X	X	X		
WB-1	Whiskey Bayou in state park	Inflow (tributary)	X*	X*	X		
UC-1	Unnamed Canal just upstream of confluence with Main Canal (approx. 200 yds W of Segnette Blvd. bridge)	Inflow (tributary)	X	X	X		
LC-1	Labranche Canal at Lapalco Blvd.	Inflow (tributary)	X*	X*	X		
AC-1	Avondale Canal at Nicolle Blvd.	Inflow (tributary)	X*	X*	X		
KC-1	Kelly Canal at south end of subdivision	Inflow (tributary)	X*	X*	X		
MC-5		Depth and width					X
MC-6		Depth and width					X
MC-7		Depth and width					X
MC-8		Depth and width					X
AGC-3		Depth and width					X

* For these tributary stations, in situ and laboratory data were not collected because there was no flow at these stations during the intensive survey.

APPENDIX B2

Water Quality Sampling Data

Table B2.1. Summary of Sampling and In Situ Data for Main Canal (Subsegment 020501).

Site	Lab ID	Date	Time	Sampling Depth (m)	Temp. (ºC)	DO (mg/L)	DO (% sat)	Conduc. (umhos /cm)	Salinity (ppt)	pH (su)	Secchi Depth (ft)	TDS (ppm)	Chloride (ppm)	Chloro-phyll a, calc. (ug/L)	Total Phos. (ppm)	Ammonia Nitrogen (ppm)	TKN (ppm)	NO2 + NO3 (ppm)	TOC (ppm)
MC1	TRG	08/20/02	11:45	1.0	28.7	0.6	8	763	0.40	7.1	2.5	462	61.2	45.3	0.54	0.53	1.40	0.23	13.0
MC2	TRG	08/20/02	09:40	1.0	28.7	3.0	38	810	0.42	7.3	2.0	496	101	36.8	0.52	0.31	1.01	0.23	11.8
MC2 duplic.	FD	08/20/02	09:40	1.0								512	101	46.7	0.53	0.31	1.23	0.23	12.0
MC2 blank	FB	08/20/02	09:40	1.0								ND	ND	ND	0.07	ND	0.24	ND	ND
MC3	TRG	08/20/02	12:30	1.0	29.1	1.2	17	972	0.51	8.8	2.5	564	133	33.3	0.43	0.25	1.12	0.21	11.7
MC4	TRG	08/20/02	14:30	0.8	32.5	7.5	104	914	0.48	8.4	3.0	522	125	27.4	0.34	0.11	1.18	0.18	12.3
AGC1	TRG	08/20/02	08:30	0.5	26.4	1.7	21	760	0.39	6.0		418	88.9		0.33	0.47	0.68	0.06	24.5
AGC2	TRG	08/20/02	10:20	1.5	28.7	6.8	88	499	0.25	8.5		276	61.5	22.3	0.24	ND	0.66	ND	9.3
RC1	TRG	08/20/02	13:47	1.0	27.5	3.0	37	974	0.51	7.1		694	88.7	4.1	0.29	0.21	0.66	0.24	9.1
UC1	TRG	08/20/02	15:37	1.0	29.8	5.4	74	1298	0.68	7.4		816	139	83.2	0.29	0.85	2.65	1.71	8.9

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\WQ_SUMMARY_020501.XLS

Table B2.2. Comparison of survey data and historical data.

Parameter	LDEQ Station 0904 July - Sep. 2000			MC-3 08/20/02
Temperature (C)	25.5	-	30.2	29.1
DO (mg/L)	0.23	-	1.49	1.21
Conductivity (uhmos)	976	-	1381	972
NO2+NO3 (mg/L of N)	0.04	-	0.11	0.21
TKN (mg/L of N)	1.42	-	2.03	1.12
Total phos. (mg/L)	0.30	-	0.83	0.43
TOC (mg/L)	14.7	-	31.8	11.7

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\HIST COMP-MAIN.XLS

APPENDIX B3

Plots of Continuous In Situ Data

Figure B3.1. Continuous Temperature for Main Canal at MC1

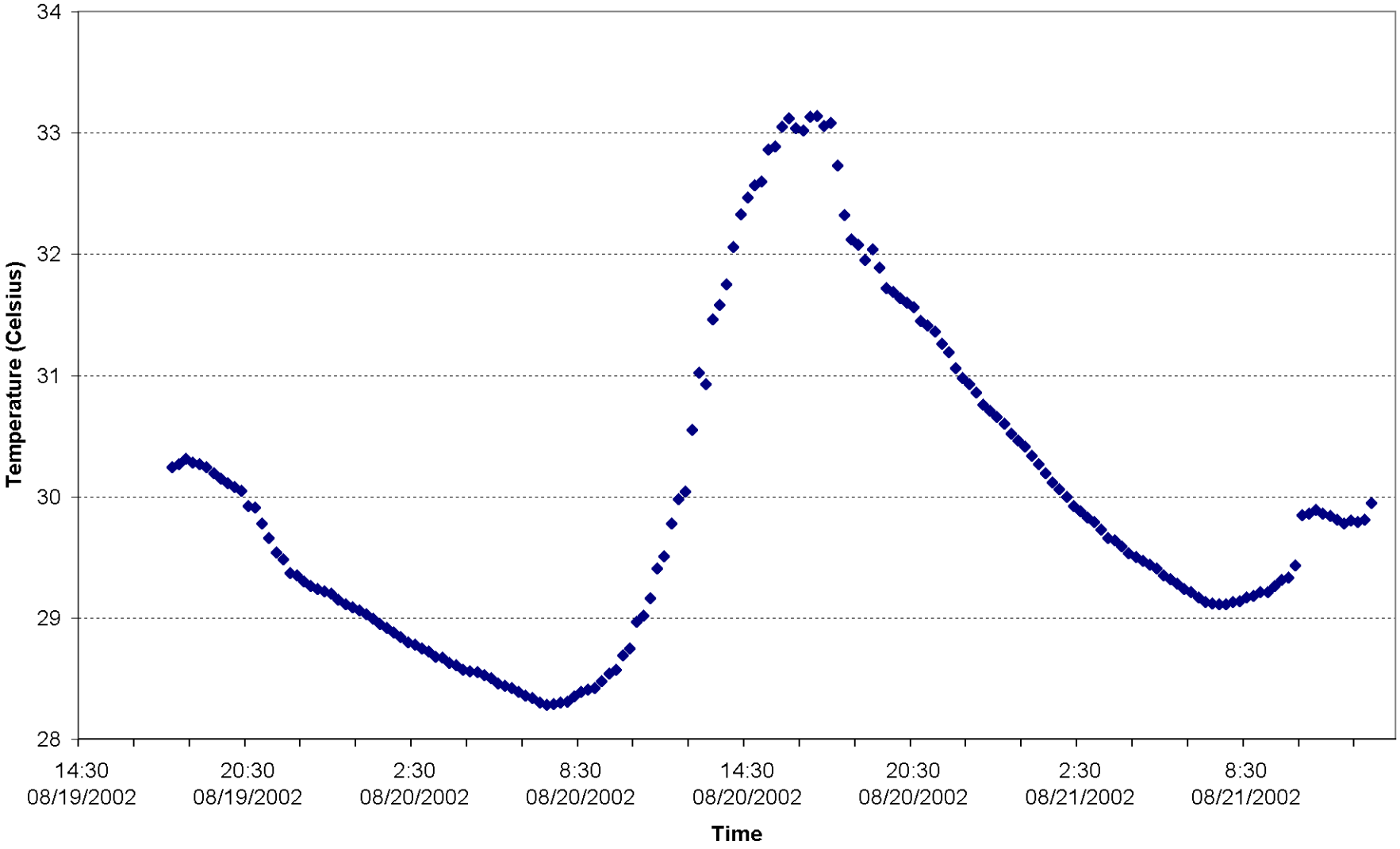


Figure B3.2. Continuous DO for Main Canal at MC1

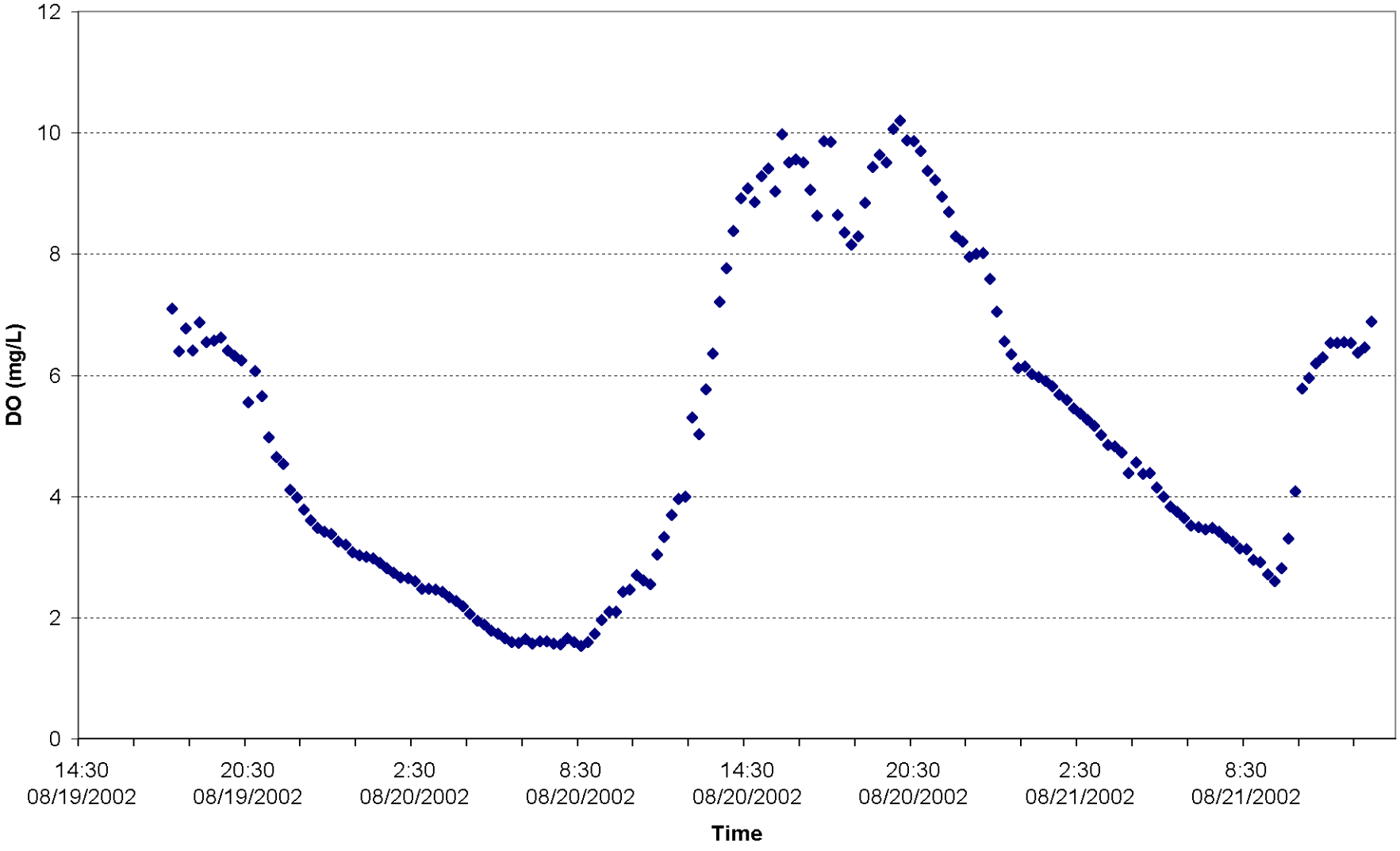


Figure B3.3. Continuous DO Percent Saturation for Main Canal at MC1

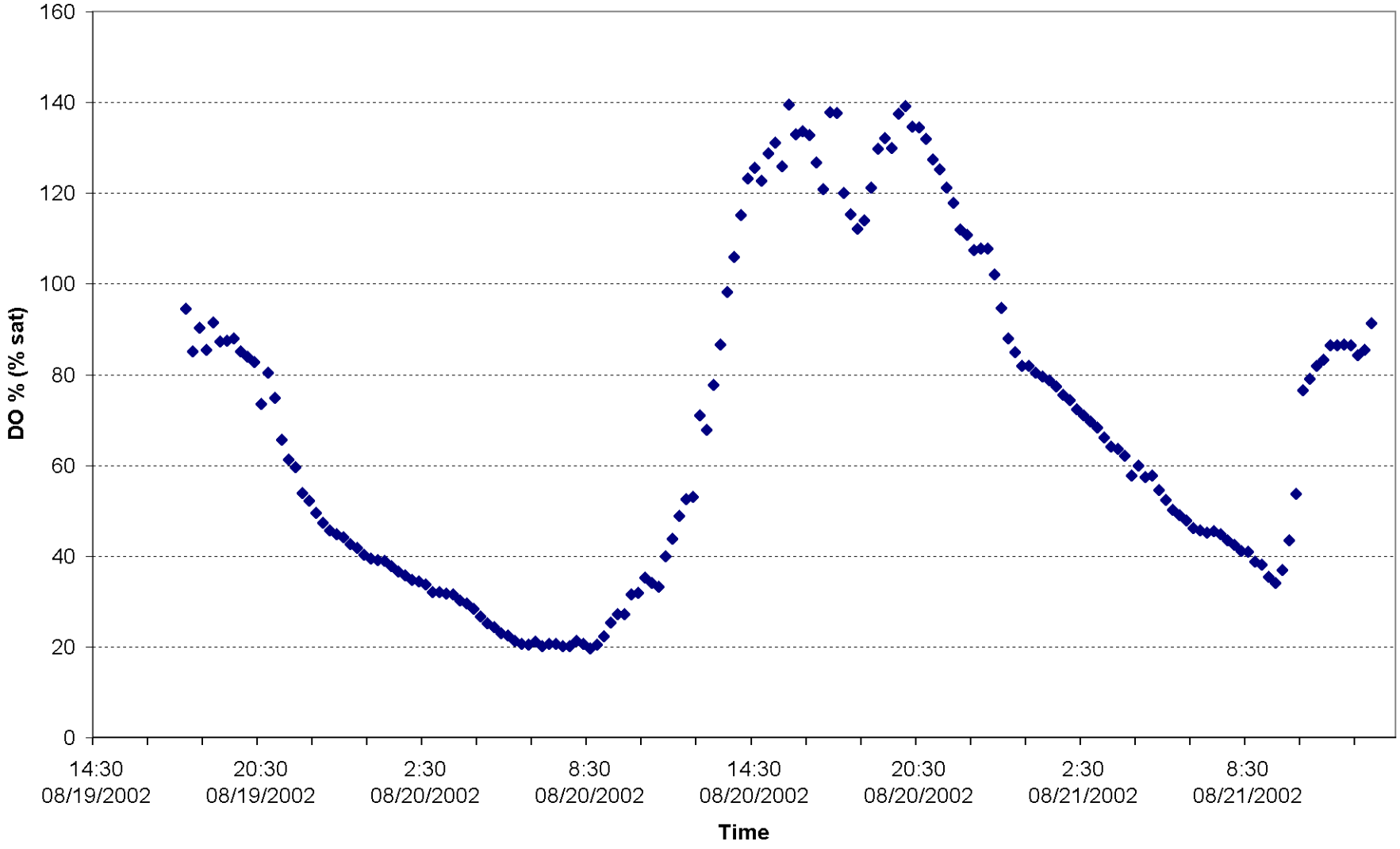


Figure B3.4. Continuous pH for Main Canal at MC1

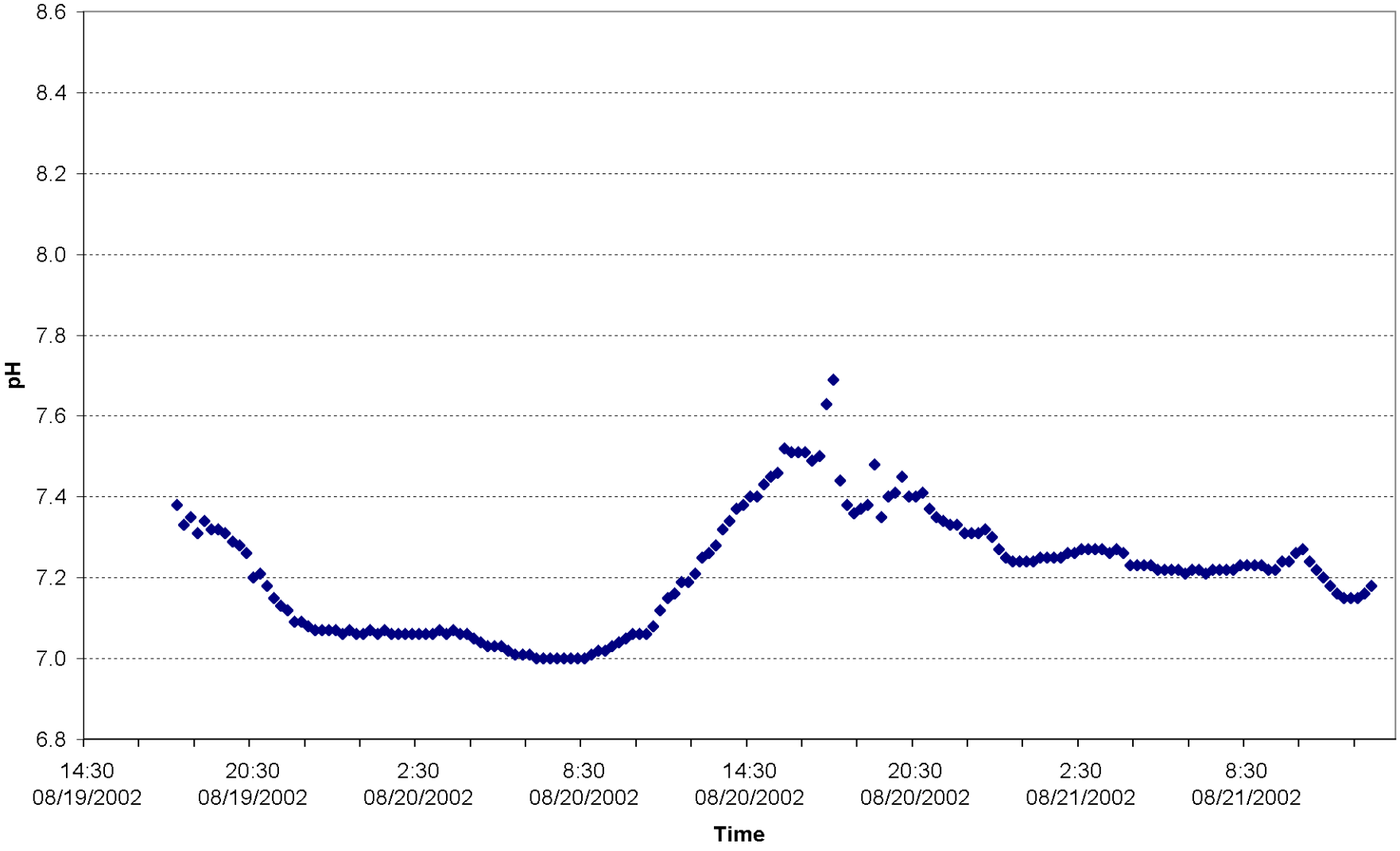


Figure B3.5. Continuous Specific Conductivity for Main Canal at MC1

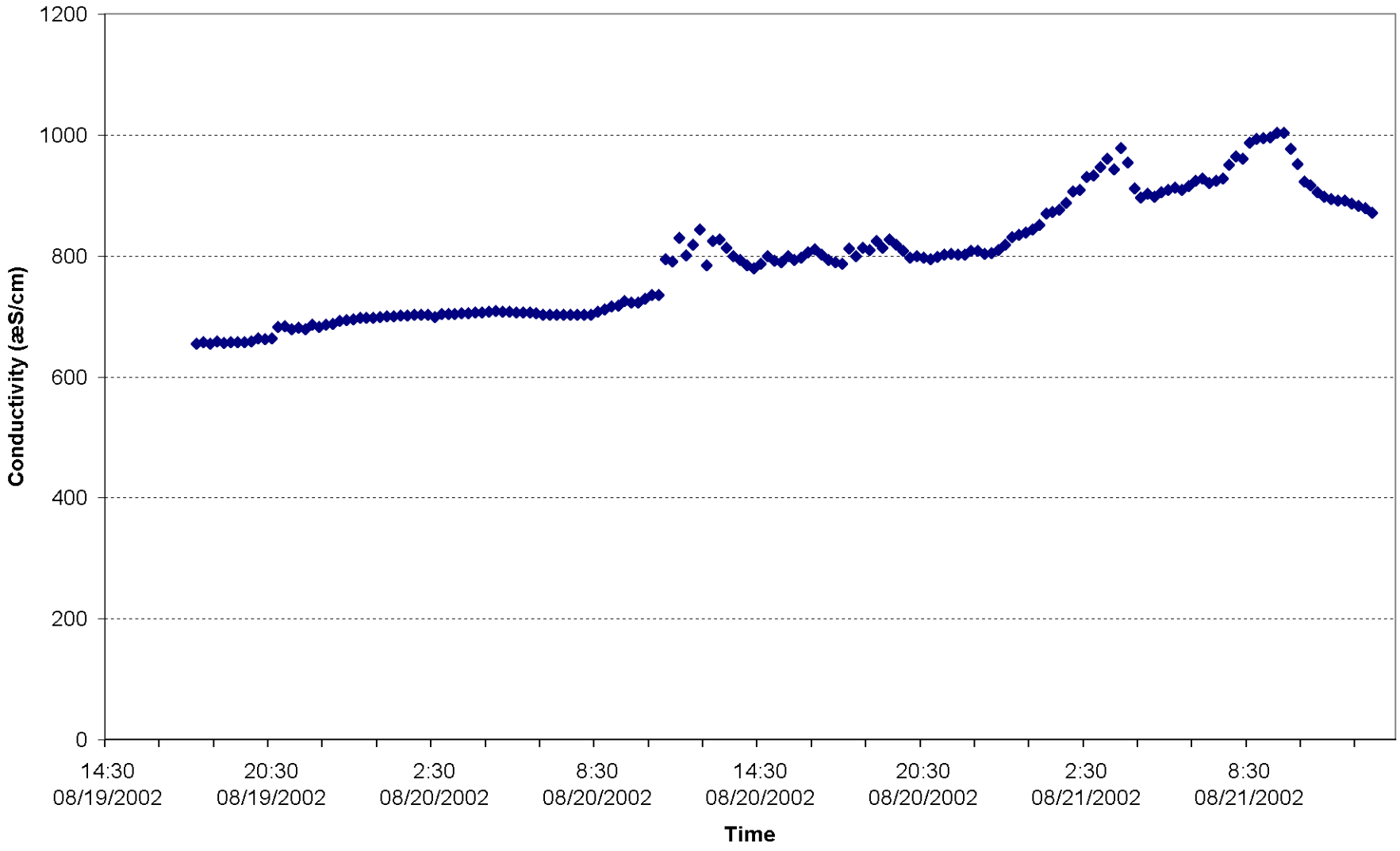


Figure B3.6. Continuous Water Level for Main Canal at MC1

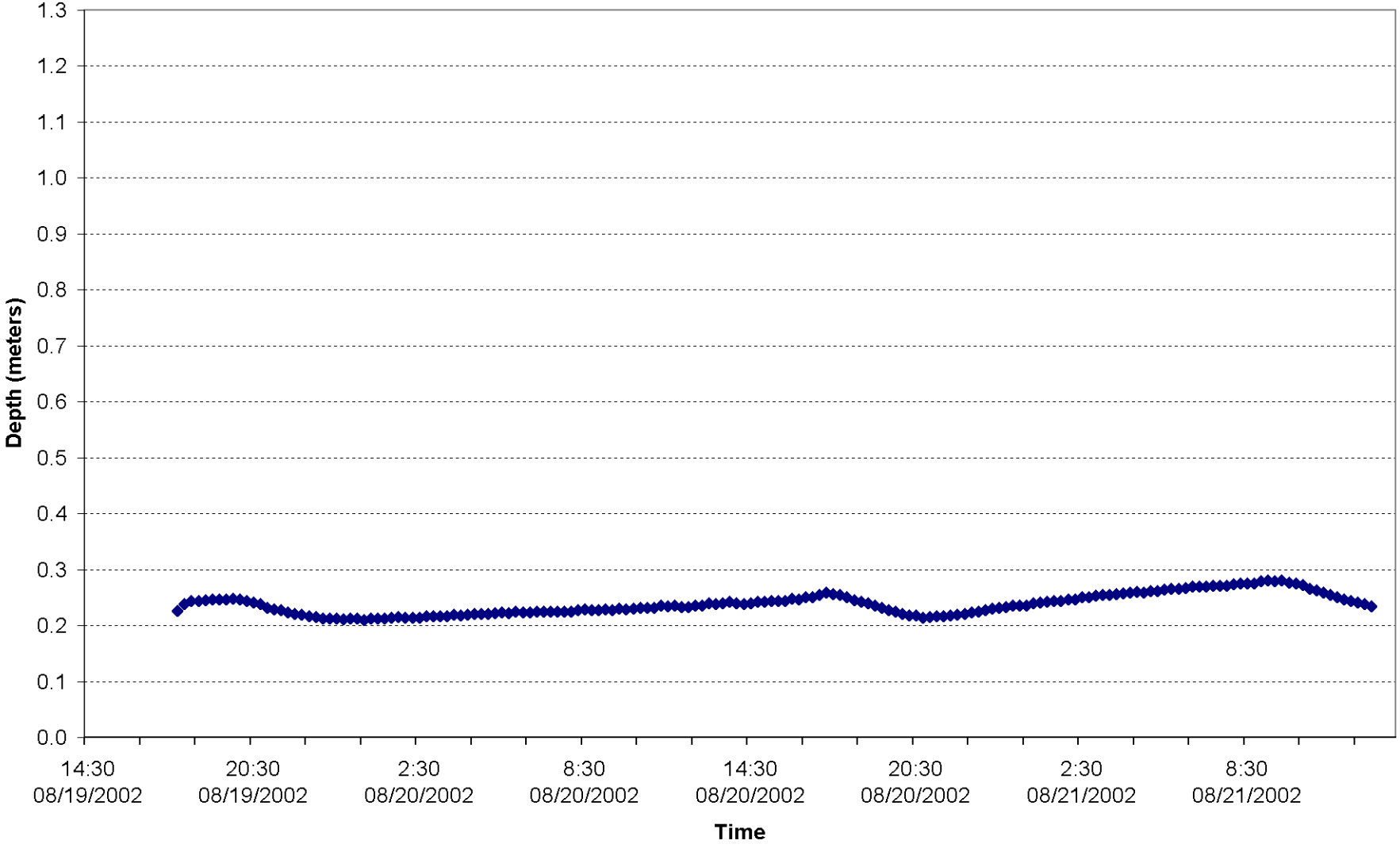


Figure B3.7. Continuous Temperature for Main Canal at MC2

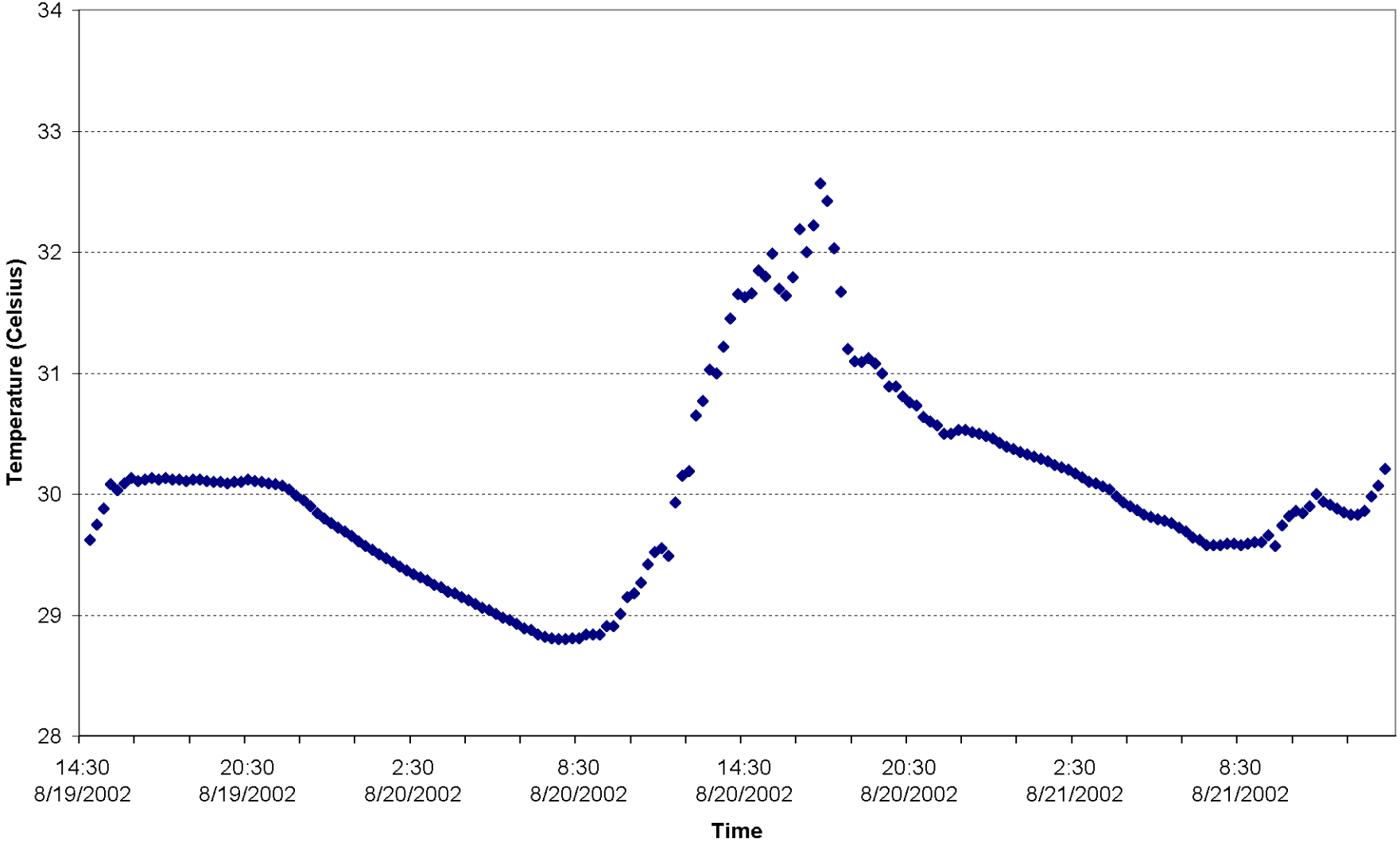


Figure B3.8. Continuous DO for Main Canal at MC2

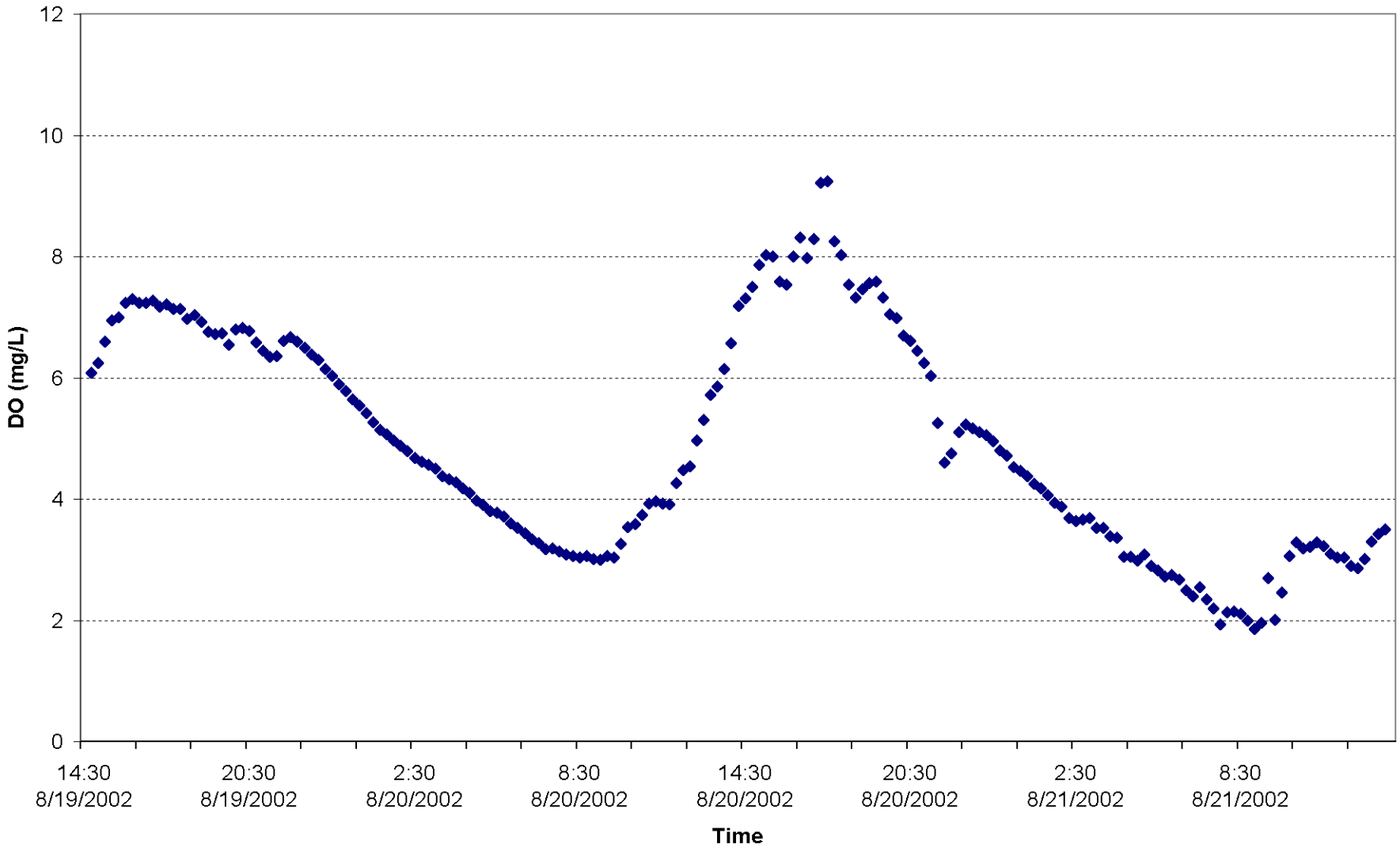


Figure B3.9. Continuous DO Percent Saturation for Main Canal at MC2

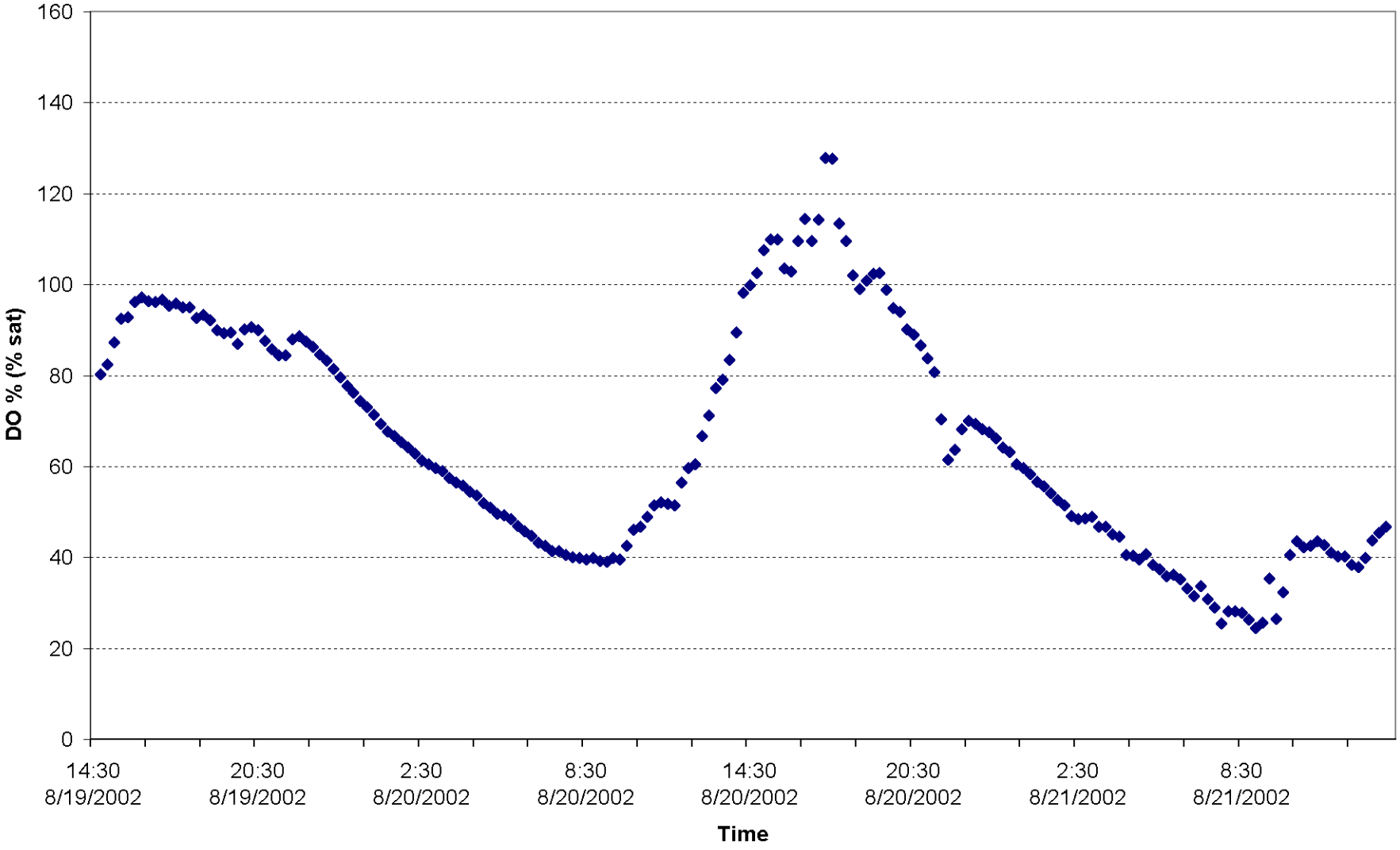


Figure B3.10. Continuous pH for Main Canal at MC2

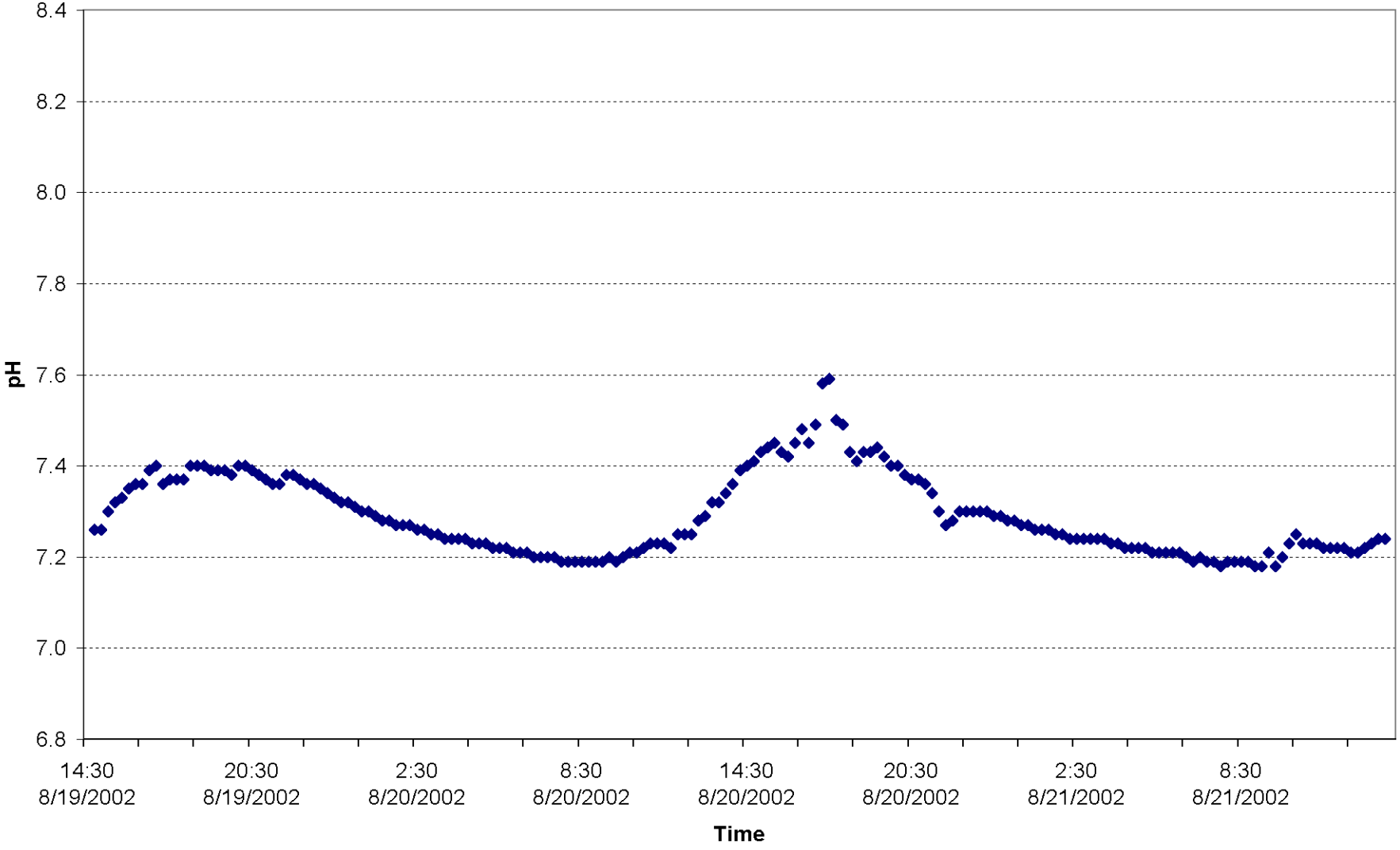


Figure B3.11. Continuous Specific Conductivity for Main Canal at MC2

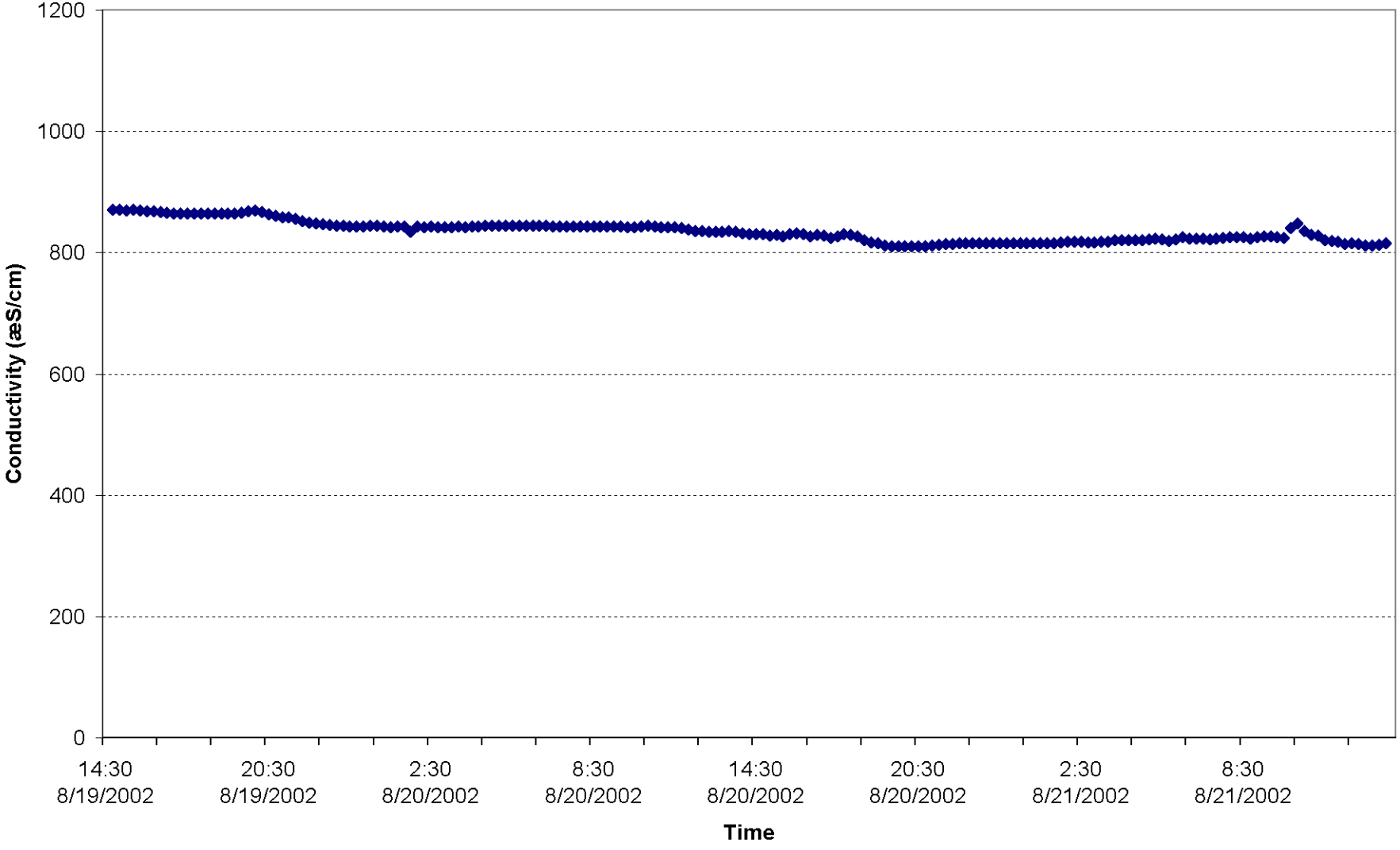


Figure B3.12. Continuous Water Level for Main Canal at MC2

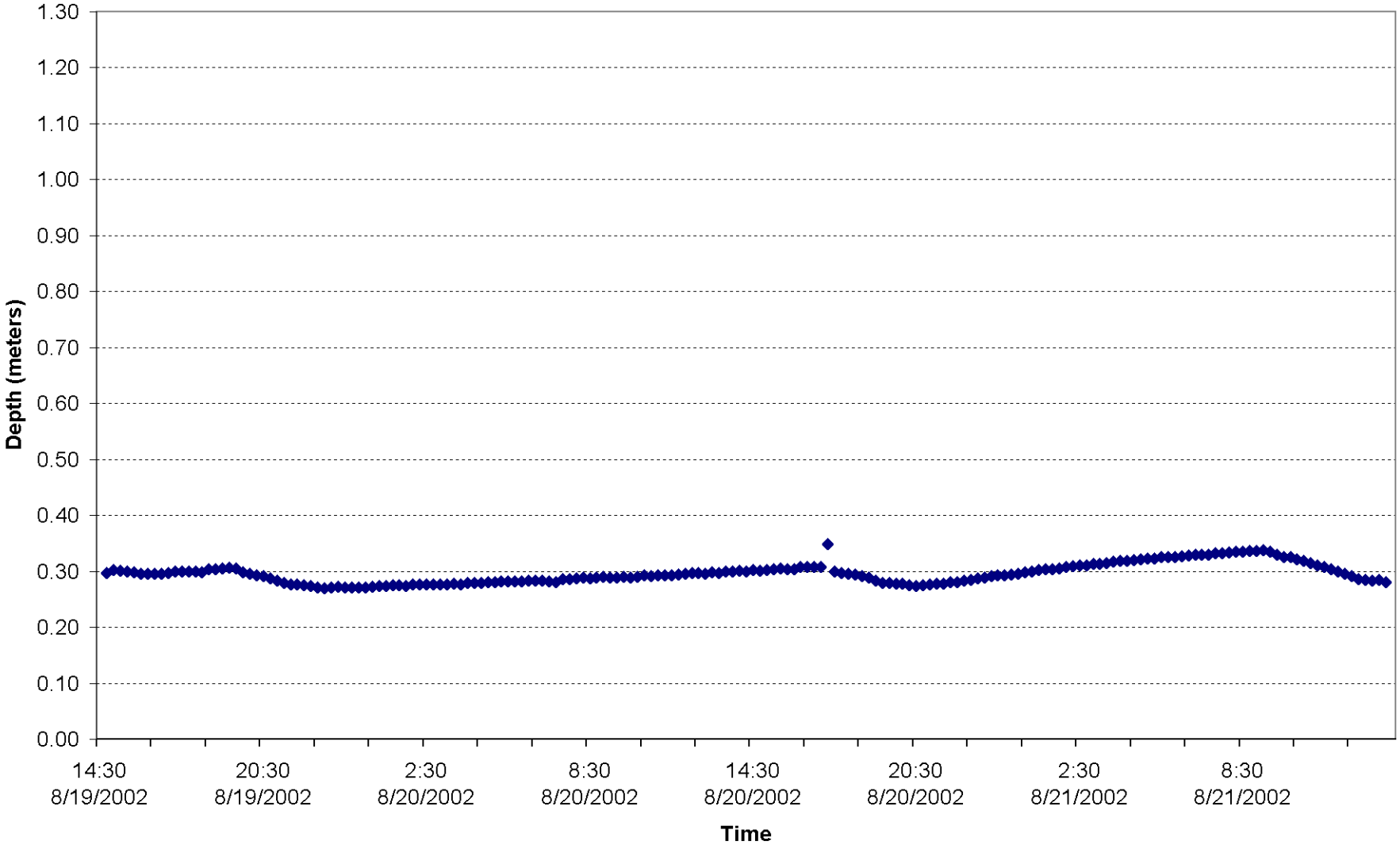


Figure B3.13. Continuous Temperature for Main Canal at MC3

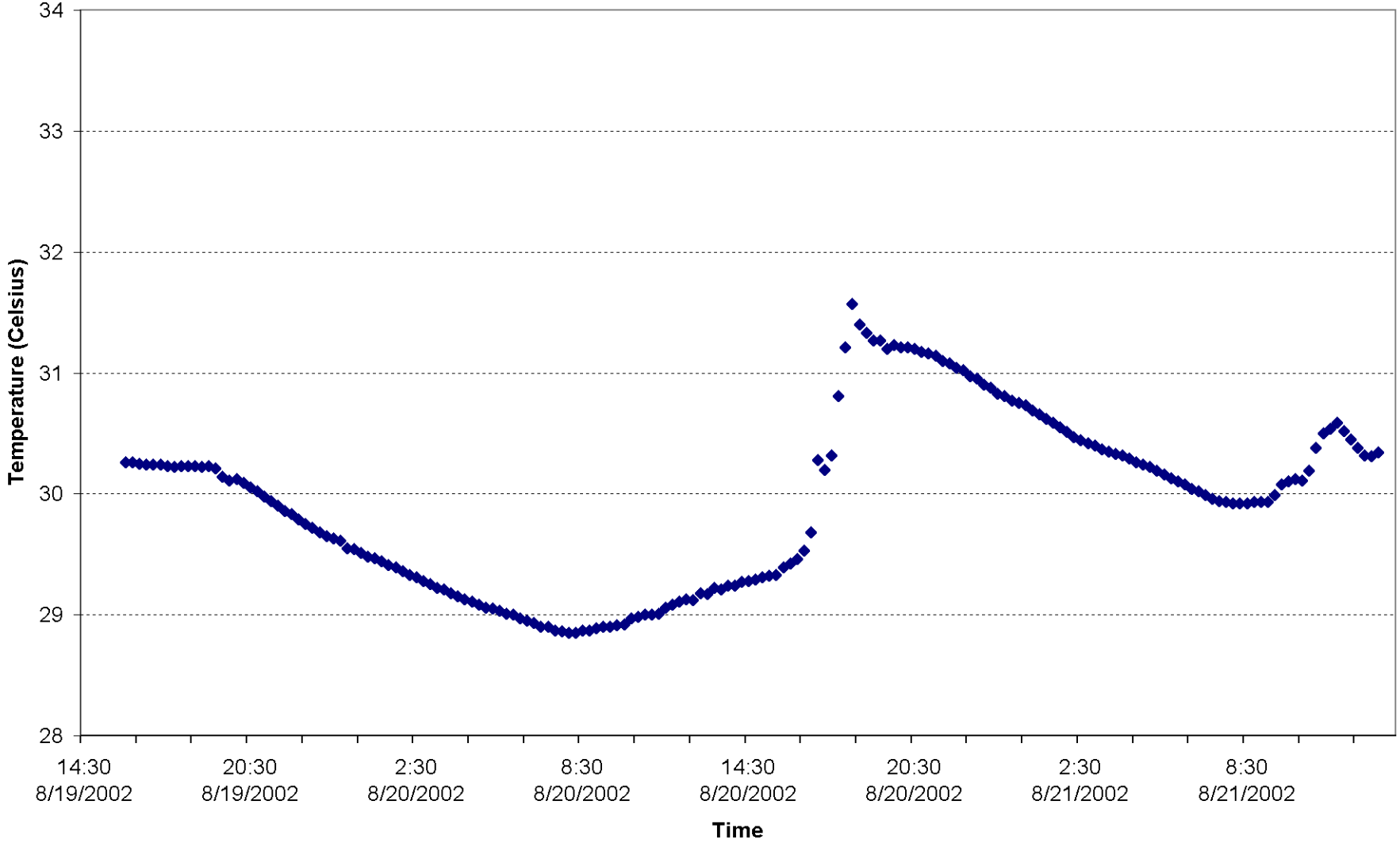


Figure B3.14. Continuous DO for Main Canal at MC3

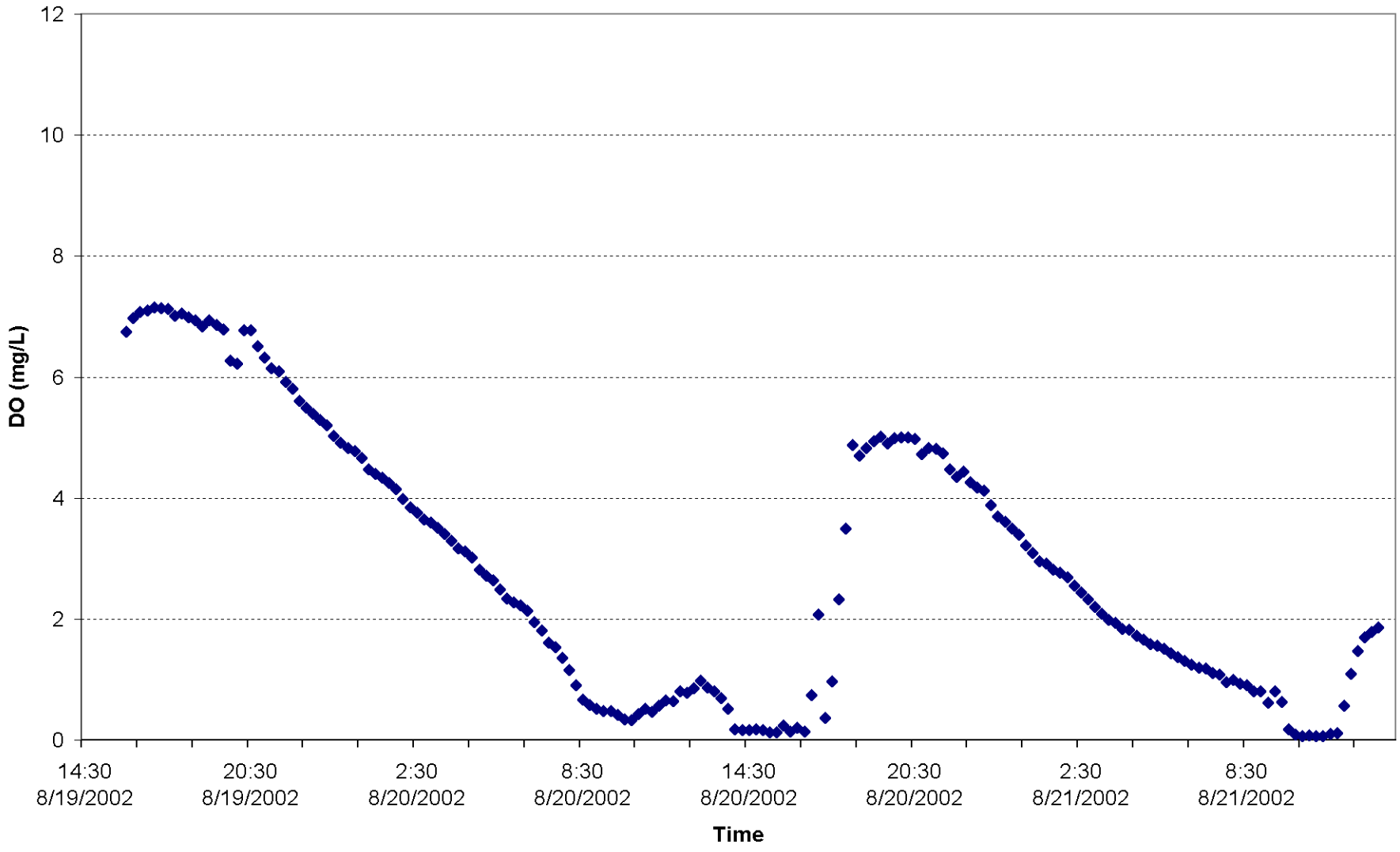


Figure B3.15. Continuous DO Percent Saturation for Main Canal at MC3

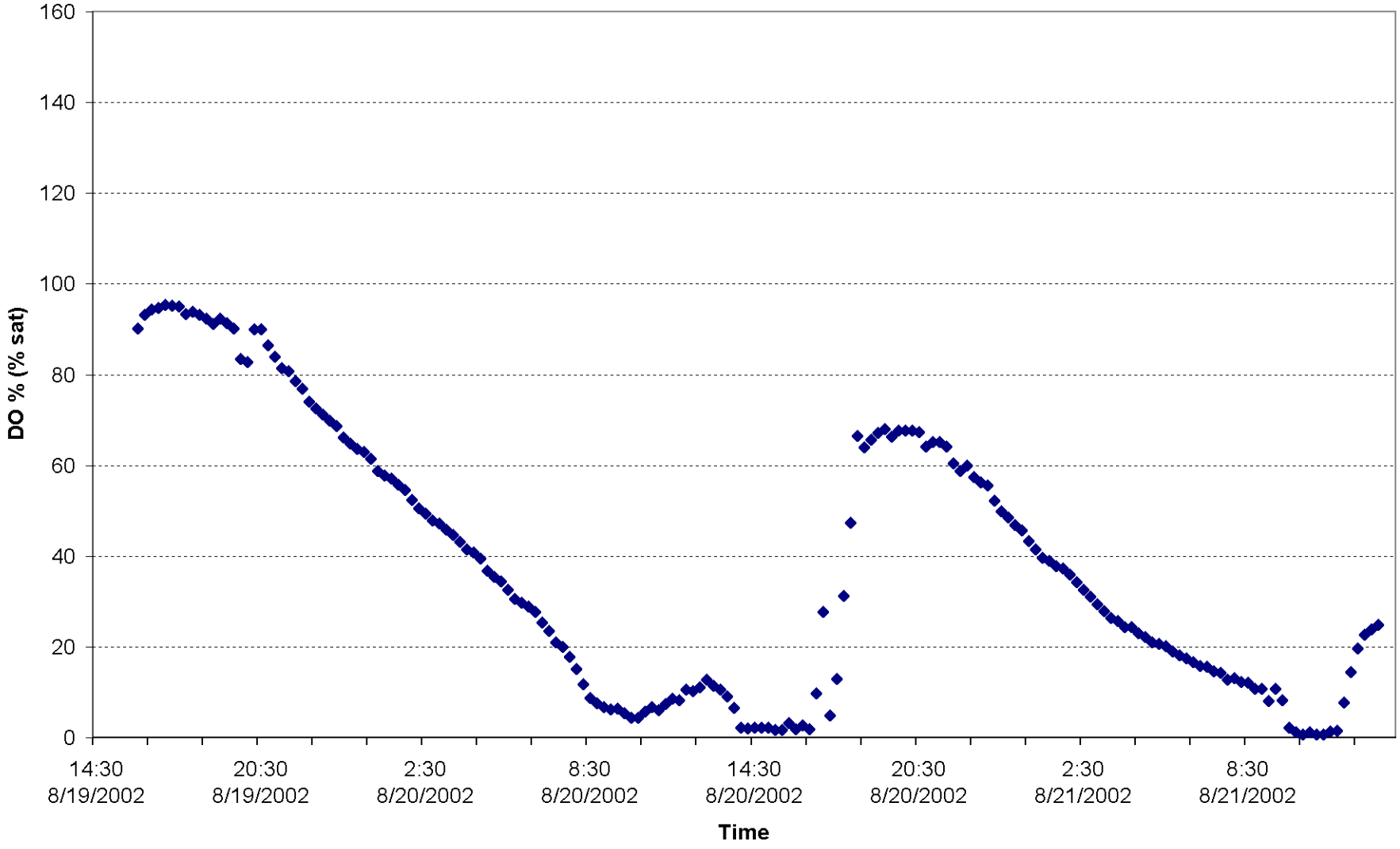


Figure B3.16. Continuous pH for Main Canal at MC3

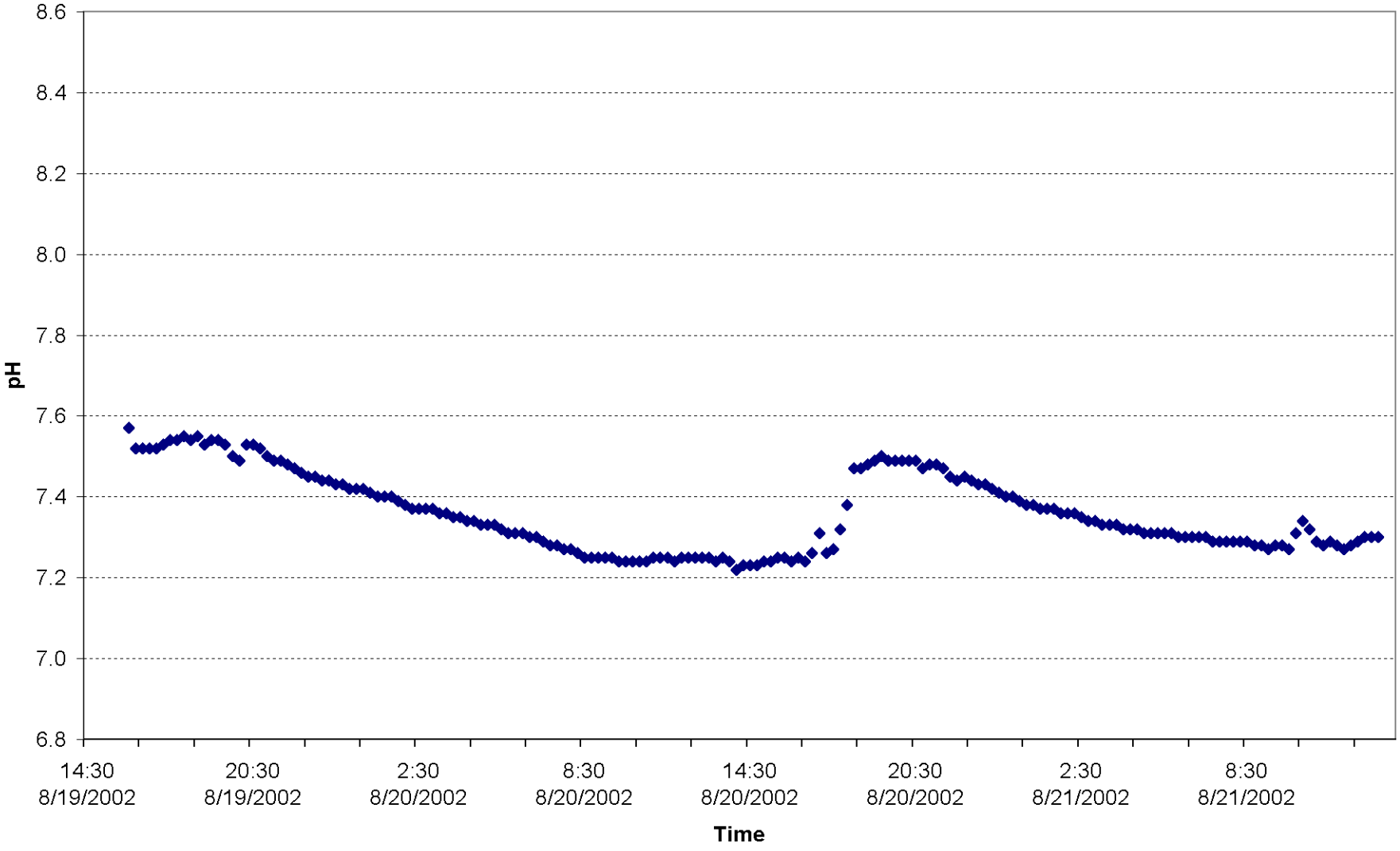


Figure B3.17. Continuous Specific Conductivity for Main Canal at MC3

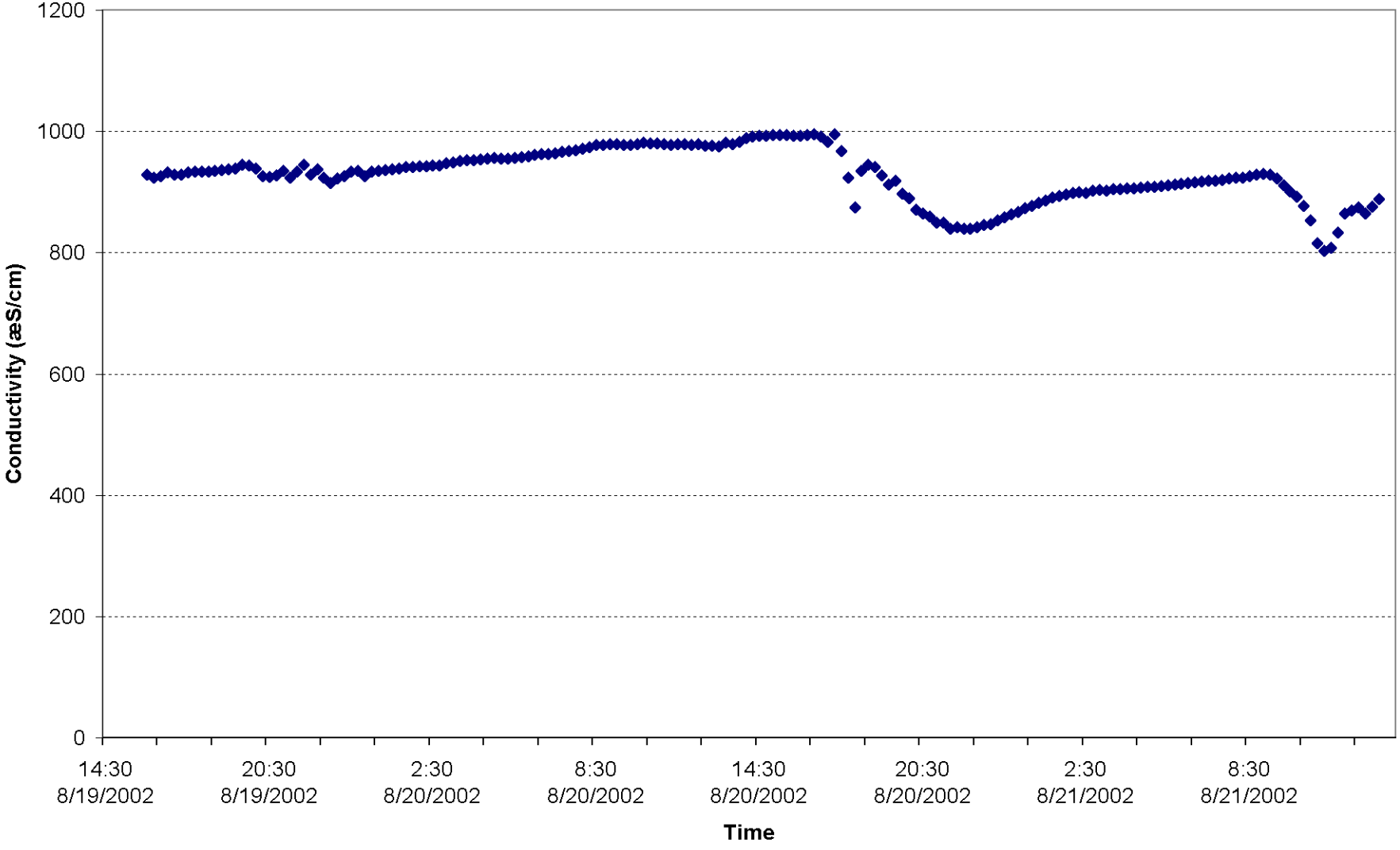


Figure B3.18. Continuous Water Level for Main Canal at MC3

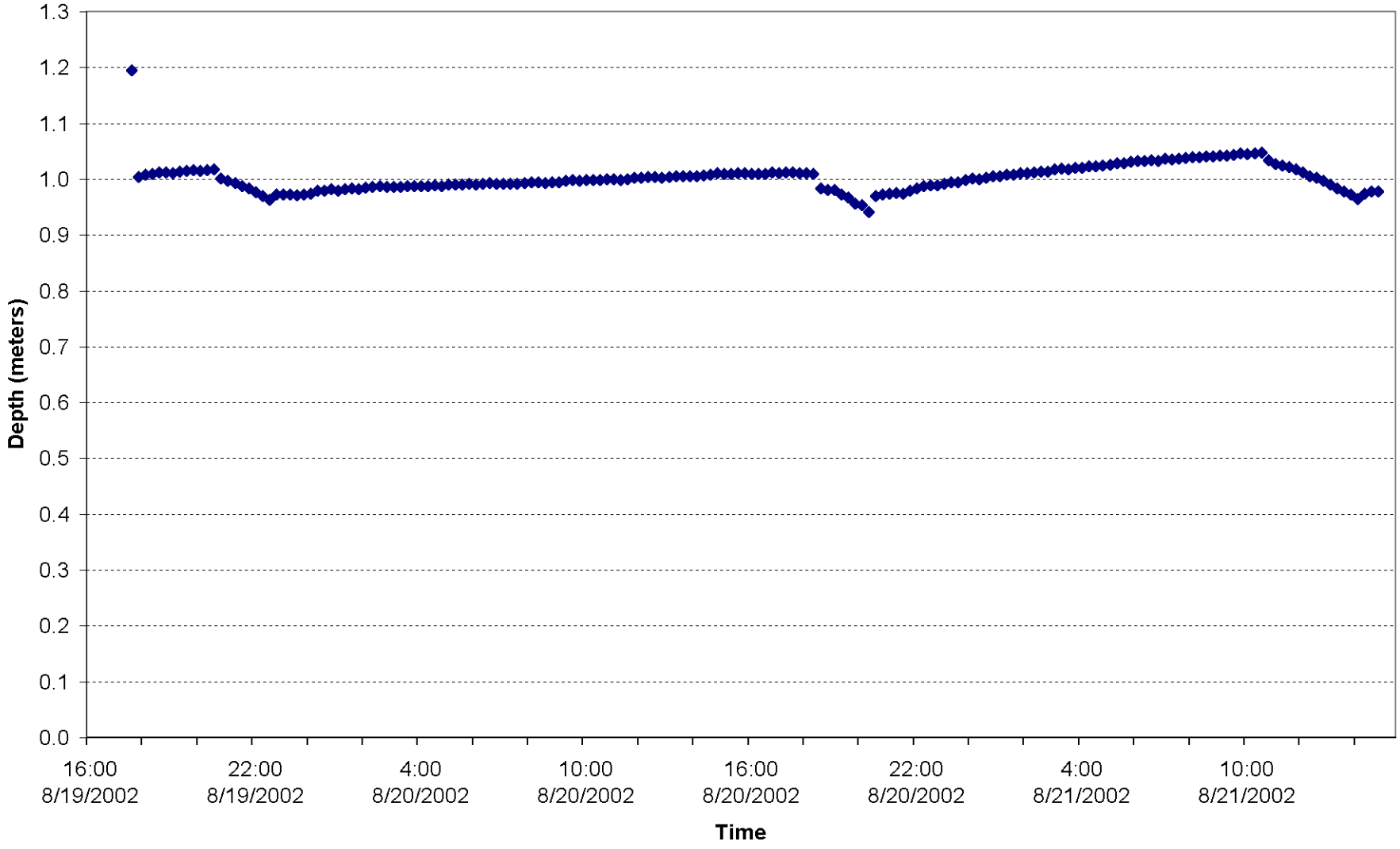


Figure B3.19. Continuous Temperature for Main Canal at MC4

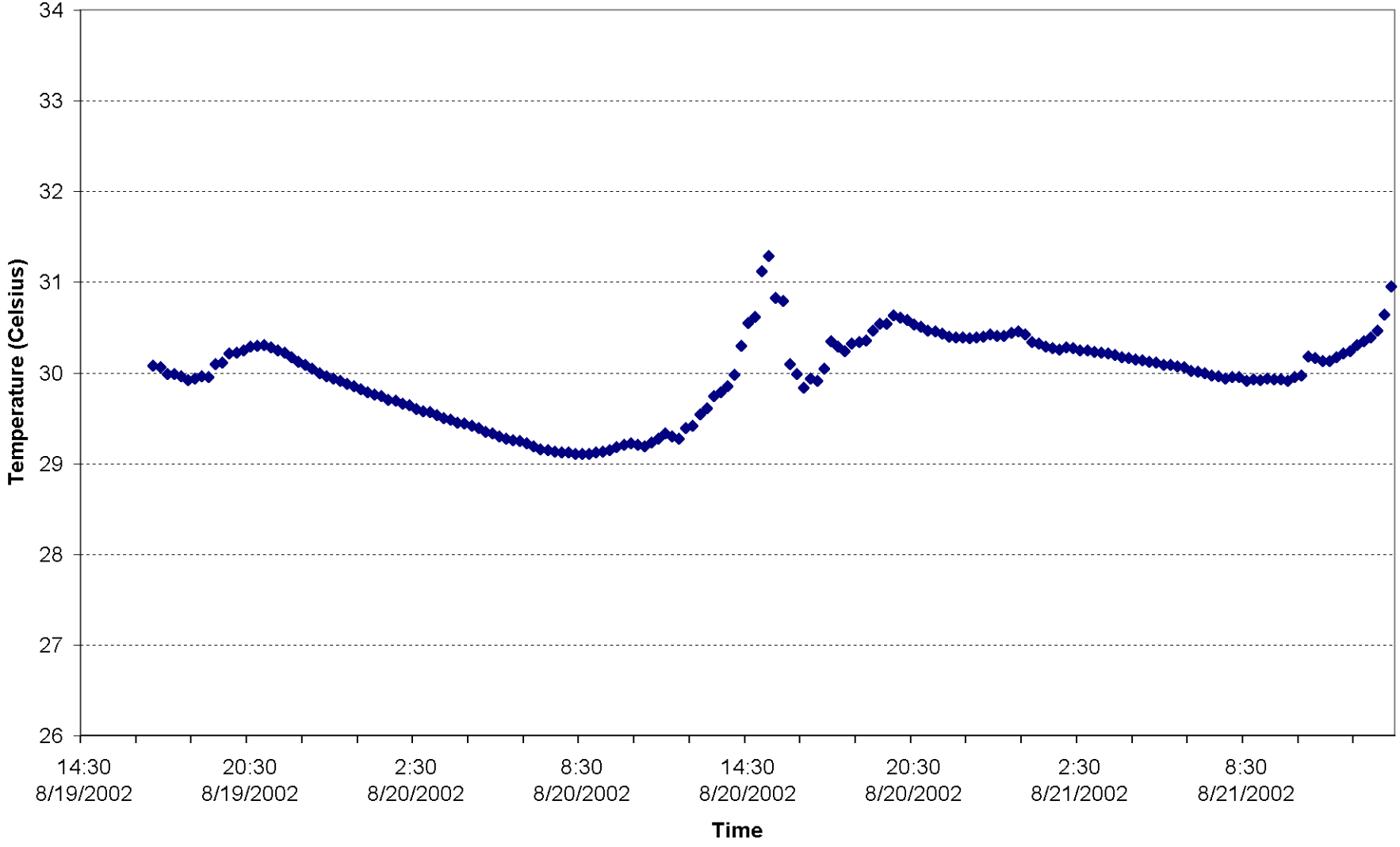


Figure B3.20. Continuous DO for Main Canal at MC4

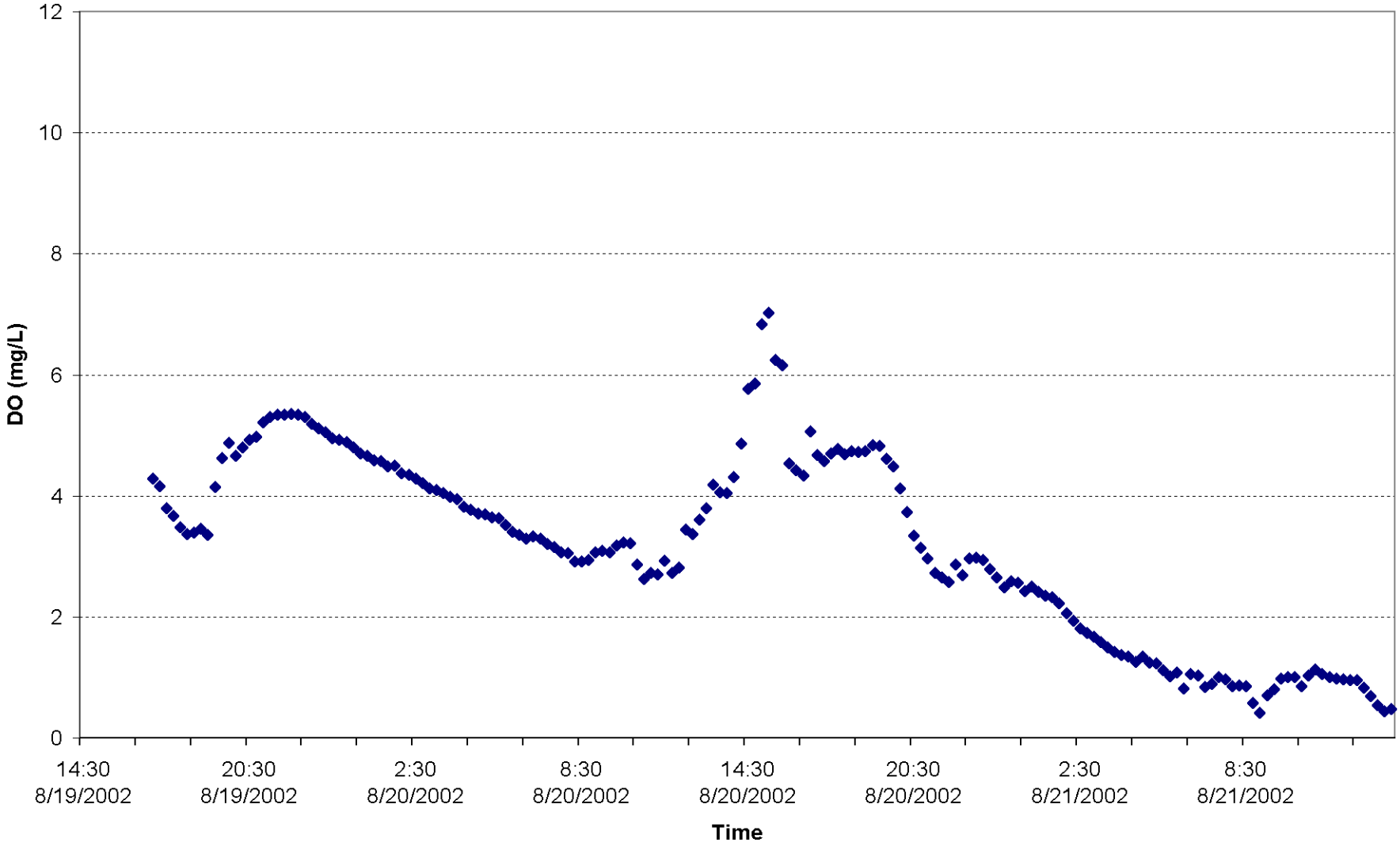


Figure B3.21. Continuous DO Percent Saturation for Main Canal at MC4

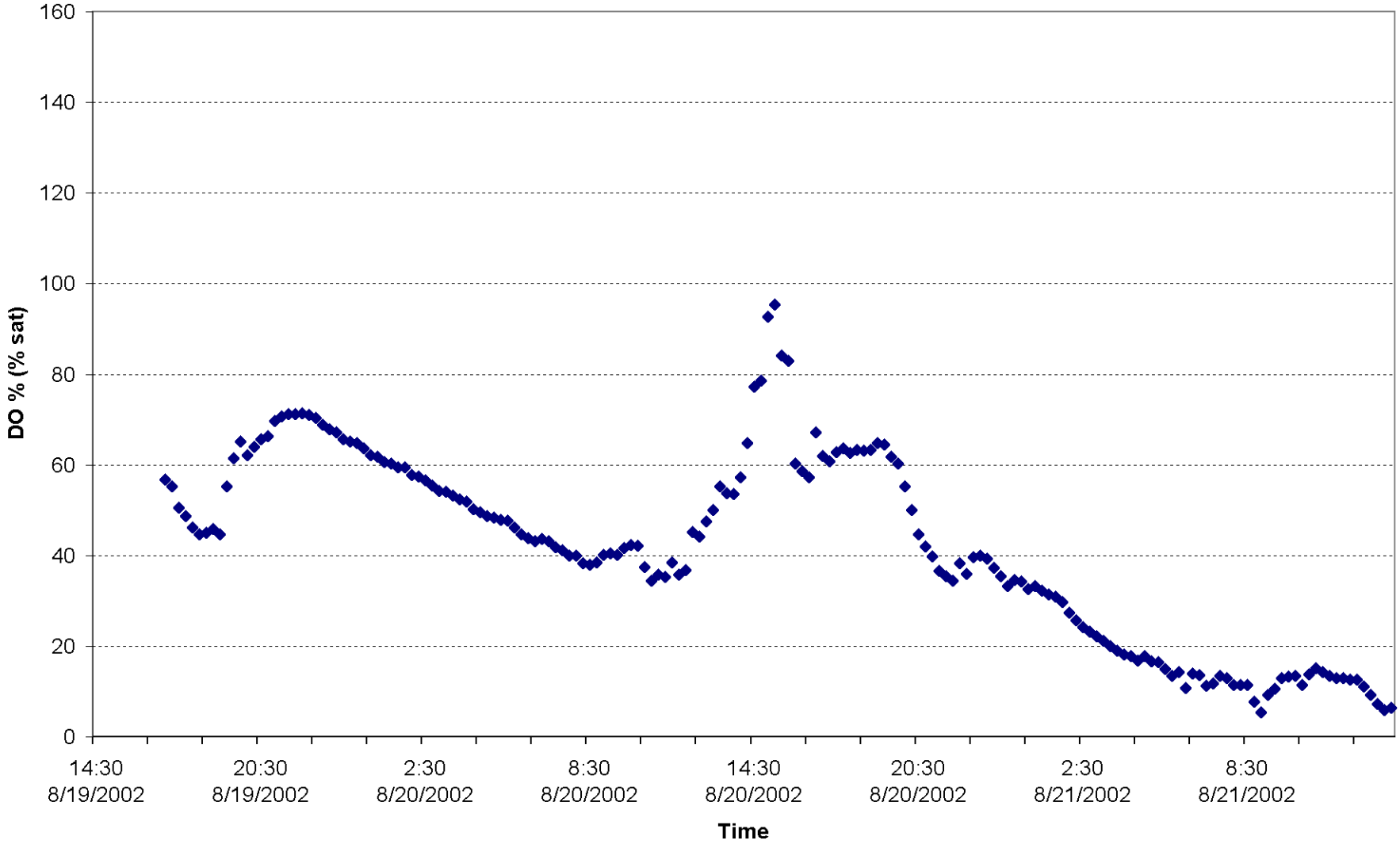


Figure B3.22. Continuous pH for Main Canal at MC4

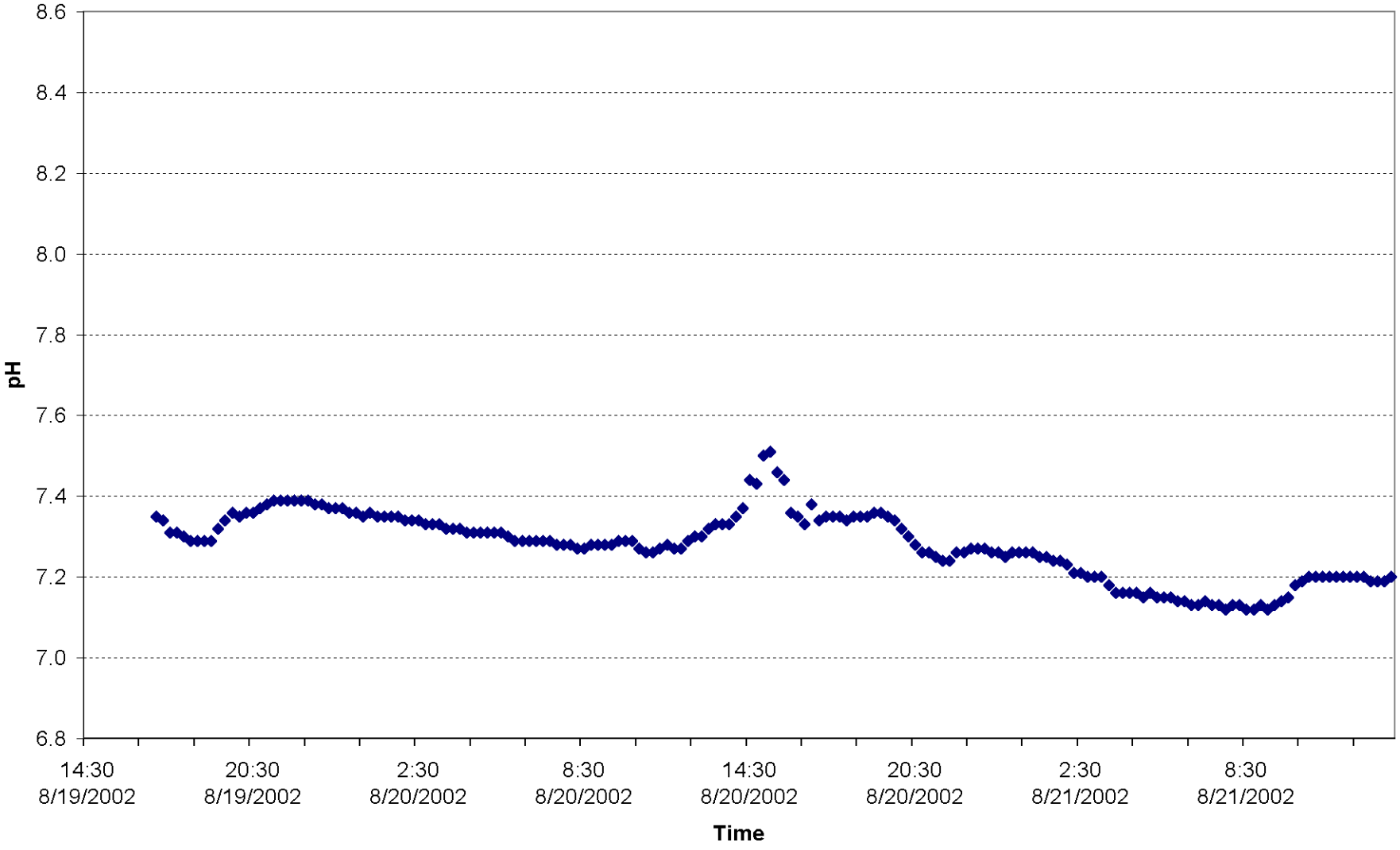


Figure B3.23. Continuous Specific Conductivity for Main Canal at MC4

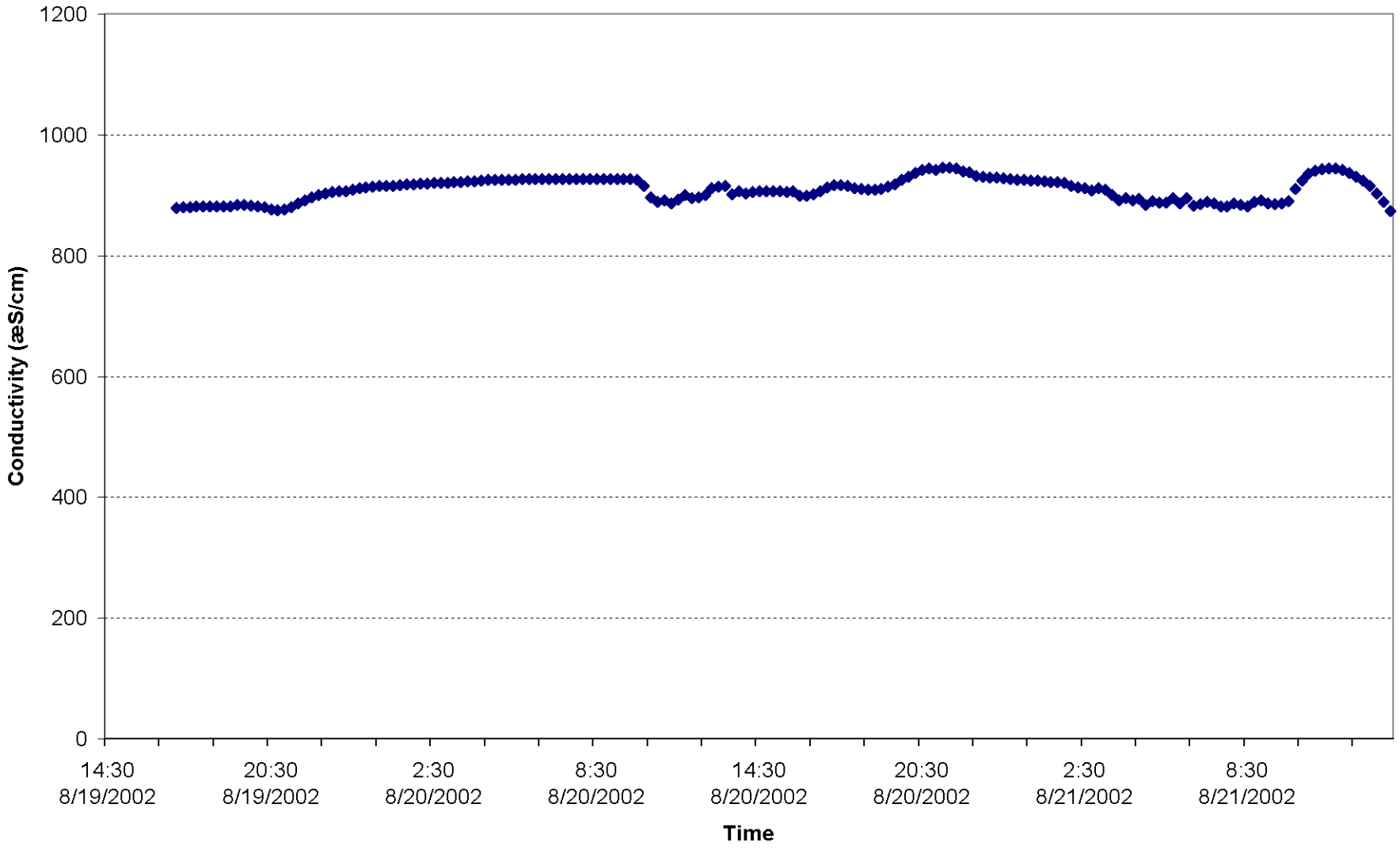


Figure B3.24. Continuous Water Level for Main Canal at MC4

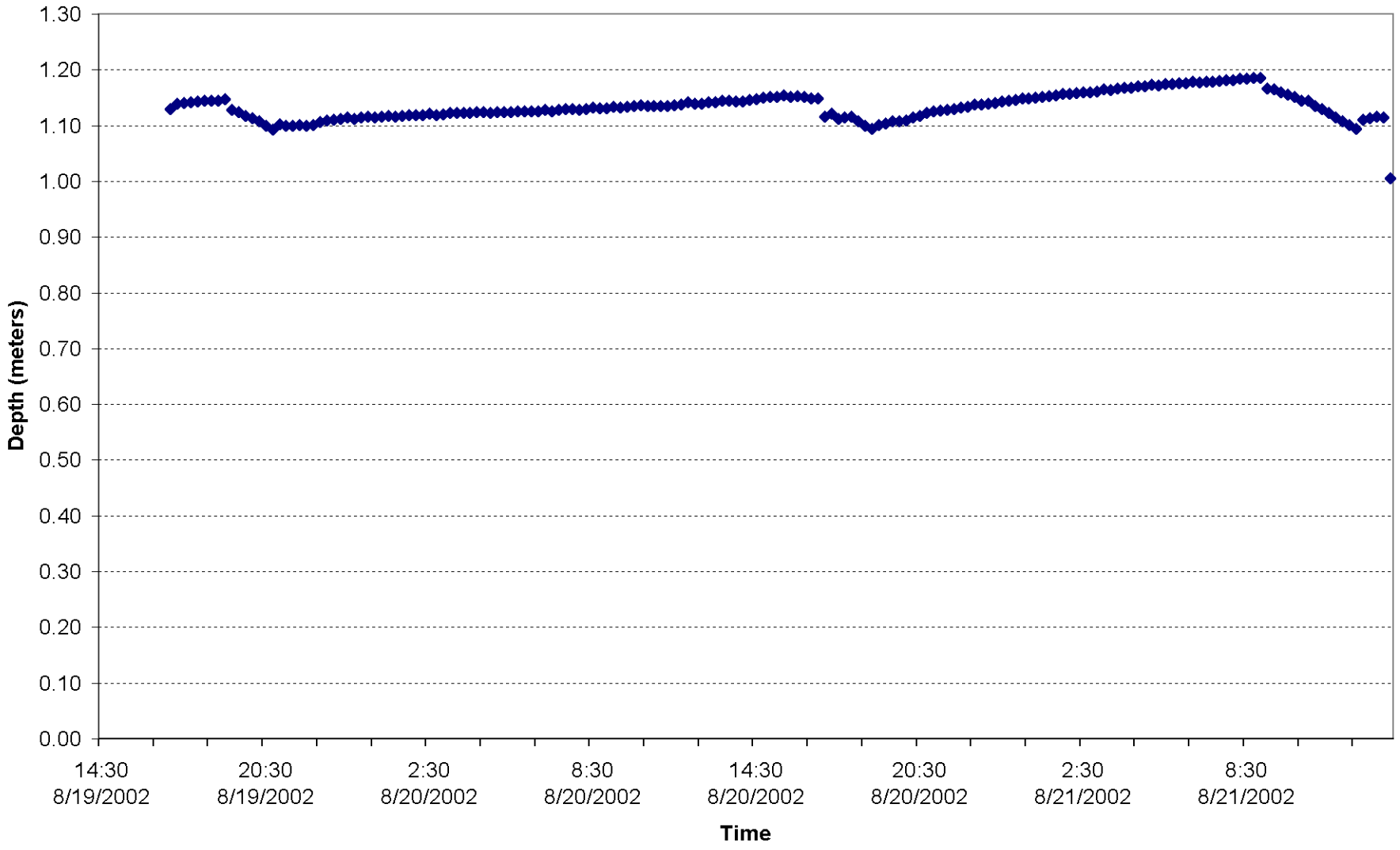


Figure B3.25. Continuous Temperature for Avondale Gardens Canal at AGC2

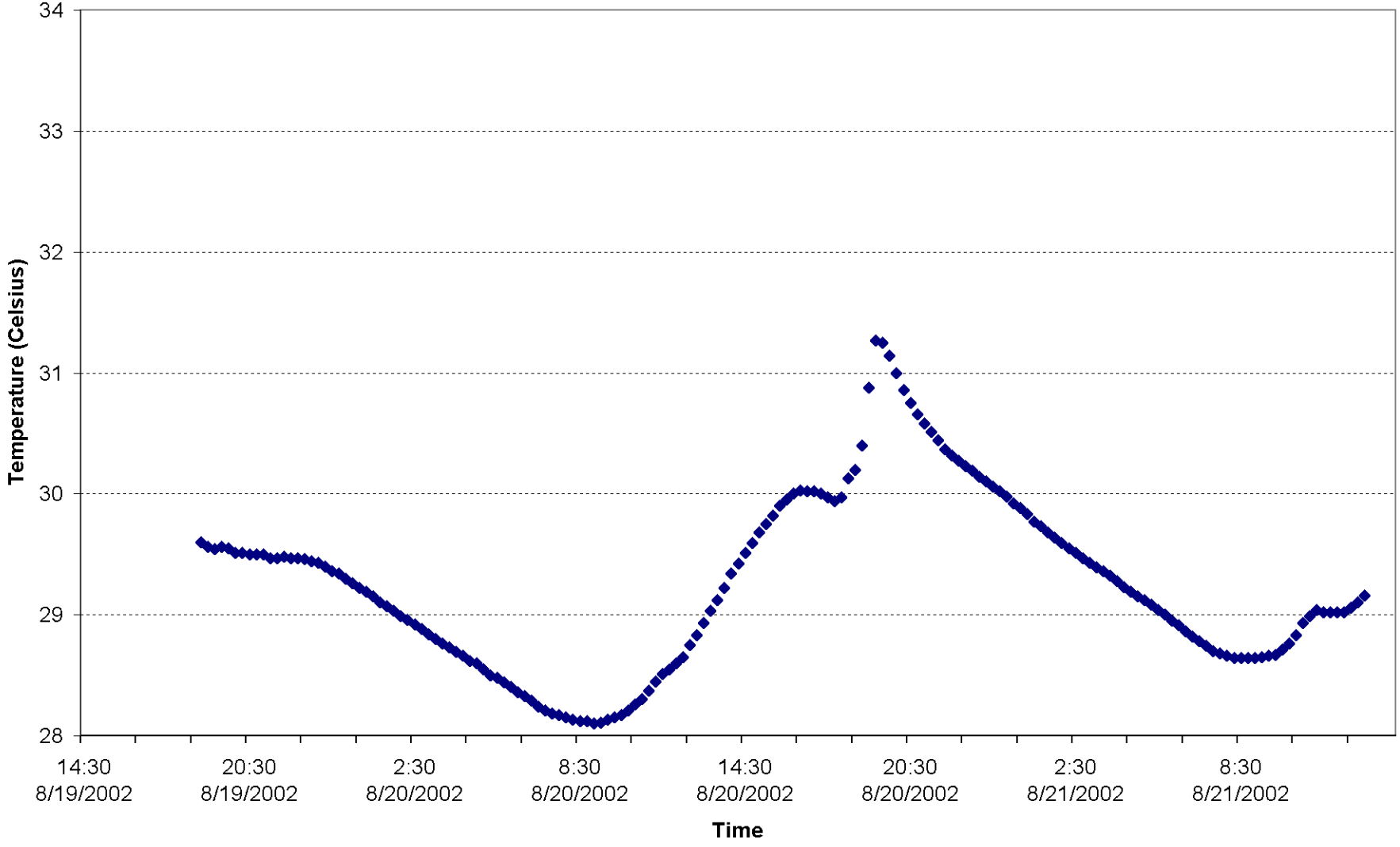


Figure B3.26. Continuous DO for Avondale Gardens Canal at AGC2

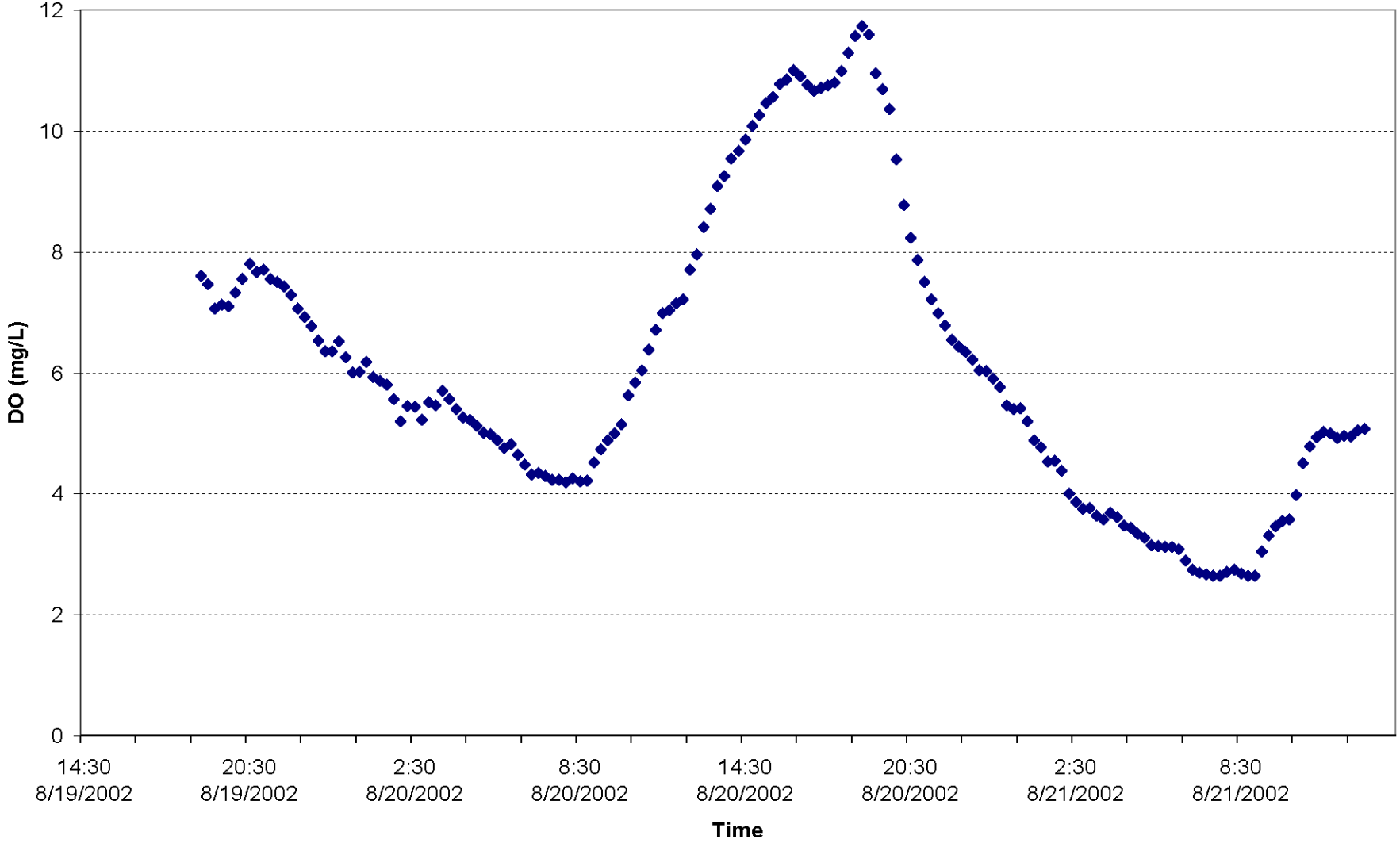


Figure B3.27. Continuous DO Percent Saturation for Avondale Gardens Canal at AGC2

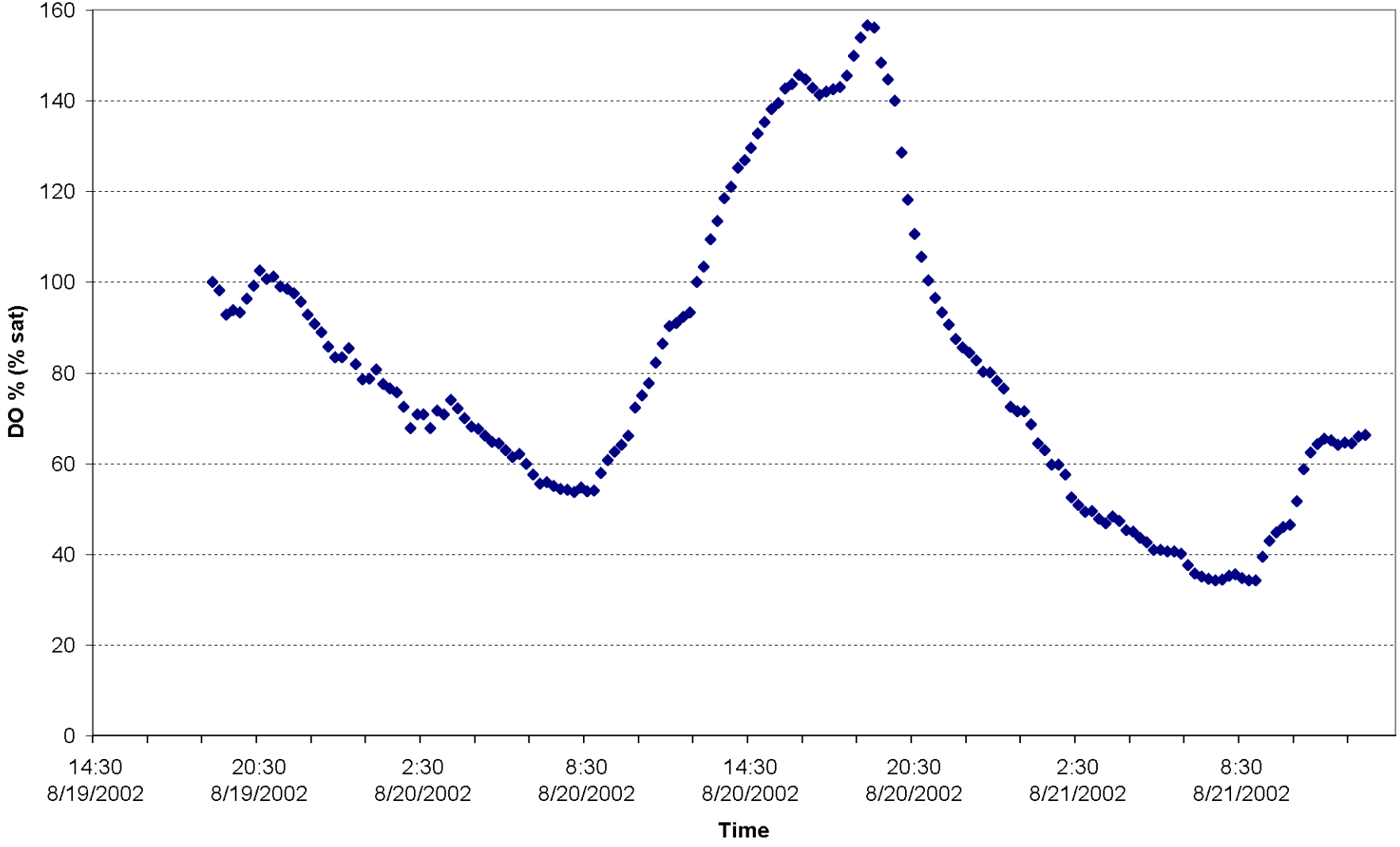


Figure B3.28. Continuous pH for Avondale Gardens Canal at AGC2

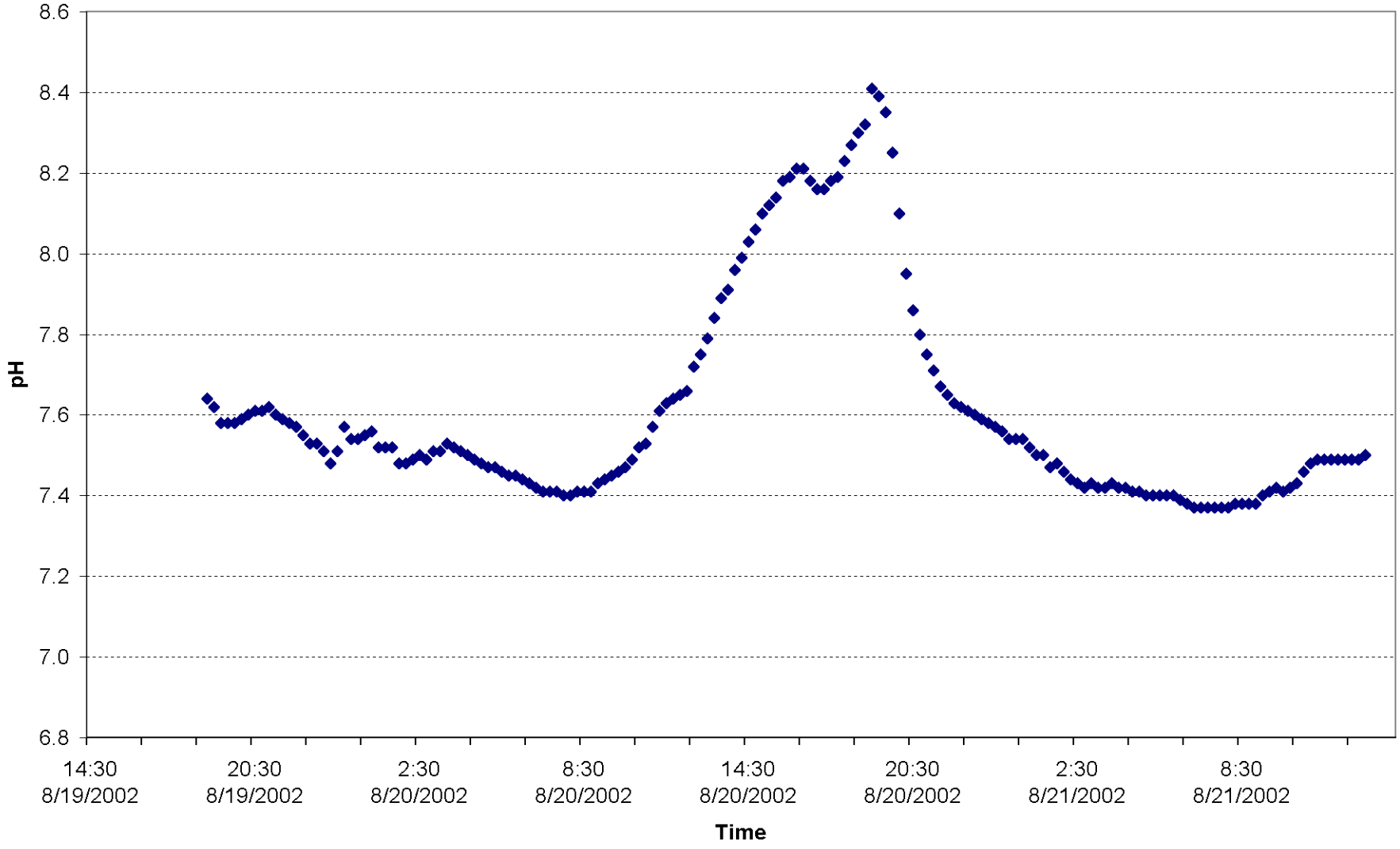


Figure B3.29. Continuous Specific Conductivity for Avondale Gardens Canal at AGC2

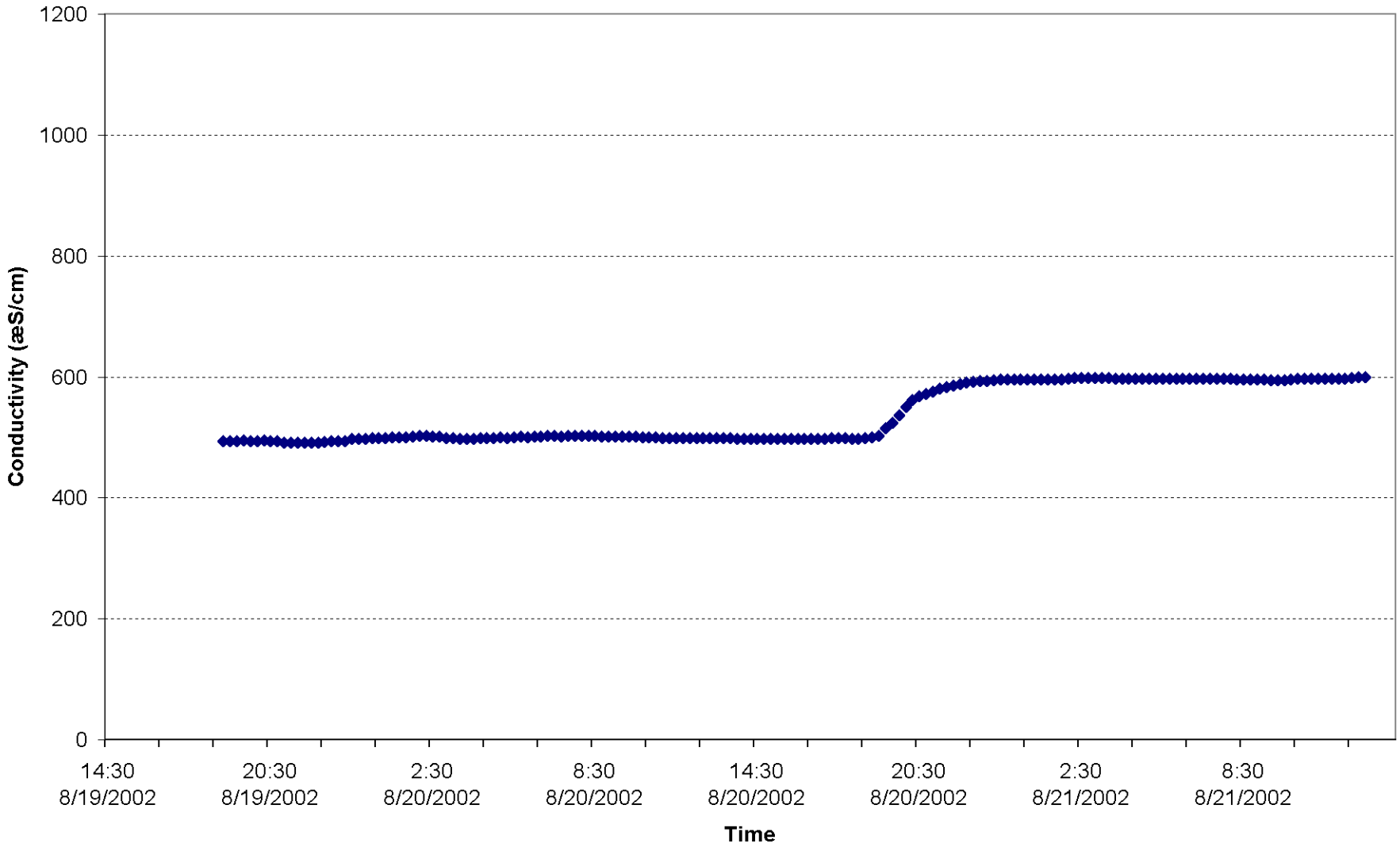
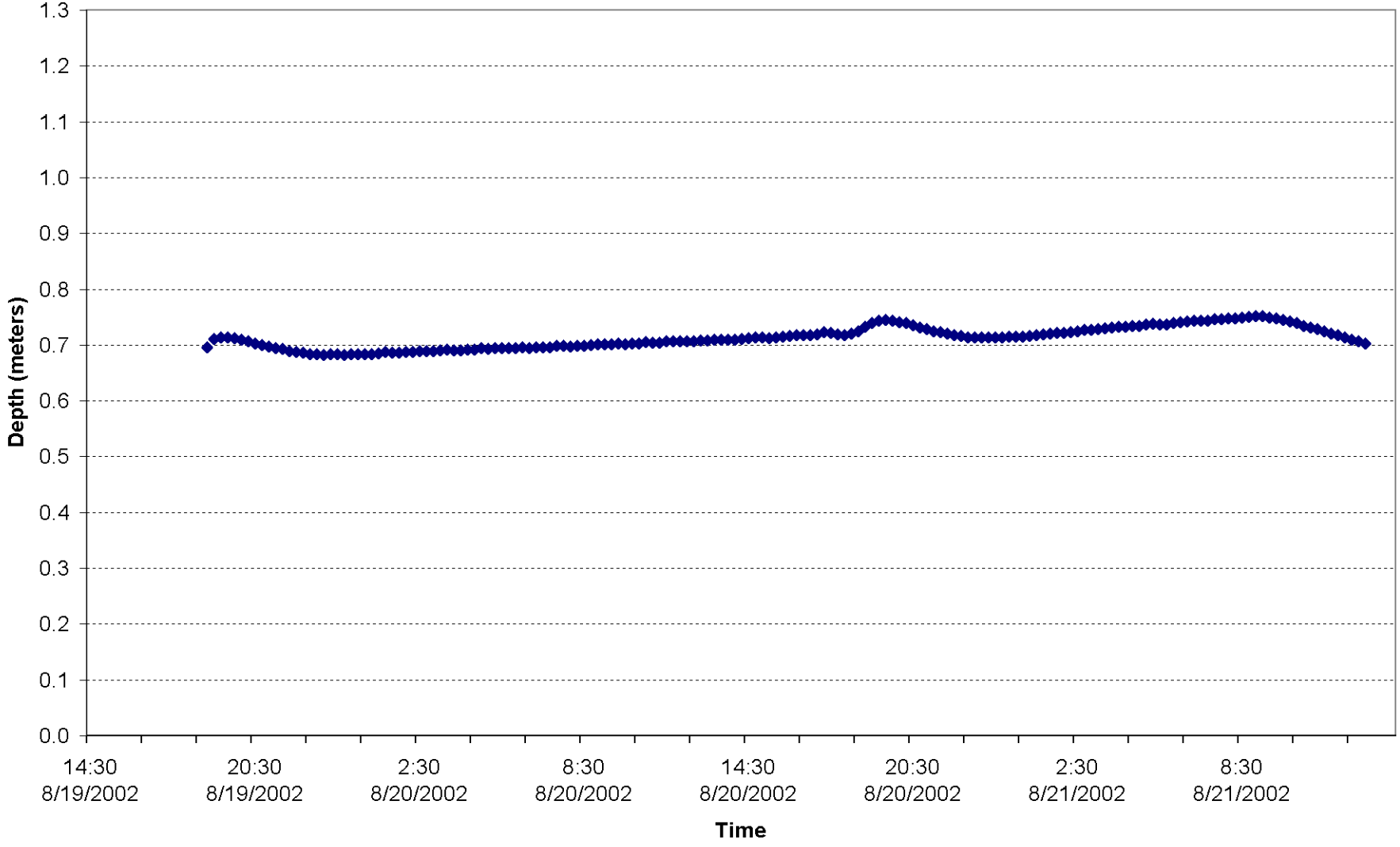


Figure B3.30. Continuous Water Level for Avondale Gardens Canal at AGC2



APPENDIX B4

Results of BOD Time Series Analyses

Table B4.1. Summary of CBODu values and Rates for Main Canal.

Sample No.	NBODu (mg/L)	NBODu rate (1/day)	CBODu (mg/L)	CBODu rate (1/day)
MC1 - Main Canal at Segnette Blvd	5.58	0.22	13.46	0.09
MC2-Main Canal at Nicolle Blvd	3.59	0.16	9.94	0.08
MC3-Main Canal	4.19	0.25	10.06	0.10
MC4-At Cataouatche Pumping Station #1	2.85	0.17	10.75	0.10
RC1-Railroad Canal	2.13	0.17	6.75	0.07
UC1-Unnamed Canal	8.79	0.29	15.04	0.12
AGC1-Avondale Gardens Canal	2.19	0.21	5.82	0.04
AGC2-Avondale Gardens Canal	1.60	0.06	8.13	0.05
	AVG =	0.19		0.08

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\MAIN CANAL GSBOD CALCULATIONS.XLS

Table B4.2. Raw BOD and Nitrate+Nitrite data from LDEQ survey on August 20,2002.

Instructions for the worksheet:

1. Enter the appropriate data into the green highlighted cells. The 60th or final day analysis data goes into the far right date column. The rest of the analysis data goes in the columns to the left of the 60th or final day values. The NOx data for the analysis start date goes in the NOx section underneath the analysis start date.
2. Click on the "Measured BOD" tab at the bottom of the page and follow that page's instructions. This page can be printed for reporting purposes.

Survey Stream and date: Main Canal

Sample Collection date:

Analysis Start date: 08/21/02

Total BOD data

		Daily analysis start dates:														
Item No.	Sample No.	08/21/02				08/23/02	08/26/02	08/28/02	08/30/02	09/03/02	09/06/02	09/10/02	09/20/02	09/30/02	10/10/02	10/21/02
1	MC1 - Main Canal at Segnette Blvd					2.9	6.0	7.4	8.6	12.6	13.9	15.6	17.4	18.6	19.3	20.1
2	MC2-Main Canal at Nicolle Blvd					1.9	4.0	5.3	6.5	8.9	9.6	10.3	11.7	12.9	13.6	14.3
3	MC3-Main Canal					2.4	4.7	5.8	6.8	9.4	11.0	11.8	13.0	13.9	14.6	15.2
4	MC4-At Cataouatche Pumping Station #1					2.3	5.1	6.3	7.2	9.0	9.7	10.9	12.2	13.4	14.0	14.6
5	RC1-Railroad Canal					1.3	2.4	3.1	3.7	5.1	5.8	6.4	7.4	8.2	8.8	9.4
6	UC1-Unnamed Canal					4.1	8.3	12.0	15.3	19.4	20.4	21.4	22.8	23.8	24.4	25.0
7	AGC1-Avondale Gardens Canal					0.4	1.1	1.7	2.3	3.8	4.5	5.1	5.9	6.7	7.2	7.7
8	AGC2-Avondale Gardens Canal					1.2	2.5	3.2	3.7	4.6	5.2	6.0	7.2	8.5	9.1	9.7
9																
10																
11																
12																
13																
14																
15																

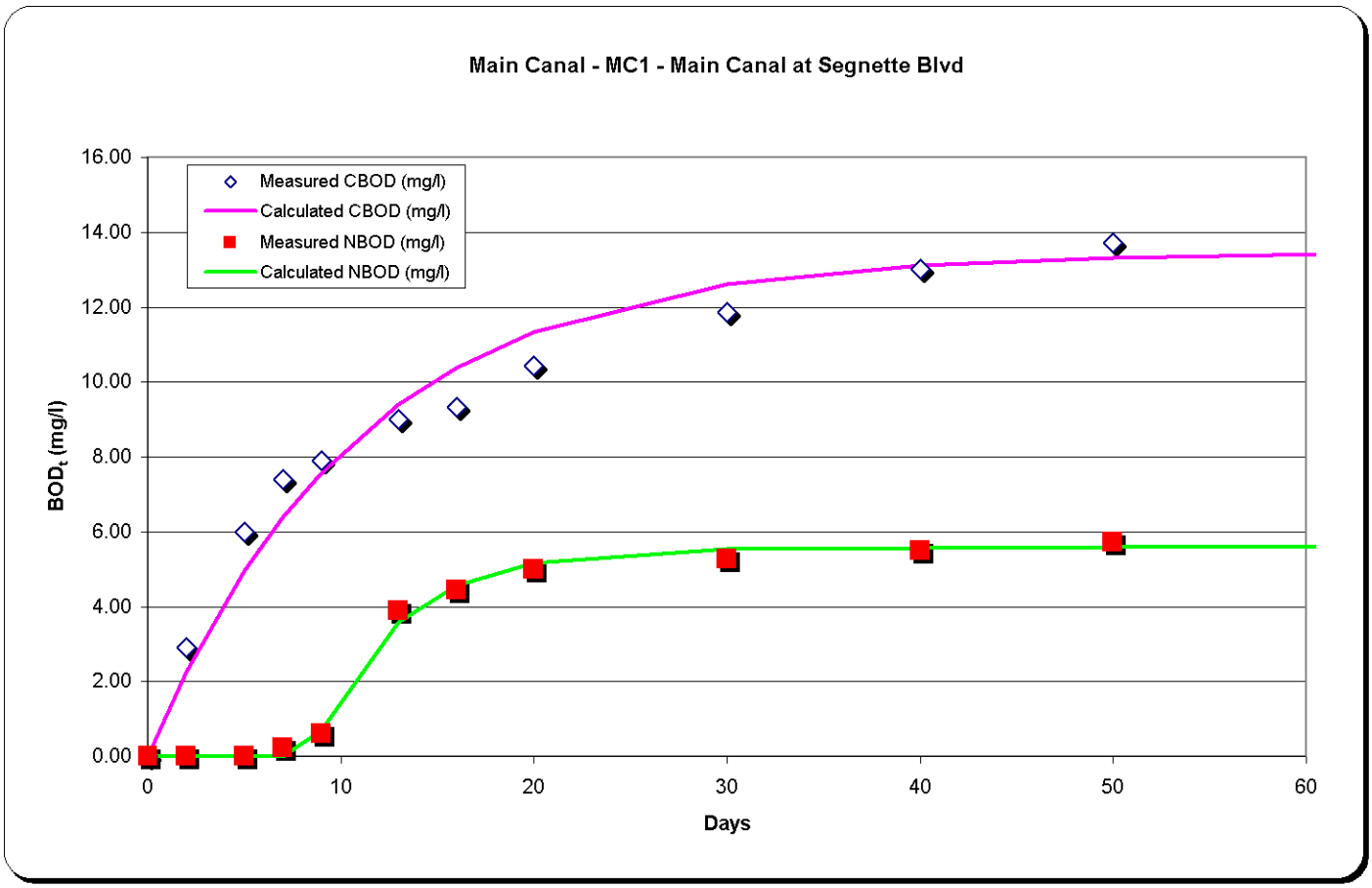
(NO_2+NO_3) as Nitrogen data (mg/l)

		Daily analysis start dates:														
Item No.	Sample No.	08/21/02				08/23/02	08/26/02	08/28/02	08/30/02	09/03/02	09/06/02	09/10/02	09/20/02	09/30/02	10/10/02	10/21/02
1	MC1 - Main Canal at Segnette Blvd	0.23				0.22	0.23	0.28	0.36	1.08	1.20	1.32	1.38	1.43	1.48	1.53
2	MC2-Main Canal at Nicolle Blvd	0.23				0.23	0.23	0.35	0.49	0.80	0.85	0.90	0.95	0.99	1.04	1.05
3	MC3-Main Canal	0.22				0.22	0.23	0.28	0.36	0.85	0.98	1.04	1.09	1.13	1.20	1.19
4	MC4-At Cataouatche Pumping Station #1	0.18				0.18	0.19	0.22	0.24	0.54	0.62	0.70	0.75	0.79	0.83	0.84
5	RC1-Railroad Canal	0.24				0.24	0.24	0.27	0.31	0.50	0.58	0.66	0.67	0.69	0.72	0.73
6	UC1-Unnamed Canal	1.71				1.75	1.82	2.35	2.94	3.48	3.50	3.52	3.54	3.60	3.71	3.77
7	AGC1-Avondale Gardens Canal	0.06				0.06	0.07	0.09	0.15	0.39	0.45	0.49	0.51	0.53	0.54	0.57
8	AGC2-Avondale Gardens Canal	0.00				0.00	0.05	0.06	0.05	0.15	0.19	0.23	0.28	0.31	0.32	0.34
9																
10																
11																
12																
13																
14																
15																

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\MAIN CANAL GSBOD CALCULATIONS.XLS

BOD Analysis of the for: **Main Canal - MC1 - Main Canal at Segnette Blvd**

Measured Data					Calculated Data		
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.23					
2	2.9	0.22	0.00	2.90	0.00	2.26	
5	6.0	0.23	0.00	6.00	0.00	4.97	
7	7.4	0.28	0.23	7.40	0.00	6.40	
9	8.6	0.36	0.59	7.91	0.69	7.58	
13	12.6	1.08	3.88	9.00	3.60	9.39	
16	13.9	1.20	4.43	9.33	4.57	10.38	
20	15.6	1.32	4.98	10.43	5.17	11.33	
30	17.4	1.38	5.26	11.86	5.54	12.61	
40	18.6	1.43	5.48	13.02	5.58	13.12	
50	19.3	1.48	5.71	13.72	5.58	13.33	
61	20.1	1.53	5.94	14.52	5.58	13.41	
					5.58	13.46	**UBOD (mg/l)**
					0.22	0.09	**k rate (1/day)**
					8.41	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

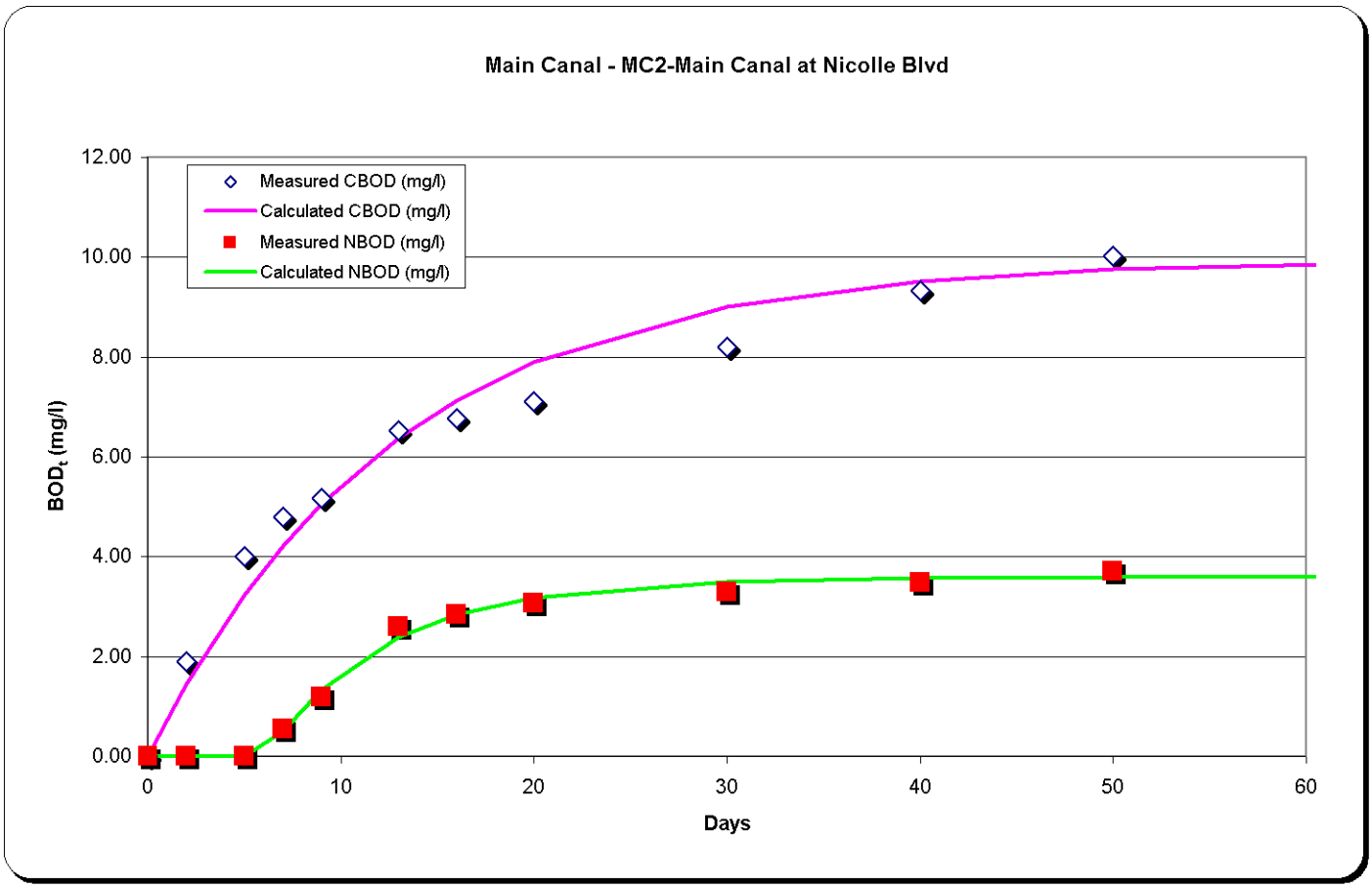
Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

BOD Analysis of the for: **Main Canal - MC2-Main Canal at Nicolle Blvd**

Measured Data					Calculated Data	
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7
0		0.23				
2	1.9	0.23	0.00	1.90	0.00	1.45
5	4.0	0.23	0.00	4.00	0.00	3.24
7	5.3	0.35	0.55	4.79	0.51	4.22
9	6.5	0.49	1.19	5.17	1.33	5.06
13	8.9	0.80	2.60	6.52	2.38	6.38
16	9.6	0.85	2.83	6.77	2.83	7.13
20	10.3	0.90	3.06	7.12	3.18	7.89
30	11.7	0.95	3.29	8.20	3.50	9.01
40	12.9	0.99	3.47	9.33	3.57	9.52
50	13.6	1.04	3.70	10.02	3.58	9.75
61	14.3	1.05	3.75	10.71	3.59	9.86
					3.59	9.94	**UBOD (mg/l)**
					0.16	0.08	**k rate (1/day)**
					6.03	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

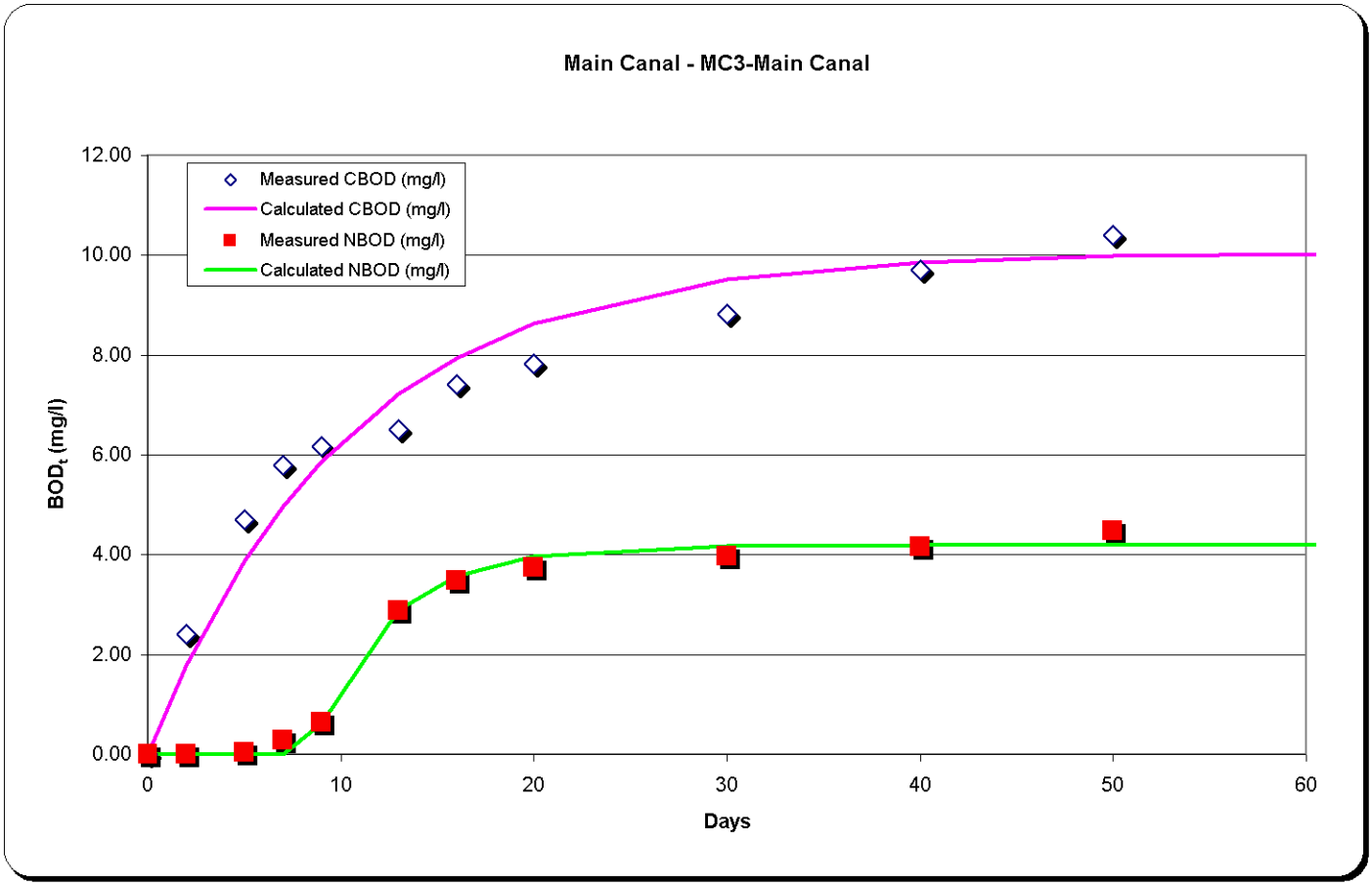
Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

BOD Analysis of the for: **Main Canal - MC3-Main Canal**

Measured Data					Calculated Data	
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7
0		0.22				
2	2.4	0.22	0.00	2.40	0.00	1.78
5	4.7	0.23	0.05	4.70	0.00	3.88
7	5.8	0.28	0.27	5.80	0.00	4.97
9	6.8	0.36	0.64	6.18	0.62	5.87
13	9.4	0.85	2.88	6.51	2.89	7.22
16	11.0	0.98	3.47	7.42	3.58	7.94
20	11.8	1.04	3.75	7.83	3.97	8.63
30	13.0	1.09	3.98	8.83	4.17	9.52
40	13.9	1.13	4.16	9.71	4.19	9.85
50	14.6	1.20	4.48	10.41	4.19	9.98
61	15.2	1.19	4.43	11.01	4.19	10.03

4.19	10.06	**UBOD (mg/l)**
0.25	0.10	**k rate (1/day)**
8.36	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

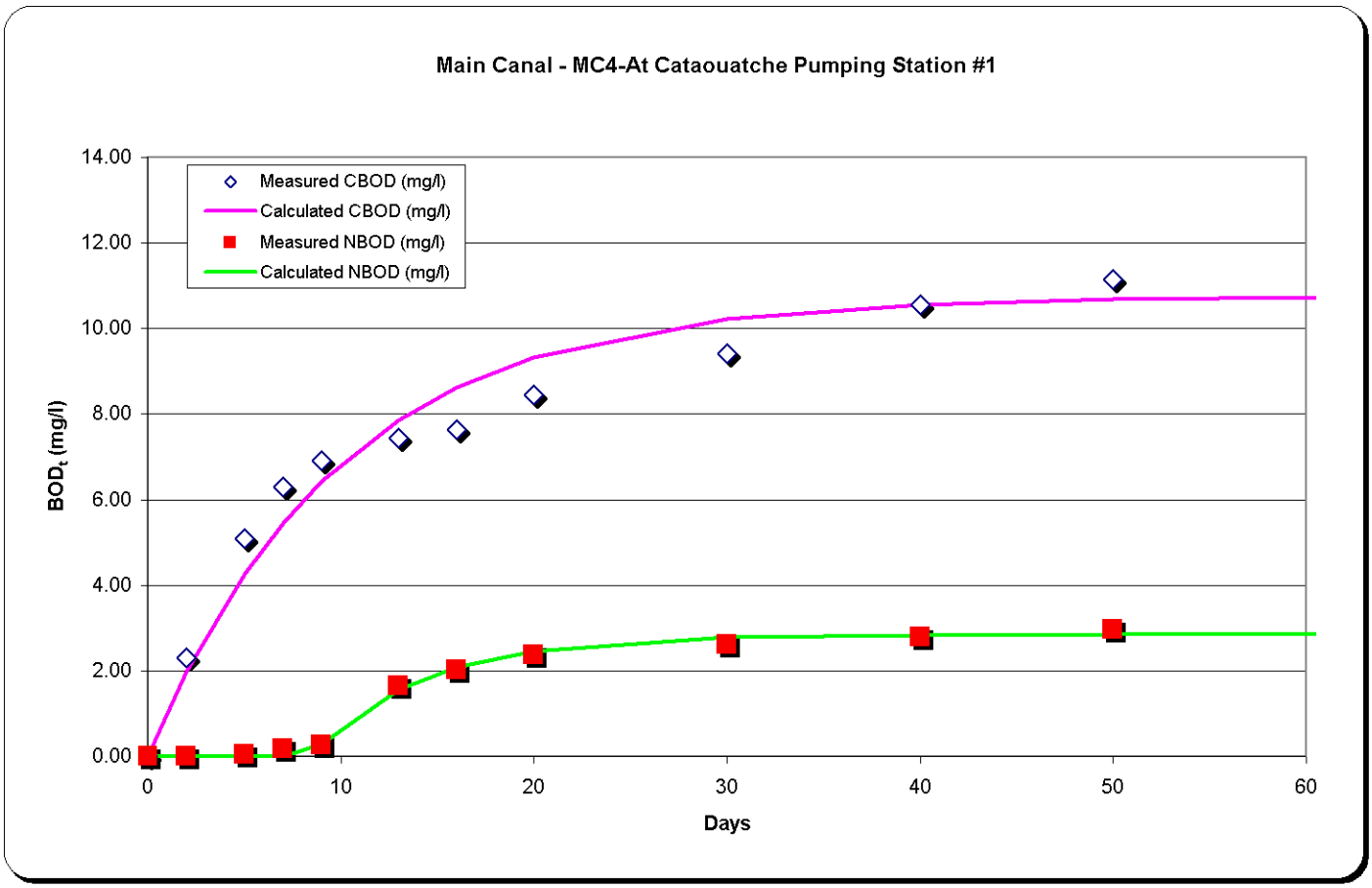
Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

BOD Analysis of the for: **Main Canal - MC4-At Cataouatche Pumping Station #1**

Measured Data					Calculated Data		
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.18					
2	2.3	0.18	0.00	2.30	0.00	1.97	
5	5.1	0.19	0.05	5.10	0.00	4.26	
7	6.3	0.22	0.18	6.30	0.00	5.45	
9	7.2	0.24	0.27	6.91	0.29	6.42	
13	9.0	0.54	1.65	7.44	1.56	7.86	
16	9.7	0.62	2.01	7.63	2.07	8.61	
20	10.9	0.70	2.38	8.44	2.46	9.32	
30	12.2	0.75	2.60	9.42	2.78	10.23	
40	13.4	0.79	2.79	10.56	2.84	10.56	
50	14.0	0.83	2.97	11.15	2.85	10.68	
61	14.6	0.84	3.02	11.75	2.85	10.72	
					2.85	10.75	**UBOD (mg/l)**
					0.17	0.10	**k rate (1/day)**
					8.36	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

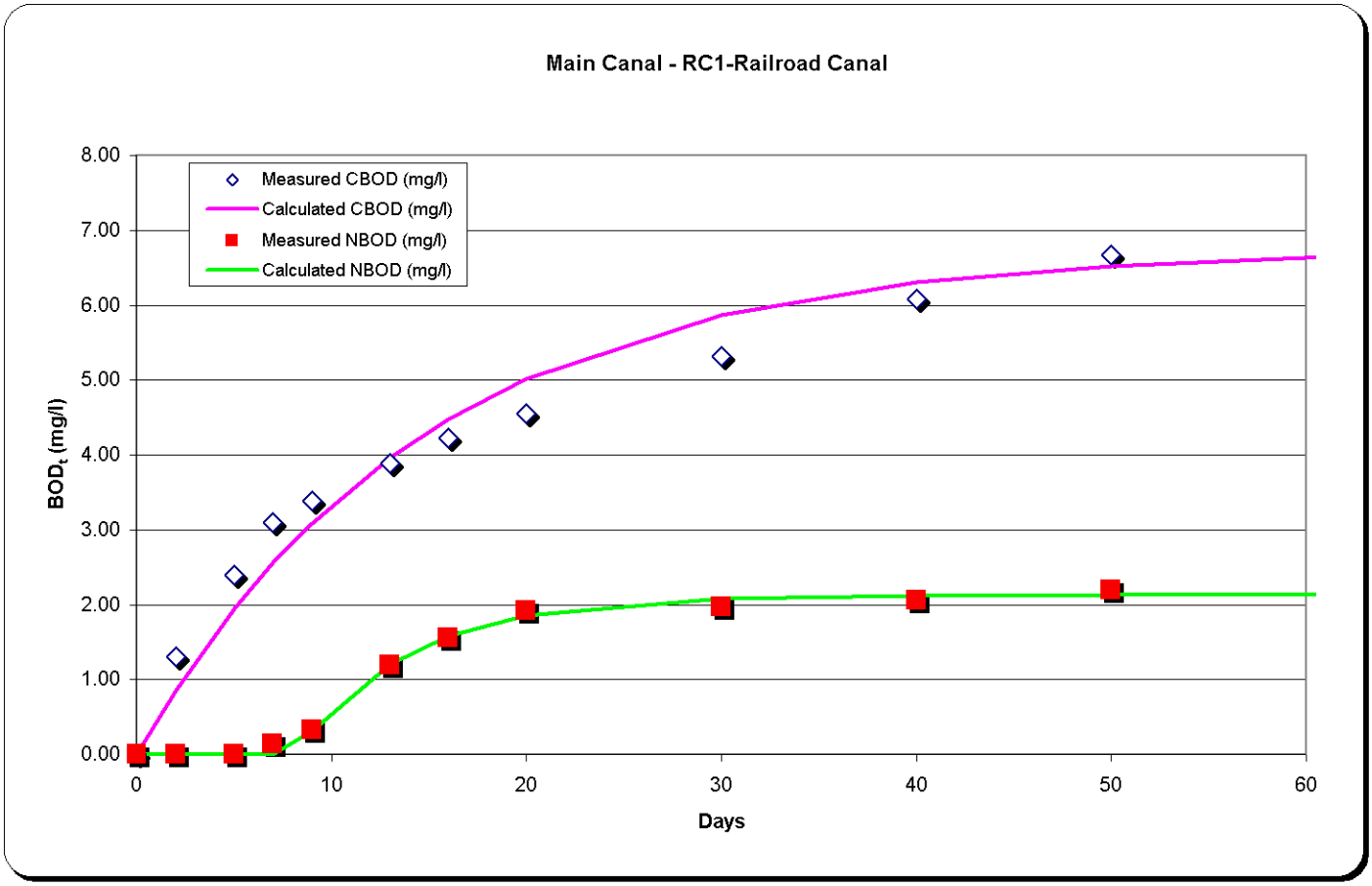
Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

BOD Analysis of the for: **Main Canal - RC1-Railroad Canal**

Measured Data					Calculated Data		
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.24					
2	1.3	0.24	0.00	1.30	0.00	0.86	
5	2.4	0.24	0.00	2.40	0.00	1.95	
7	3.1	0.27	0.14	3.10	0.00	2.56	
9	3.7	0.31	0.32	3.39	0.31	3.09	
13	5.1	0.50	1.19	3.89	1.21	3.96	
16	5.8	0.58	1.55	4.22	1.58	4.48	
20	6.4	0.66	1.92	4.55	1.85	5.02	
30	7.4	0.67	1.97	5.32	2.08	5.87	
40	8.2	0.69	2.06	6.08	2.12	6.30	
50	8.8	0.72	2.19	6.67	2.13	6.52	
61	9.4	0.73	2.24	7.27	2.13	6.64	
					2.13	6.75	**UBOD (mg/l)**
					0.17	0.07	**k rate (1/day)**
					8.07	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

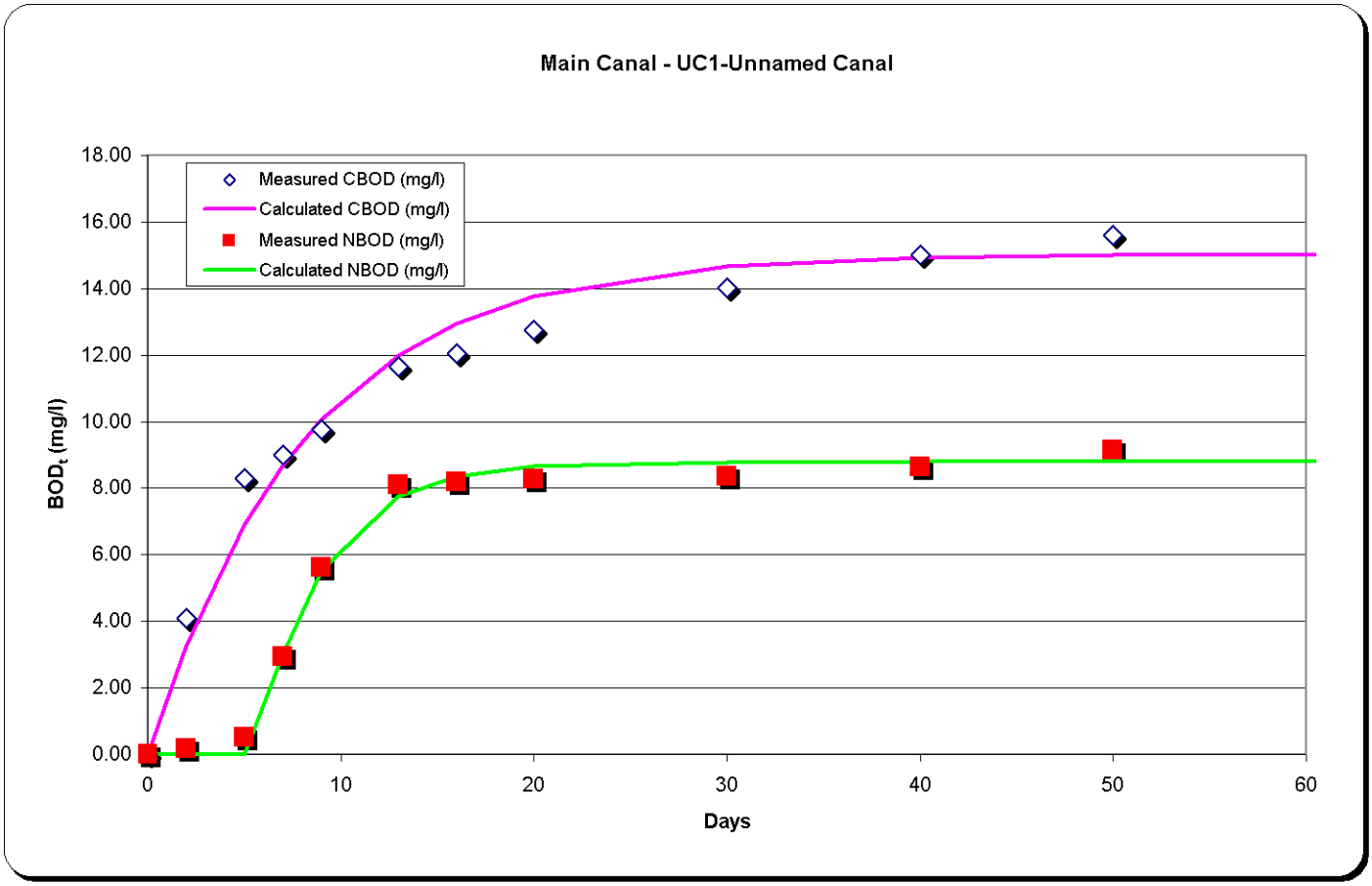
Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

BOD Analysis of the for: **Main Canal - UC1-Unnamed Canal**

Measured Data					Calculated Data	
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7
0		1.71				
2	4.1	1.75	0.18	4.10	0.00	3.28
5	8.3	1.82	0.50	8.30	0.00	6.91
7	12.0	2.35	2.92	8.99	3.01	8.69
9	15.3	2.94	5.62	9.77	5.53	10.07
13	19.4	3.48	8.09	11.64	7.76	12.00
16	20.4	3.50	8.18	12.04	8.36	12.94
20	21.4	3.52	8.27	12.75	8.65	13.76
30	22.8	3.54	8.36	14.01	8.79	14.67
40	23.8	3.60	8.64	15.01	8.79	14.93
50	24.4	3.71	9.14	15.61	8.79	15.01
61	25.0	3.77	9.41	16.21	8.79	15.04

8.79	15.04	**UBOD (mg/l)**
0.29	0.12	**k rate (1/day)**
5.54	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

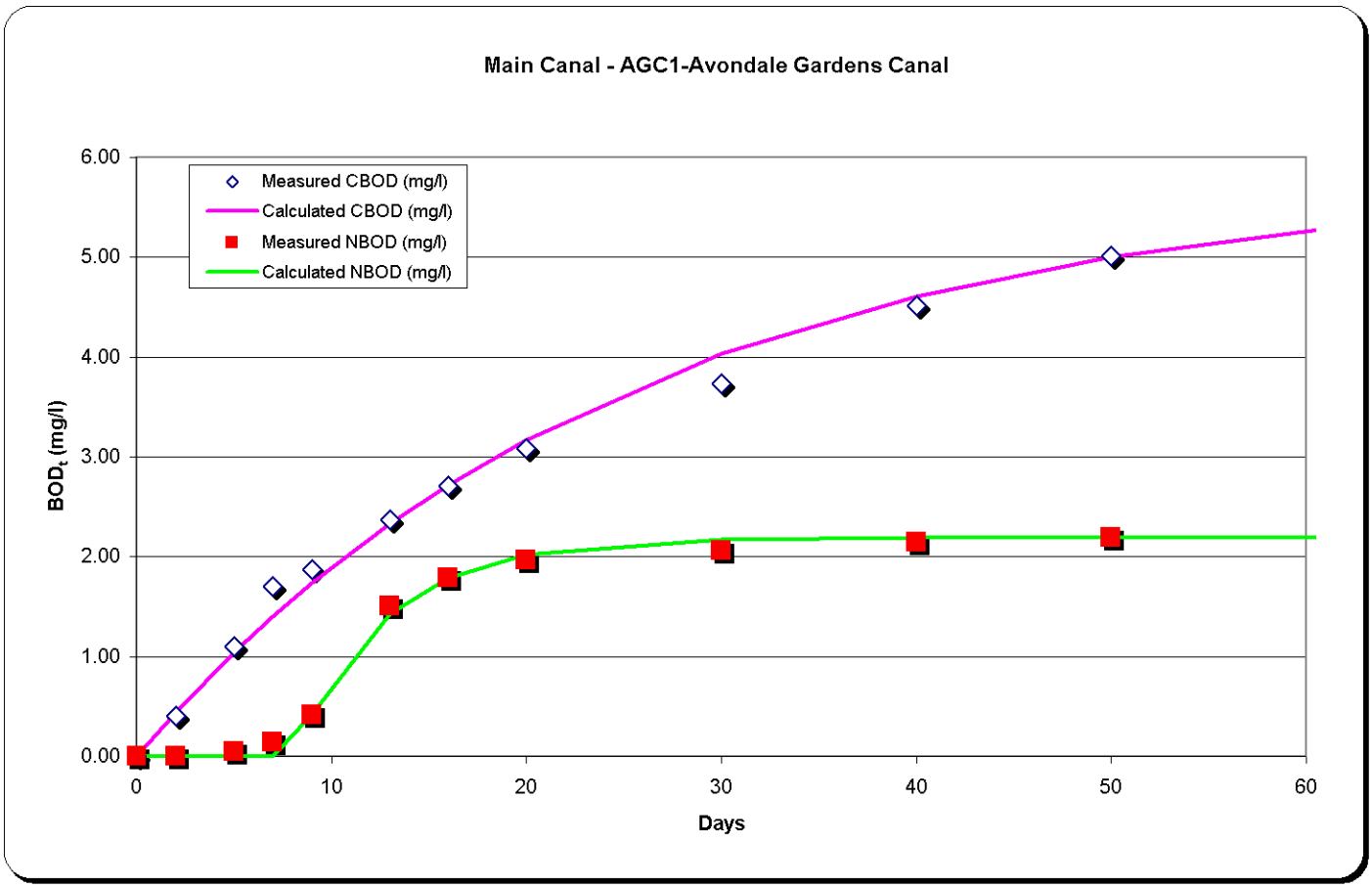
Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

BOD Analysis of the for: **Main Canal - AGC1-Avondale Gardens Canal**

Measured Data					Calculated Data	
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7
0		0.06				
2	0.4	0.06	0.00	0.40	0.00	0.44
5	1.1	0.07	0.05	1.10	0.00	1.04
7	1.7	0.09	0.14	1.70	0.00	1.40
9	2.3	0.15	0.41	1.87	0.43	1.74
13	3.8	0.39	1.51	2.37	1.43	2.33
16	4.5	0.45	1.78	2.71	1.79	2.72
20	5.1	0.49	1.97	3.08	2.02	3.17
30	5.9	0.51	2.06	3.73	2.17	4.03
40	6.7	0.53	2.15	4.51	2.19	4.61
50	7.2	0.54	2.19	5.01	2.19	5.00
61	7.7	0.57	2.33	5.51	2.19	5.29

2.19	5.82	**UBOD (mg/l)**
0.21	0.04	**k rate (1/day)**
7.97	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

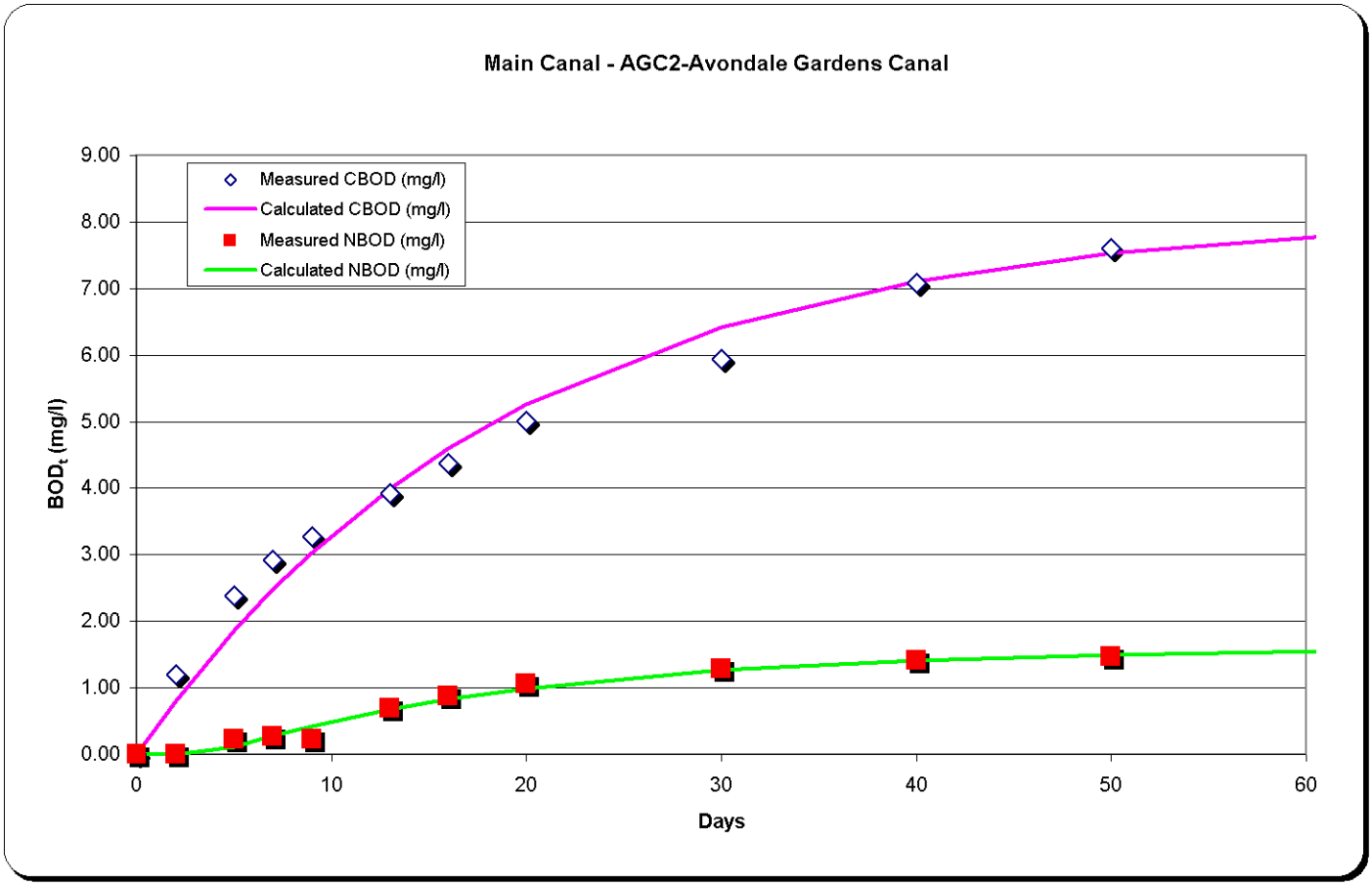
Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

BOD Analysis of the for: **Main Canal - AGC2-Avondale Gardens Canal**

Measured Data					Calculated Data	
Days	*Total BOD (mg/l)*	*NOx as N (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*	*NBOD (mg/l)*	*CBOD (mg/l)*
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7
0		0.00				
2	1.2	0.00	0.00	1.20	0.00	0.80
5	2.5	0.05	0.23	2.38	0.12	1.86
7	3.2	0.06	0.27	2.92	0.28	2.48
9	3.7	0.05	0.23	3.27	0.43	3.04
13	4.6	0.15	0.69	3.92	0.68	3.99
16	5.2	0.19	0.87	4.37	0.83	4.59
20	6.0	0.23	1.05	5.01	0.99	5.26
30	7.2	0.28	1.28	5.94	1.26	6.42
40	8.5	0.31	1.42	7.09	1.41	7.12
50	9.1	0.32	1.46	7.60	1.50	7.53
61	9.7	0.34	1.55	8.15	1.55	7.79

1.60	8.13	**UBOD (mg/l)**
0.06	0.05	**k rate (1/day)**
3.69	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

Note 8 - Nox nondetects were input at 1/2 the detection level = 0.025 mg/l.

APPENDIX B5

Cross Section Data

STREAM CROSS-SECTION SPREADSHEET

Site Number: MC1 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: Segnette Blvd Bridge (downstream side/west bdg)

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

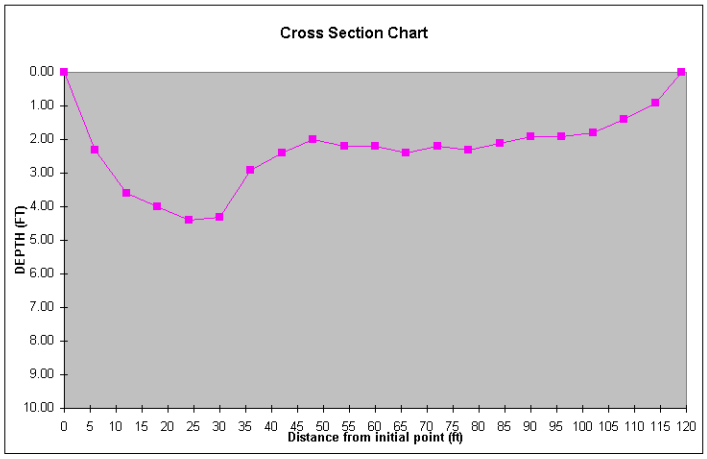
Tapedown: 10.33ft@1144

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	119.00
AREA[2] (ft²):	282.75
AVG. DEPTH[3] (ft):	2.38

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	0.0	3.00	0.00	0.00	
2	6.0	6.00	2.30	13.80	4.88%
3	12.0	6.00	3.60	21.60	7.64%
4	18.0	6.00	4.00	24.00	8.49%
5	24.0	6.00	4.40	26.40	9.34%
6	30.0	6.00	4.30	25.80	9.12%
7	36.0	6.00	2.90	17.40	6.15%
8	42.0	6.00	2.40	14.40	5.09%
9	48.0	6.00	2.00	12.00	4.24%
10	54.0	6.00	2.20	13.20	4.67%
11	60.0	6.00	2.20	13.20	4.67%
12	66.0	6.00	2.40	14.40	5.09%
13	72.0	6.00	2.20	13.20	4.67%
14	78.0	6.00	2.30	13.80	4.88%
15	84.0	6.00	2.10	12.60	4.46%
16	90.0	6.00	1.90	11.40	4.03%
17	96.0	6.00	1.90	11.40	4.03%
18	102.0	6.00	1.80	10.80	3.82%
19	108.0	6.00	1.40	8.40	2.97%
20	114.0	5.50	0.90	4.95	1.75%
21	119.0	2.50	0.00	0.00	0.00%
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	119.00		282.75	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Farlow/Fontenot	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Phillippe	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: MC2 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: Nicolle Blvd. Bridge (downstream side)

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

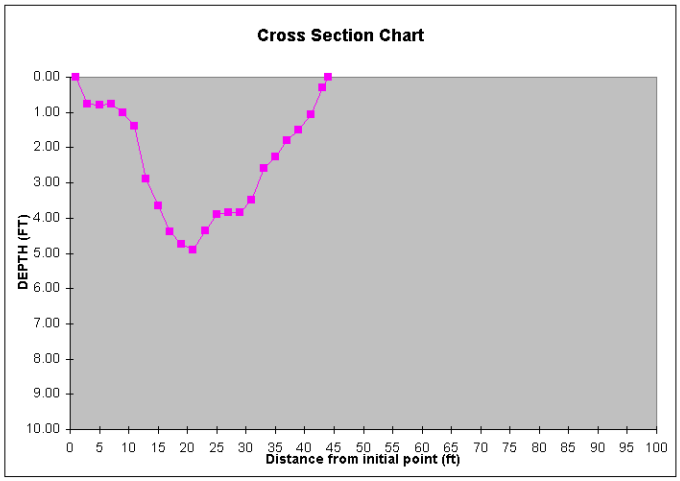
Tapedown: 13.00ft@0840

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	43.00
AREA[2] (ft^2):	108.35
AVG. DEPTH[3](ft):	2.52

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	1.0	1.00	0.00	0.00	0.00%
2	3.0	2.00	0.75	1.50	1.38%
3	5.0	2.00	0.80	1.60	1.48%
4	7.0	2.00	0.75	1.50	1.38%
5	9.0	2.00	1.00	2.00	1.85%
6	11.0	2.00	1.40	2.80	2.58%
7	13.0	2.00	2.90	5.80	5.35%
8	15.0	2.00	3.65	7.30	6.74%
9	17.0	2.00	4.40	8.80	8.12%
10	19.0	2.00	4.75	9.50	8.77%
11	21.0	2.00	4.90	9.80	9.04%
12	23.0	2.00	4.35	8.70	8.03%
13	25.0	2.00	3.90	7.80	7.20%
14	27.0	2.00	3.85	7.70	7.11%
15	29.0	2.00	3.85	7.70	7.11%
16	31.0	2.00	3.50	7.00	6.46%
17	33.0	2.00	2.60	5.20	4.80%
18	35.0	2.00	2.25	4.50	4.15%
19	37.0	2.00	1.80	3.60	3.32%
20	39.0	2.00	1.50	3.00	2.77%
21	41.0	2.00	1.05	2.10	1.94%
22	43.0	1.50	0.30	0.45	0.42%
23	44.0	0.50	0.00	0.00	0.00%
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	43.00		108.35	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Lanthier/Fontenot	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Phillippe	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: MC3 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: downstream of confluence w/Avondale Gardens Canal

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

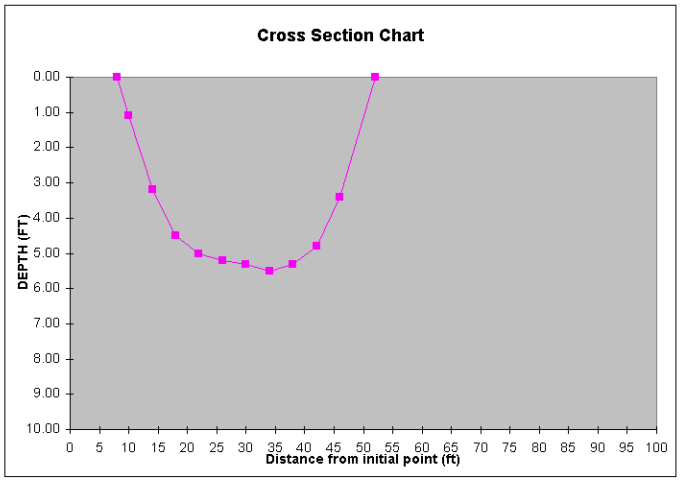
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	44.00
AREA[2] (ft²):	175.50
AVG. DEPTH[3] (ft):	3.99

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	8.0	1.00	0.00	0.00	0.00%
2	10.0	3.00	1.10	3.30	1.88%
3	14.0	4.00	3.20	12.80	7.29%
4	18.0	4.00	4.50	18.00	10.26%
5	22.0	4.00	5.00	20.00	11.40%
6	26.0	4.00	5.20	20.80	11.85%
7	30.0	4.00	5.30	21.20	12.08%
8	34.0	4.00	5.50	22.00	12.54%
9	38.0	4.00	5.30	21.20	12.08%
10	42.0	4.00	4.80	19.20	10.94%
11	46.0	5.00	3.40	17.00	9.69%
12	52.0	3.00	0.00	0.00	0.00%
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	44.00		175.50	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Griffin, Garner	**Data Inputed by / Date:**	Phillippe
Notetaker/Recorder:	Stone, Grezaffi	**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: MC4 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: near Cataouache Pumping Station #1

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

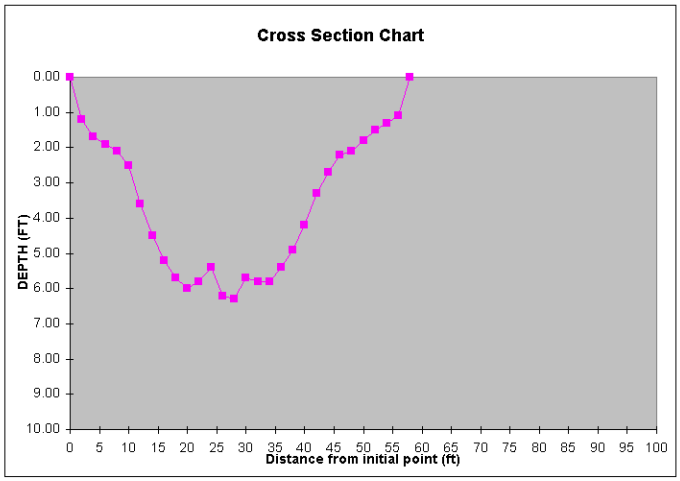
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	58.00
AREA[2] (ft^2):	211.80
AVG. DEPTH[3](ft):	3.65

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	0.0	1.00	0.00	0.00	
2	2.0	2.00	1.20	2.40	1.13%
3	4.0	2.00	1.70	3.40	1.61%
4	6.0	2.00	1.90	3.80	1.79%
5	8.0	2.00	2.10	4.20	1.98%
6	10.0	2.00	2.50	5.00	2.36%
7	12.0	2.00	3.60	7.20	3.40%
8	14.0	2.00	4.50	9.00	4.25%
9	16.0	2.00	5.20	10.40	4.91%
10	18.0	2.00	5.70	11.40	5.38%
11	20.0	2.00	6.00	12.00	5.67%
12	22.0	2.00	5.80	11.60	5.48%
13	24.0	2.00	5.40	10.80	5.10%
14	26.0	2.00	6.20	12.40	5.85%
15	28.0	2.00	6.30	12.60	5.95%
16	30.0	2.00	5.70	11.40	5.38%
17	32.0	2.00	5.80	11.60	5.48%
18	34.0	2.00	5.80	11.60	5.48%
19	36.0	2.00	5.40	10.80	5.10%
20	38.0	2.00	4.90	9.80	4.63%
21	40.0	2.00	4.20	8.40	3.97%
22	42.0	2.00	3.30	6.60	3.12%
23	44.0	2.00	2.70	5.40	2.55%
24	46.0	2.00	2.20	4.40	2.08%
25	48.0	2.00	2.10	4.20	1.98%
26	50.0	2.00	1.80	3.60	1.70%
27	52.0	2.00	1.50	3.00	1.42%
28	54.0	2.00	1.30	2.60	1.23%
29	56.0	2.00	1.10	2.20	1.04%
30	58.0	1.00	0.00	0.00	0.00%
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	58.00		211.80	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Garner, Griffin	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Stone, Grezaffi	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: MC5 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: Bayou Segnette St. Park Bridge (downstream)

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

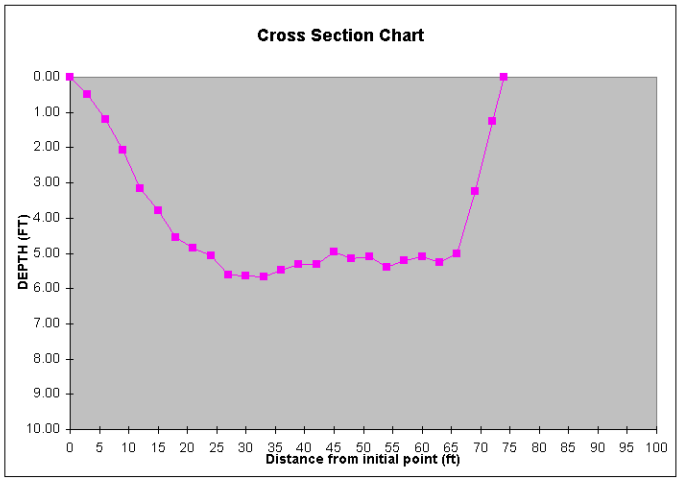
Tapedown: 10.85@1430

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	74.00
AREA[2] (ft^2):	310.69
AVG. DEPTH[3](ft):	4.20

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	0.0	1.50	0.00	0.00	
2	3.0	3.00	0.50	1.50	0.48%
3	6.0	3.00	1.20	3.60	1.16%
4	9.0	3.00	2.06	6.18	1.99%
5	12.0	3.00	3.15	9.45	3.04%
6	15.0	3.00	3.78	11.34	3.65%
7	18.0	3.00	4.54	13.62	4.38%
8	21.0	3.00	4.84	14.52	4.67%
9	24.0	3.00	5.07	15.21	4.90%
10	27.0	3.00	5.60	16.80	5.41%
11	30.0	3.00	5.63	16.89	5.44%
12	33.0	3.00	5.67	17.01	5.47%
13	36.0	3.00	5.48	16.44	5.29%
14	39.0	3.00	5.30	15.90	5.12%
15	42.0	3.00	5.30	15.90	5.12%
16	45.0	3.00	4.95	14.85	4.78%
17	48.0	3.00	5.15	15.45	4.97%
18	51.0	3.00	5.10	15.30	4.92%
19	54.0	3.00	5.40	16.20	5.21%
20	57.0	3.00	5.20	15.60	5.02%
21	60.0	3.00	5.10	15.30	4.92%
22	63.0	3.00	5.25	15.75	5.07%
23	66.0	3.00	5.00	15.00	4.83%
24	69.0	3.00	3.25	9.75	3.14%
25	72.0	2.50	1.25	3.13	1.01%
26	74.0	1.00	0.00	0.00	0.00%
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	74.00		310.69	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Phillippe/Fontenot	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Farlow	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: MC6 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: upstream of confluence w/Main Canal

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

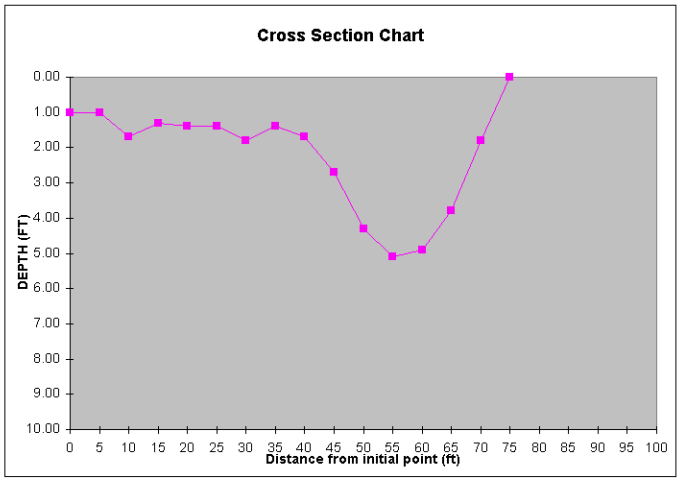
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	75.00
AREA[2] (ft^2):	174.00
AVG. DEPTH[3](ft):	2.32

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	0.0	2.50	1.00	2.50	
2	5.0	5.00	1.00	5.00	2.87%
3	10.0	5.00	1.70	8.50	4.89%
4	15.0	5.00	1.30	6.50	3.74%
5	20.0	5.00	1.40	7.00	4.02%
6	25.0	5.00	1.40	7.00	4.02%
7	30.0	5.00	1.80	9.00	5.17%
8	35.0	5.00	1.40	7.00	4.02%
9	40.0	5.00	1.70	8.50	4.89%
10	45.0	5.00	2.70	13.50	7.76%
11	50.0	5.00	4.30	21.50	12.36%
12	55.0	5.00	5.10	25.50	14.66%
13	60.0	5.00	4.90	24.50	14.08%
14	65.0	5.00	3.80	19.00	10.92%
15	70.0	5.00	1.80	9.00	5.17%
16	75.0	2.50	0.00	0.00	0.00%
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	75.00		174.00	98.56%



Data Collection Crew		Office Data Work	
Measurement made by:	Brignac/Zaunbrecher	**Data Inputed by / Date:**	Phillippe
Notetaker/Recorder:	Champagne	**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: MC7 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: ~50ft. Upstream of LaPalco Blvd. Bridge

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

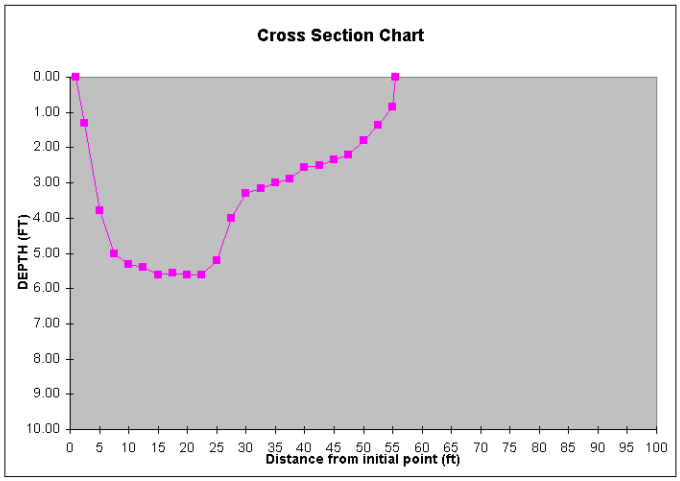
Tapedown: NA

Guage Height: NA

Date: 08/20/02 1625hrs

WIDTH[1] (ft):	54.50
AREA[2] (ft^2):	194.25
AVG. DEPTH[3](ft):	3.56

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	1.0	0.75	0.00	0.00	0.00%
2	2.5	2.00	1.30	2.60	1.34%
3	5.0	2.50	3.80	9.50	4.89%
4	7.5	2.50	5.00	12.50	6.44%
5	10.0	2.50	5.30	13.25	6.82%
6	12.5	2.50	5.40	13.50	6.95%
7	15.0	2.50	5.60	14.00	7.21%
8	17.5	2.50	5.55	13.88	7.14%
9	20.0	2.50	5.60	14.00	7.21%
10	22.5	2.50	5.60	14.00	7.21%
11	25.0	2.50	5.20	13.00	6.69%
12	27.5	2.50	4.00	10.00	5.15%
13	30.0	2.50	3.30	8.25	4.25%
14	32.5	2.50	3.15	7.88	4.05%
15	35.0	2.50	3.00	7.50	3.86%
16	37.5	2.50	2.90	7.25	3.73%
17	40.0	2.50	2.55	6.38	3.28%
18	42.5	2.50	2.50	6.25	3.22%
19	45.0	2.50	2.35	5.88	3.02%
20	47.5	2.50	2.20	5.50	2.83%
21	50.0	2.50	1.80	4.50	2.32%
22	52.5	2.50	1.35	3.38	1.74%
23	55.0	1.50	0.85	1.28	0.66%
24	55.5	0.25	0.00	0.00	0.00%
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	54.50		194.25	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Lantier	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Fontenot	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: MC8 **Subsegment:** 020501 **Waterbody:** Main Canal

Site Description: near confluence with Kelly Canal

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☐ RDB ☑ LDB

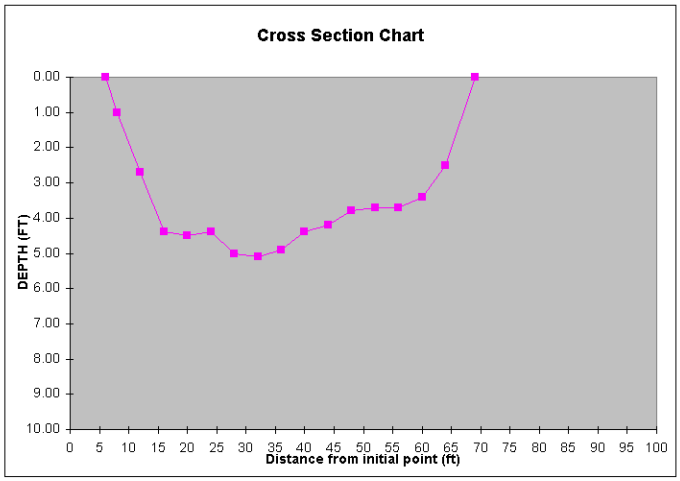
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	63.00
AREA[2] (ft^2):	231.05
AVG. DEPTH[3](ft):	3.67

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	6.0	1.00	0.00	0.00	0.00%
2	8.0	3.00	1.00	3.00	1.30%
3	12.0	4.00	2.70	10.80	4.67%
4	16.0	4.00	4.40	17.60	7.62%
5	20.0	4.00	4.50	18.00	7.79%
6	24.0	4.00	4.40	17.60	7.62%
7	28.0	4.00	5.00	20.00	8.66%
8	32.0	4.00	5.10	20.40	8.83%
9	36.0	4.00	4.90	19.60	8.48%
10	40.0	4.00	4.40	17.60	7.62%
11	44.0	4.00	4.20	16.80	7.27%
12	48.0	4.00	3.80	15.20	6.58%
13	52.0	4.00	3.70	14.80	6.41%
14	56.0	4.00	3.70	14.80	6.41%
15	60.0	4.00	3.40	13.60	5.89%
16	64.0	4.50	2.50	11.25	4.87%
17	69.0	2.50	0.00	0.00	0.00%
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	63.00		231.05	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Garner, Grezaffi	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Stone, Griffin	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: AGC-1Xsect **Subsegment:** 020501 **Waterbody:** Avondale Gardens Canal

Site Description: downstream of US Hwy 90 (rep xs)

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

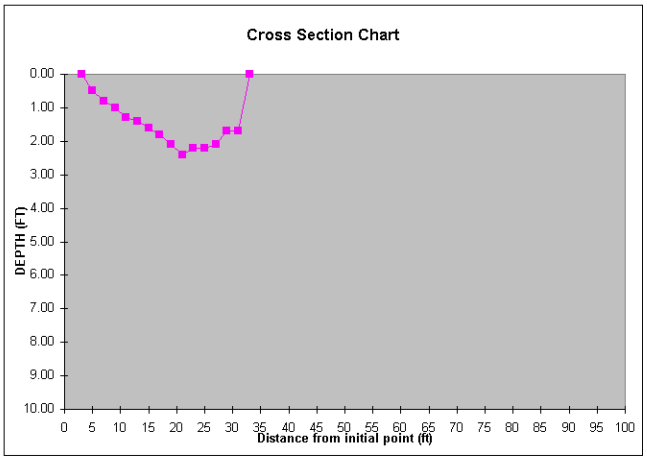
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	30.00
AREA[2] (ft[2]):	45.60
AVG. DEPTH[3] (ft):	1.52

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	3.0	1.00	0.00	0.00	0.00%
2	5.0	2.00	0.50	1.00	2.19%
3	7.0	2.00	0.80	1.60	3.51%
4	9.0	2.00	1.00	2.00	4.39%
5	11.0	2.00	1.30	2.60	5.70%
6	13.0	2.00	1.40	2.80	6.14%
7	15.0	2.00	1.60	3.20	7.02%
8	17.0	2.00	1.80	3.60	7.89%
9	19.0	2.00	2.10	4.20	9.21%
10	21.0	2.00	2.40	4.80	10.53%
11	23.0	2.00	2.20	4.40	9.65%
12	25.0	2.00	2.20	4.40	9.65%
13	27.0	2.00	2.10	4.20	9.21%
14	29.0	2.00	1.70	3.40	7.46%
15	31.0	2.00	1.70	3.40	7.46%
16	33.0	1.00	0.00	0.00	0.00%
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	30.00		45.60	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Garner, Griffin	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Stone, Grezaffi	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: AGC1Drogue Subsegment: 025001 Waterbody: Avondale Gardens Canal

Site Description: downstream of US Hwy 90 (drogue xs)

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

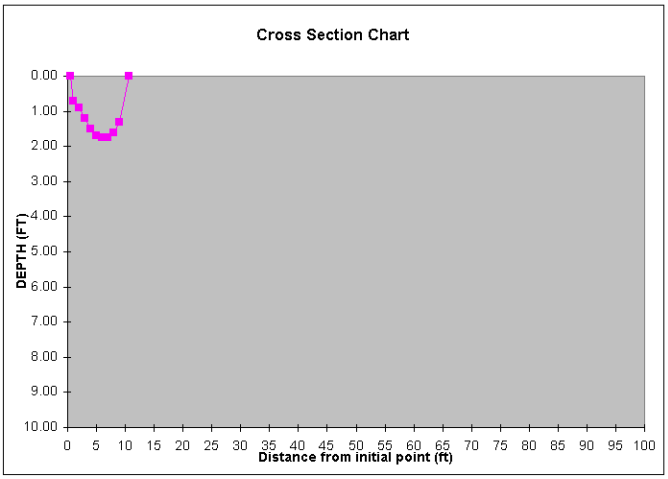
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	10.10
AREA[2] (ft^2):	12.62
AVG. DEPTH[3] (ft):	1.25

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	0.5	0.25	0.00	0.00	0.00%
2	1.0	0.75	0.70	0.53	4.16%
3	2.0	1.00	0.90	0.90	7.13%
4	3.0	1.00	1.20	1.20	9.51%
5	4.0	1.00	1.50	1.50	11.89%
6	5.0	1.00	1.70	1.70	13.48%
7	6.0	1.00	1.75	1.75	13.87%
8	7.0	1.00	1.75	1.75	13.87%
9	8.0	1.00	1.60	1.60	12.68%
10	9.0	1.30	1.30	1.69	13.40%
11	10.6	0.80	0.00	0.00	0.00%
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	10.10		12.62	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Garner, Grezaffi	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Stone, Griffin	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: AGC2 **Subsegment:** 020501 **Waterbody:** Avondale Gardens Canal

Site Description: near cattle guard

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

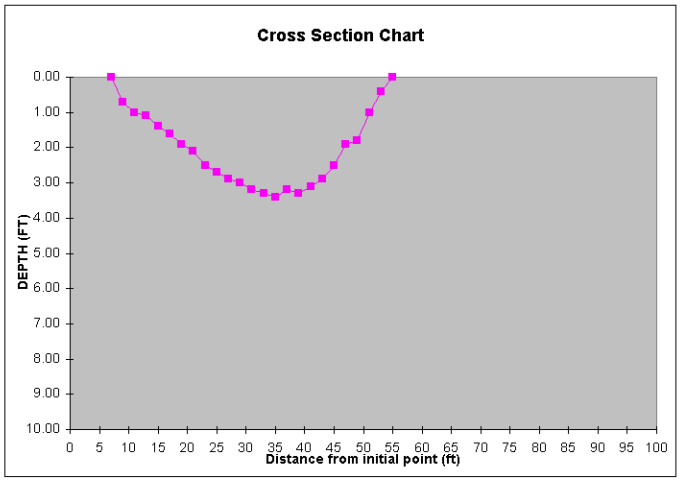
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	48.00
AREA[2] (ft^2):	101.80
AVG. DEPTH[3](ft):	2.12

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	7.0	1.00	0.00	0.00	0.00%
2	9.0	2.00	0.70	1.40	1.38%
3	11.0	2.00	1.00	2.00	1.96%
4	13.0	2.00	1.10	2.20	2.16%
5	15.0	2.00	1.40	2.80	2.75%
6	17.0	2.00	1.60	3.20	3.14%
7	19.0	2.00	1.90	3.80	3.73%
8	21.0	2.00	2.10	4.20	4.13%
9	23.0	2.00	2.50	5.00	4.91%
10	25.0	2.00	2.70	5.40	5.30%
11	27.0	2.00	2.90	5.80	5.70%
12	29.0	2.00	3.00	6.00	5.89%
13	31.0	2.00	3.20	6.40	6.29%
14	33.0	2.00	3.30	6.60	6.48%
15	35.0	2.00	3.40	6.80	6.68%
16	37.0	2.00	3.20	6.40	6.29%
17	39.0	2.00	3.30	6.60	6.48%
18	41.0	2.00	3.10	6.20	6.09%
19	43.0	2.00	2.90	5.80	5.70%
20	45.0	2.00	2.50	5.00	4.91%
21	47.0	2.00	1.90	3.80	3.73%
22	49.0	2.00	1.80	3.60	3.54%
23	51.0	2.00	1.00	2.00	1.96%
24	53.0	2.00	0.40	0.80	0.79%
25	55.0	1.00	0.00	0.00	0.00%
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	48.00		101.80	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Stone, Griffin	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Garner, Grezaffi	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: AGC3 **Subsegment:** 020501 **Waterbody:** Avondale Gardens Canal

Site Description: upstream of confluence w/Main Canal

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

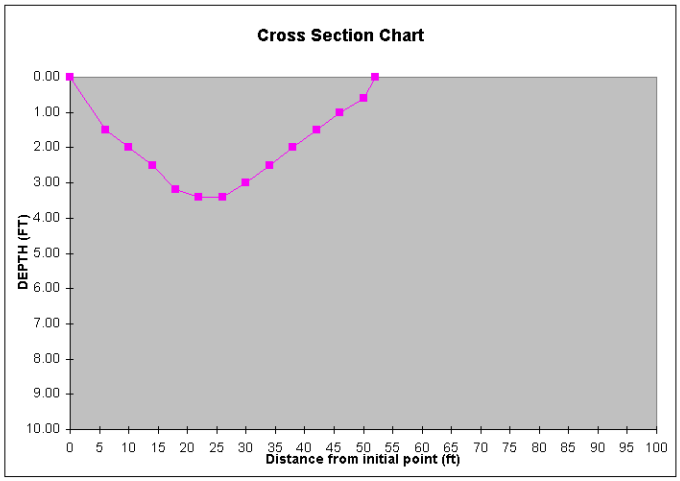
Tapedown: NA

Guage Height: NA

Date: 08/20/02

WIDTH[1] (ft):	52.00
AREA[2] (ft^2):	107.30
AVG. DEPTH[3](ft):	2.06

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	0.0	3.00	0.00	0.00	
2	6.0	5.00	1.50	7.50	6.99%
3	10.0	4.00	2.00	8.00	7.46%
4	14.0	4.00	2.50	10.00	9.32%
5	18.0	4.00	3.20	12.80	11.93%
6	22.0	4.00	3.40	13.60	12.67%
7	26.0	4.00	3.40	13.60	12.67%
8	30.0	4.00	3.00	12.00	11.18%
9	34.0	4.00	2.50	10.00	9.32%
10	38.0	4.00	2.00	8.00	7.46%
11	42.0	4.00	1.50	6.00	5.59%
12	46.0	4.00	1.00	4.00	3.73%
13	50.0	3.00	0.60	1.80	1.68%
14	52.0	1.00	0.00	0.00	0.00%
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	52.00		107.30	100.00%



Data Collection Crew		Office Data Work	
Measurement made by:	Griffin, Grezaffi	Data Inputed by / Date:	Phillippe
Notetaker/Recorder:	Garner, Stone	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.

APPENDIX B6

Velocity and Flow Information

Table B6.1. Velocities and Flow Estimates from Drogue Measurements.

Site	Date	Time	Drogue velocity (ft/sec)			Average drogue velocity (ft/sec)	Velocity adjustment factor*	Estimated avg. channel velocity (ft/sec)	Cross section area (ft^2)	Estimated flow rate (cfs)
			right	middle	left					
MC-1	08/20/02	11:44	0.14	0.25	0.17	0.19	1.16	0.16	282.8	46.0
MC-2	08/20/02	8:40	0.16	0.22	0.27	0.21	1.16	0.18	108.4	20.0
MC-3	08/20/02	12:30		0.11		0.11	1.16	0.09	175.5	16.3
MC-4	08/20/02	14:30		0.02		0.02	1.16	0.01	211.8	3.1
AGC-1	08/20/02	8:30		0.07		0.07	1.16	0.06	12.6	0.8
AGC-2	08/20/02	10:20		0.07		0.07	1.16	0.06	101.8	6.5
RC-1	08/20/02	14:00	0.20	0.46	0.20	0.29	1.16	0.25	80.3	19.7
UC-1	08/20/02	15:05		0.19		0.19	1.16	0.16	95.9	15.5

* Velocity adjustment factor is ratio of surface velocity to mean velocity for the water column based on information from page 133 of "Measurement and Computation of Streamflow: Volume 1. Measurement and Discharge", USGS Water Supply Paper 2175.

FILE: R:\WP_FILES\3110-051\MAIN CANAL\PDF FILES MAIN CANAL\APPENDIX B6\TABLE B6-1.XLS

Table B6.2. Center of mass calculations for time of travel study at station MC-6

PROJECT: Main Canal
INJECTION LOCATION: MC-1
SAMPLING LOCATION: MC-6

INJECTION DATE AND TIME: 8/20/2002 8:40
DISTANCE FROM INJEC.: 495 feet

DATE AND TIME	ELAPSED TIME (hours)	MEASUR DYE CONC (ppb)	AREA UNDER CURVE	HORIZ MOMENT
8/20/2002 9:30	0.83	0		
8/20/2002 9:40	1.00	0	0.000	0.000
8/20/2002 9:46	1.10	1.61	0.006	0.006
8/20/2002 9:50	1.17	0.358	0.001	0.001
8/20/2002 9:55	1.25	0.924	0.003	0.004
8/20/2002 10:00	1.33	8.97	0.031	0.042
8/20/2002 10:05	1.42	8.56	0.030	0.042
8/20/2002 10:10	1.50	7.44	0.026	0.039
8/20/2002 10:15	1.58	8.71	0.030	0.048
8/20/2002 10:20	1.67	7.78	0.027	0.045
8/20/2002 10:25	1.75	9.34	0.032	0.057
8/20/2002 10:30	1.83	7.22	0.025	0.046
8/20/2002 10:35	1.92	7.43	0.039	0.074
8/20/2002 10:45	2.08	14.8	0.077	0.161
8/20/2002 10:50	2.17	15.9	0.055	0.120
8/20/2002 10:55	2.25	15.9	0.055	0.124
8/20/2002 11:00	2.33	19.9	0.069	0.161
8/20/2002 11:05	2.42	22	0.076	0.185
8/20/2002 11:10	2.50	18.1	0.063	0.157
8/20/2002 11:15	2.58	16.1	0.056	0.144
8/20/2002 11:20	2.67	21	0.073	0.194
8/20/2002 11:25	2.75	29.3	0.102	0.280
8/20/2002 11:30	2.83	19.5	0.068	0.192
8/20/2002 11:35	2.92	17.6	0.061	0.178
8/20/2002 11:40	3.00	22.9	0.080	0.239
8/20/2002 11:45	3.08	19.1	0.066	0.204
8/20/2002 11:50	3.17	24.5	0.085	0.269
8/20/2002 11:55	3.25	20.8	0.072	0.235
8/20/2002 12:00	3.33	22.8	0.079	0.264
8/20/2002 12:05	3.42	26.5	0.092	0.314
8/20/2002 12:10	3.50	23.1	0.080	0.281
8/20/2002 12:15	3.58	18.3	0.064	0.228
8/20/2002 12:20	3.67	17.4	0.060	0.222
8/20/2002 12:25	3.75	18.8	0.065	0.245
8/20/2002 12:30	3.83	16.3	0.057	0.217
8/20/2002 12:35	3.92	16.5	0.057	0.224
8/20/2002 12:40	4.00	15.9	0.055	0.221
8/20/2002 12:45	4.08	13.2	0.046	0.187
8/20/2002 12:50	4.17	13.1	0.045	0.190
8/20/2002 12:55	4.25	8.06	0.028	0.119

DATE AND TIME	ELAPSED TIME (hours)	MEASUR DYE CONC (ppb)	AREA UNDER CURVE	HORIZ MOMENT
8/20/2002 13:00	4.33	9.8	0.051	0.221
8/20/2002 13:10	4.50	9	0.063	0.281
8/20/2002 13:20	4.67	8.1	0.056	0.263
8/20/2002 13:30	4.83	6.88	0.048	0.231
8/20/2002 13:40	5.00	6.22	0.043	0.216
8/20/2002 13:50	5.17	5.81	0.040	0.208
8/20/2002 14:00	5.33	5.54	0.038	0.205
8/20/2002 14:10	5.50	4.3	0.030	0.164
8/20/2002 14:20	5.67	4.78	0.033	0.188
8/20/2002 14:30	5.83	5.44	0.038	0.220
8/20/2002 14:40	6.00	3.64	0.025	0.152
8/20/2002 14:50	6.17	3.66	0.025	0.157
8/20/2002 15:00	6.33	3.3	0.023	0.145
8/20/2002 15:10	6.50	3.86	0.027	0.174
8/20/2002 15:20	6.67	2.44	0.017	0.113
8/20/2002 15:30	6.83	3.12	0.022	0.148
8/20/2002 15:40	7.00	1.72	0.012	0.084
8/20/2002 15:50	7.17	3.35	0.023	0.167
8/20/2002 16:00	7.33	3.33	0.023	0.170
8/20/2002 16:10	7.50	3.84	0.027	0.200
8/20/2002 16:20	7.67	4.17	0.029	0.222
8/20/2002 16:30	7.83	3.7	0.013	0.101
		TOTALS =	2.744	9.988
		TRAVEL TIME (hours) =		3.64
		AVERAGE VELOCITY (ft/sec) =		0.04

Explanation of calculations:

1. Area under curve is measured concentration times sampling interval. Sampling interval is half of the time difference between the subsequent and preceding samples.
2. Horizontal moment is area under curve times elapsed time since injection.
3. Travel time is the sum of the horizontal moment divided by the sum of the area under the curve.
4. Average velocity is travel distance divided by travel time (with unit conversions).

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\RESULTS OF DYE STUDIES.XLS

Table B6.3. Center of mass calculations for time of travel study at station MC-7

PROJECT: Main Canal
INJECTION LOCATION: MC-1
SAMPLING LOCATION: MC-7

INJECTION DATE AND TIME: 8/20/2002 8:40
DISTANCE FROM INJEC.: 3820 feet

DATE AND TIME	ELAPSED TIME (hours)	MEASUR DYE CONC (ppb)	AREA UNDER CURVE	HORIZ MOMENT
8/21/2002 13:00	28.33	0.21		
8/21/2002 13:30	28.83	0.14	0.003	0.084
8/21/2002 14:00	29.33	0.5	0.010	0.306
8/21/2002 14:30	29.83	0.73	0.015	0.454
8/21/2002 15:00	30.33	3.23	0.067	2.041
8/21/2002 15:30	30.83	3.28	0.068	2.107
8/21/2002 16:00	31.33	4.32	0.090	2.820
8/21/2002 16:30	31.83	4.72	0.098	3.130
8/21/2002 17:00	32.33	5.59	0.116	3.765
8/21/2002 17:30	32.83	4.95	0.103	3.386
8/21/2002 18:00	33.33	4.23	0.088	2.938
8/21/2002 18:30	33.83	4.05	0.084	2.855
8/21/2002 19:00	34.33	3.81	0.079	2.725
8/21/2002 19:30	34.83	3.62	0.075	2.627
8/21/2002 20:00	35.33	3.44	0.072	2.532
8/21/2002 20:30	35.83	3.49	0.073	2.605
8/21/2002 21:00	36.33	3.53	0.074	2.672
8/21/2002 21:30	36.83	3.64	0.076	2.793
8/21/2002 22:00	37.33	3.43	0.071	2.668
8/21/2002 22:30	37.83	3.57	0.074	2.814
8/21/2002 23:00	38.33	3.32	0.069	2.651
8/21/2002 23:30	38.83	3.28	0.068	2.654
8/22/2002 0:00	39.33	3.16	0.066	2.589
8/22/2002 0:30	39.83	3.1	0.065	2.573
8/22/2002 1:00	40.33	2.58	0.054	2.168
8/22/2002 1:30	40.83	2.59	0.054	2.203
8/22/2002 2:00	41.33	2.59	0.054	2.230
8/22/2002 2:30	41.83	2.4	0.075	3.138
8/22/2002 3:30	42.83	2.41	0.100	4.301
8/22/2002 4:30	43.83	2.33	0.097	4.256
8/22/2002 5:30	44.83	2.29	0.095	4.278
8/22/2002 6:30	45.83	2.29	0.095	4.373
8/22/2002 7:30	46.83	2.18	0.068	3.191
8/22/2002 8:00	47.33	2.25	0.047	2.219
8/22/2002 8:30	47.83	2.19	0.068	3.274
8/22/2002 9:30	48.83	2.15	0.090	4.375
8/22/2002 10:30	49.83	2.23	0.093	4.630
8/22/2002 11:30	50.83	2.54	0.079	4.035
8/22/2002 12:00	51.33	2.72	0.090	4.606
8/22/2002 13:05	52.42	3.34	0.354	18.540

DATE AND TIME	ELAPSED TIME (hours)	MEASUR DYE CONC (ppb)	AREA UNDER CURVE	HORIZ MOMENT
8/22/2002 17:05	56.42	3.6	0.375	21.156
8/22/2002 18:05	57.42	3.48	0.218	12.488
8/22/2002 20:05	59.42	3.75	0.313	18.568
8/22/2002 22:05	61.42	3.78	0.315	19.346
8/23/2002 0:05	63.42	3.64	0.455	28.855
8/23/2002 4:05	67.42	3.2	0.533	35.956
8/23/2002 8:05	71.42	3.16	0.461	32.911
8/23/2002 11:05	74.42	3.04	0.190	14.139
		TOTALS =	5.980	311.024
		TRAVEL TIME (hours) =		52.01
		AVERAGE VELOCITY (ft/sec) =		0.02

Explanation of calculations:

1. Area under curve is measured concentration times sampling interval. Sampling interval is half of the time difference between the subsequent and preceding samples.
2. Horizontal moment is area under curve times elapsed time since injection.
3. Travel time is the sum of the horizontal moment divided by the sum of the area under the curve.
4. Average velocity is travel distance divided by travel time (with unit conversions).

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\RESULTS OF DYE STUDIES.XLS

Figure B6.1. Measured Dye Concentrations in Main Canal at MC-6

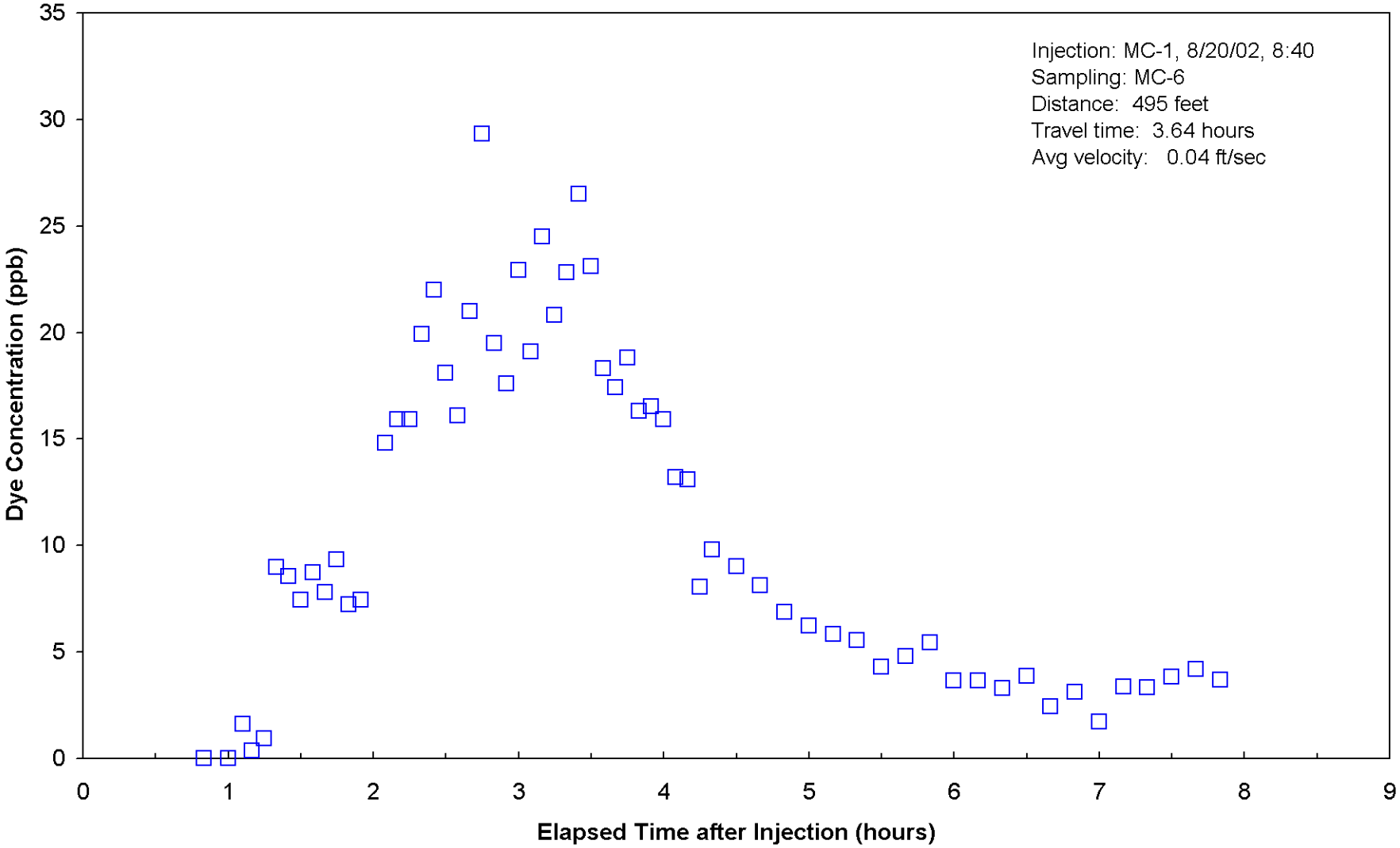


Figure B6.2. Measured Dye Concentrations in Main Canal at MC-7.

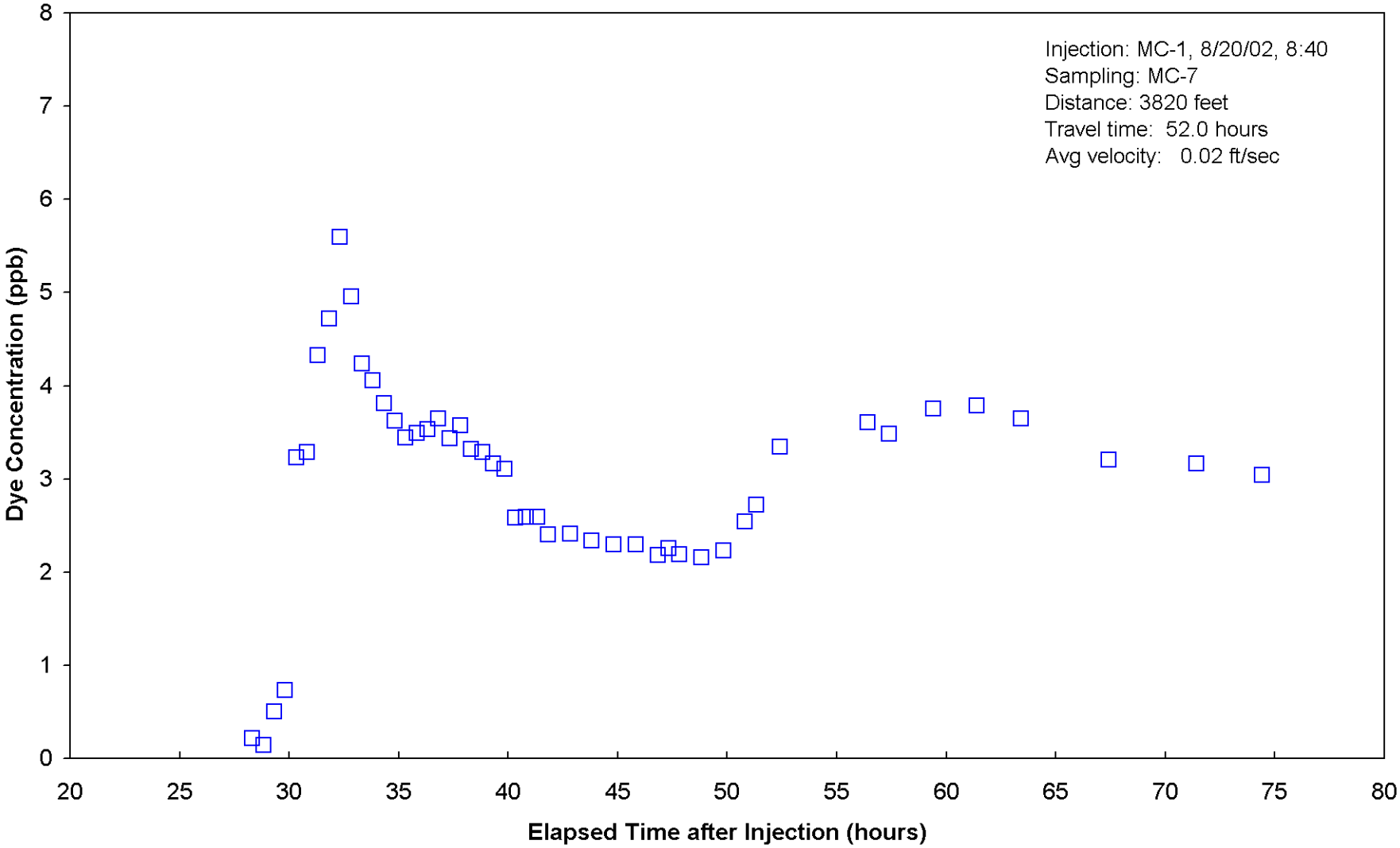
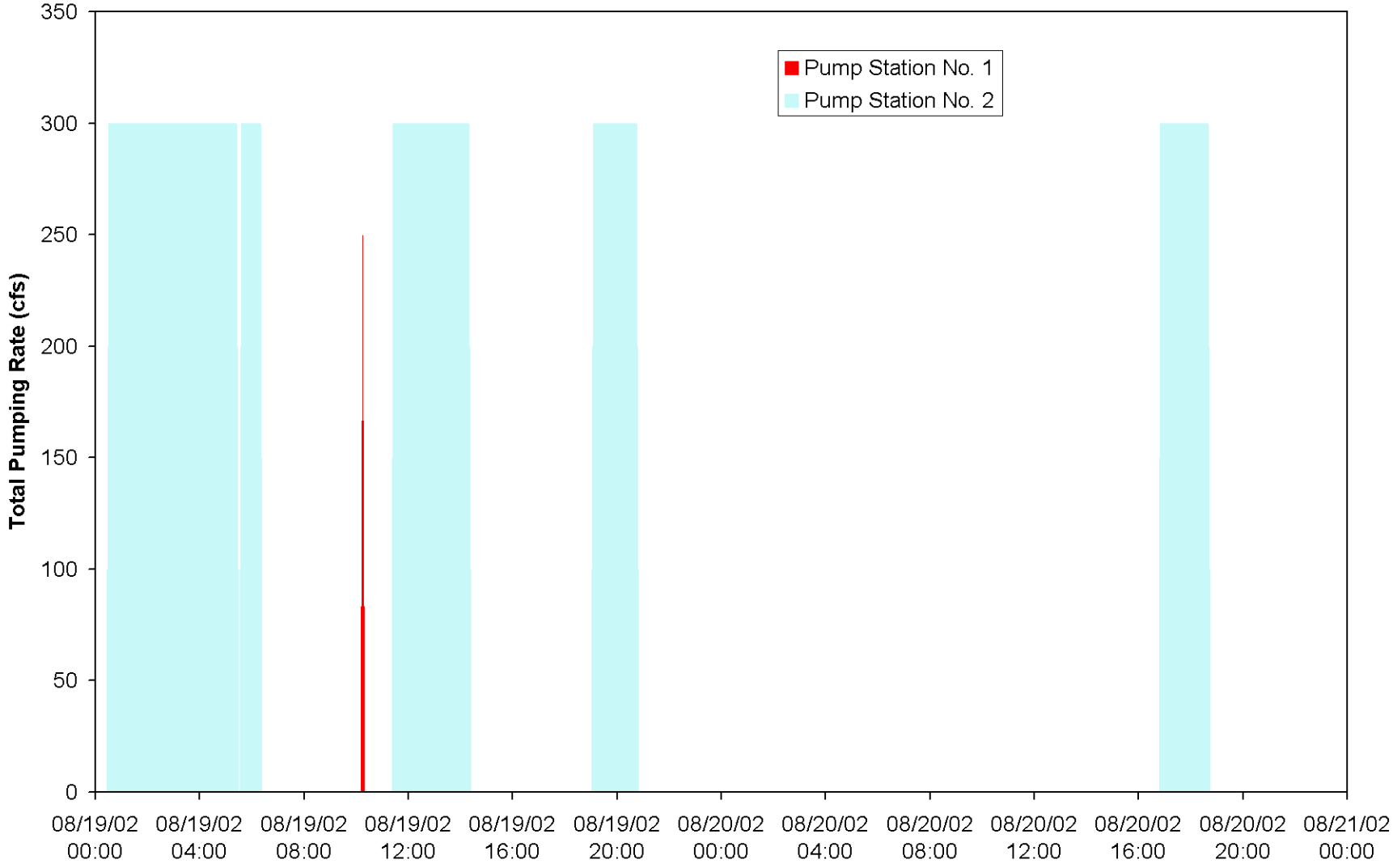


Figure B6.3. Pumping during August 19-20 at Lake Cataouatche Pump Stations No. 1 and 2



APPENDIX C

Vector Diagram

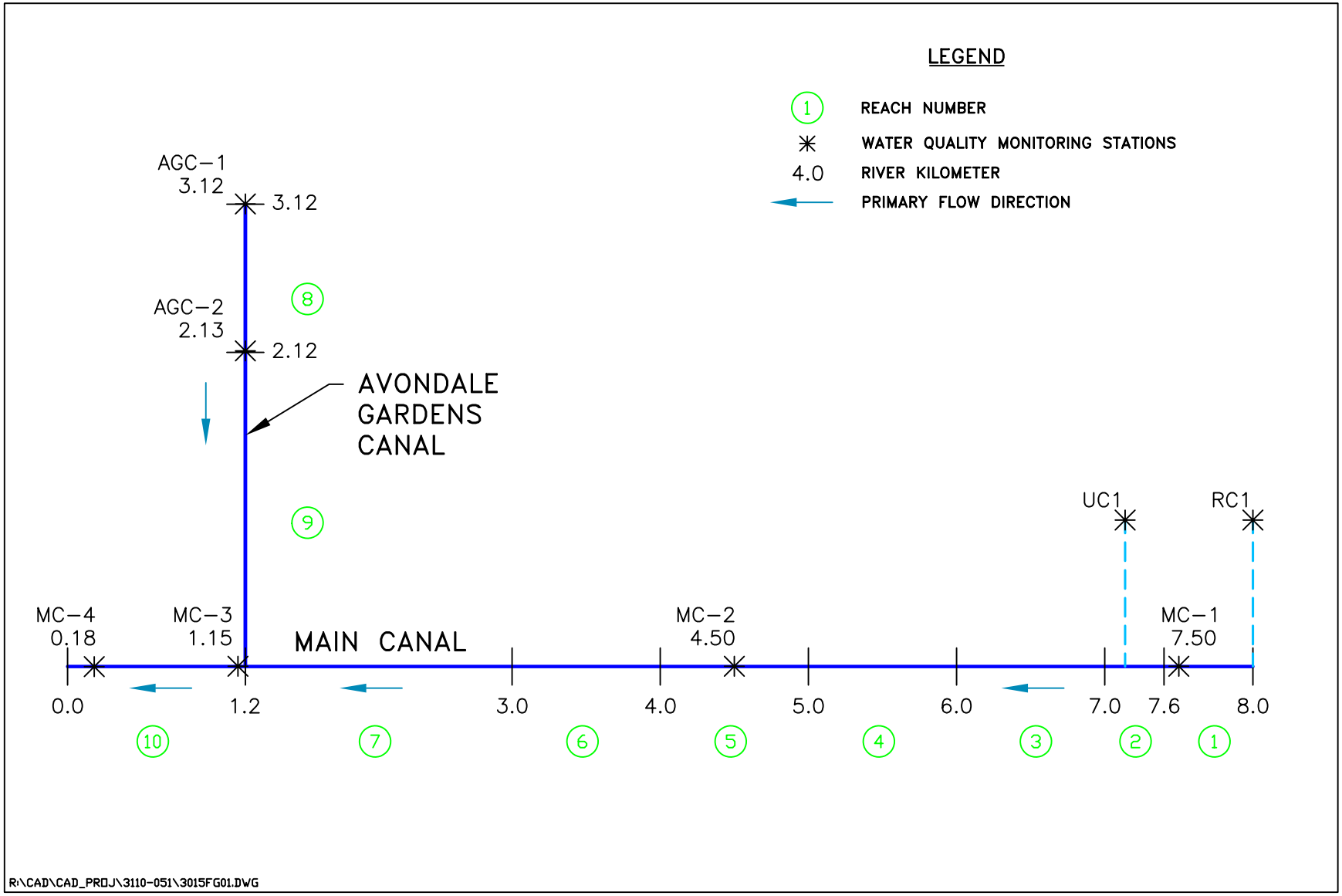


Figure C.1. LA-QUAL Vector Diagram for Main Canal System.

APPENDIX D

Model Inputs for Calibration

APPENDIX D. MAIN CANAL MODEL INPUTS FOR CALIBRATION

Table D.1. Calibration Inputs for Hydraulics (Data Type 9).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Width coefficient, a	1 – 10	0	Set to zero because changes in flow rate between calibration and projection are assumed to cause negligible changes in width.
Width exponent, b	1 – 10	0	
Width constant, c	1	22.50	Width from cross section for MC-5
	2	13.10	Width from cross section for MC-6
	3	16.60	Width from cross section for MC-7
	4	14.85	Average of reaches 3 and 5
	5	13.11	Width from cross section for MC-2
	6	16.15	Average of reaches 5 and 7
	7	19.20	Width from cross section for MC-8
	8	9.14	Width from cross section for AGC-1
	9	15.20	Average of widths from cross sections for AGC-2 and AGC-3
	10	15.54	Average of average widths from cross sections for MC-3 and MC-4
Depth coefficient, d	1 – 10	0	Set to zero because changes in flow rate between calibration and projection are assumed to cause negligible changes in depth.
Depth exponent, e	1 – 10	0	
Depth constant, f	1	1.28	Average depth from cross section for MC-5
	2	0.707	Average depth from cross section for MC-6
	3	1.08	Average depth from cross section for MC-7
	4	0.93	Average of reaches 3 and 5
	5	0.77	Average depth from cross section for MC-2
	6	0.94	Average of reaches 5 and 7
	7	1.12	Average depth from cross section for MC-8
	8	0.46	Average depth from cross section for AGC-1
	9	0.64	Average of depths from cross sections for AGC-2 and AGC-3
	10	1.16	Average of depths from cross sections for MC-3 and MC-4

Table D.2. Calibration Inputs for Initial Conditions (Data Type 11).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Temperature	1-4	30.2°C	Average temperature for continuous monitoring data at MC-1 on 8/20/02
	5,6	30.1°C	Average temperature for continuous monitoring data at MC-2 on 8/20/02
	7	29.7°C	Average temperature for continuous monitoring data at MC-3 on 8/20/02
	8,9	29.3°C	Average temperature for continuous monitoring data at AGC-2 on 8/20/02
	10	29.8°C	Average temperature for continuous monitoring data at MC-4 on 8/20/02
Salinity	1-4	0.39 ppt	Average salinity for continuous monitoring data at MC-1 on 8/20/02
	5,6	0.43 ppt	Average salinity for continuous monitoring data at MC-2 on 8/20/02
	7	0.49 ppt	Average salinity for continuous monitoring data at MC-3 on 8/20/02
	8,9	0.26 ppt	Average salinity for continuous monitoring data at AGC-2 on 8/20/02
	10	0.48 ppt	Average salinity for continuous monitoring data at MC-4 on 8/20/02
DO	1-4	2.53 mg/L	Minimum DO + 1 mg/L for continuous monitoring data at MC-1 on 8/20/02
	5,6	4.00 mg/L	Minimum DO + 1 mg/L for continuous monitoring data at MC-2 on 8/20/02
	7	1.12 mg/L	Minimum DO + 1 mg/L for continuous monitoring data at MC-3 on 8/20/02
	8,9	5.19 mg/L	Minimum DO + 1 mg/L for continuous monitoring data at AGC-2 on 8/20/02
	10	4.54 mg/L	Minimum DO + 1 mg/L for continuous monitoring data at MC-4 on 8/20/02

Table D.3. Calibration Inputs for Kinetic Coefficients (Data Types 12 and 15).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Reaeration option	1 – 10	15	Louisiana equation was used because it has been developed for Louisiana streams and used successfully for Louisiana TMDLs.
CBODu decay rate	1,2	0.090	Value calculated from 60-day BOD time series data at MC-1
	2	0.087	Linearly varying between reaches 2 and 4
	3	0.083	Linearly varying between reaches 2 and 4
	4	0.080	Value calculated from 60-day BOD time series data at MC-2
	5	0.087	Linearly varying between reaches 4 and 7
	6	0.093	Linearly varying between reaches 4 and 7
	7	0.040	Value calculated from 60-day BOD time series data at AGC-1
	8	0.050	Value calculated from 60-day BOD time series data at AGC-2
	9	0.100	Average of values calculated from 60-day BOD time series data at MC-3 and MC-4
NBODu decay rate	1,2	0.22	Value calculated from 60-day BOD time series data at MC-1
	3	0.20	Linearly varying between reaches 2 and 4
	4	0.18	Linearly varying between reaches 2 and 4
	5	0.16	Value calculated from 60-day BOD time series data at MC-2
	6	0.19	Linearly varying between reaches 4 and 7
	7	0.22	Linearly varying between reaches 4 and 7
	8	0.21	Value calculated from 60-day BOD time series data at AGC-1
	9	0.06	Value calculated from 60-day BOD time series data at AGC-2
	10	0.21	Average of values calculated from 60-day BOD time series data at MC-3 and MC-4

Table D.4. Calibration Inputs for SOD and Nonpoint Source Loads (Data Types 12 and 19).

Reach	SOD ($g/m^2/day$)	CBODu mass load (kg/day)	NBODu mass load (kg/day)	Data Source / Comment
1	0.40	36	33	These values were treated as calibration parameters by adjusting them to until the model output was similar to the calibration target values.
2	0.40	27	17	
3	0.70	15	14	
4	0.75	15	18	
5	0.75	17	17	
6	1.75	32	30	
7	4.25	66	68	
8	0.75	17	4	
9	0.75	55	14	
10	0.10	80	2	

Table D.5. Calibration Inputs for Incremental Inflow (Data Types 16, 17, and 18).

Parameter name	Reach	Value used in model	Data Source / Comment
Flow rate	1	0.020 m^3/sec	Based on outflow through Lake Cataouatche pump stations minus headwater inflows for Main Canal and Avondale Gardens Canal (as discussed in Section 4.2.11 with calculations shown in Appendix F).
	2	0.030 m^3/sec	
	3	0.050 m^3/sec	
	4	0.050 m^3/sec	
	5	0.050 m^3/sec	
	6	0.050 m^3/sec	
	7	0.091 m^3/sec	
	8	0.050 m^3/sec	
	9	0.106 m^3/sec	
	10	0.060 m^3/sec	
Chloride	1,2	61.2 mg/L	Used to adjust predicted and observed concentrations in Main Canal and Avondale Gardens.
	3-5	140 mg/L	
	6,7	190 mg/L	
	8,9	45 mg/L	
	10	300 mg/L	
Conductivity	1,2	761 µmhos	Used to adjust predicted and observed concentrations in Main Canal and Avondale Gardens.
	3-5	900 µmhos	
	6,7	1300 µmhos	
	8,9	360 µmhos	
	10	2000 µmhos	
DO	1 – 10	4.00 mg/L	Determined from best professional judgement.
CBODu	1 – 10	6.00 mg/L	Determined from best professional judgement.
NBODu	1 – 7,10	3.00 mg/L	Determined from best professional judgement.
	8,9	1.00 mg/L	

Table D.6. Calibration Inputs for Headwater (Data Types 20 and 21).

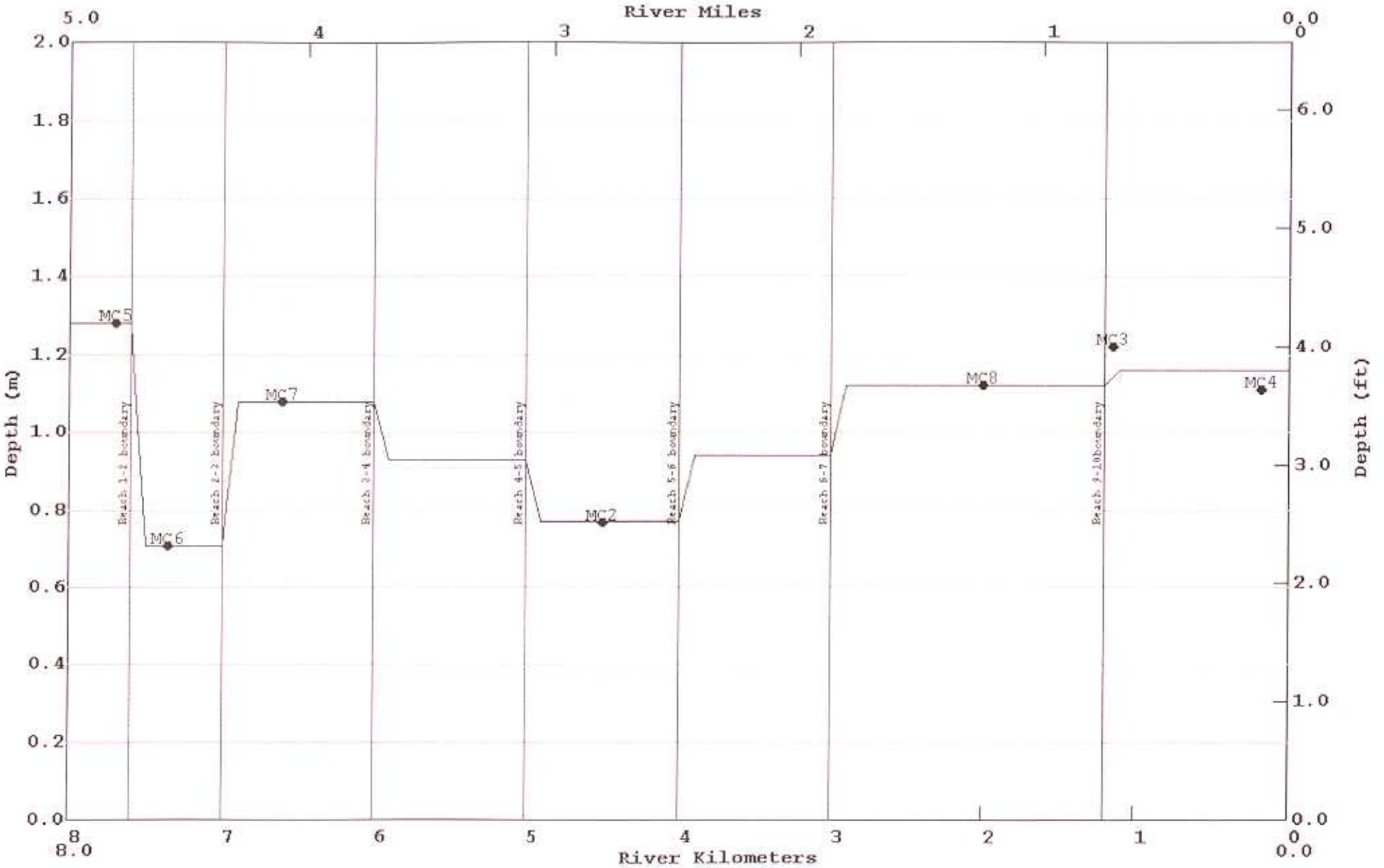
Name of inflow	Parameter name	Value used in model	Data Source / Comment
Main Canal Headwater	Flow rate	0.080 m^3/sec	Velocity from dye study between MC-1 and MC-7 (0.02 ft/sec) times average of cross sectional areas for MC-6 and MC-7 (184 ft^2)
	Chloride	61.2 mg/L	Observed value for MC-1
	Conductivity	761 µmhos	Observed value for MC-1
	DO	5.34 mg/L	Estimated daily average DO for MC-1
	CBODu	13.46 mg/L	Value calculated from 60-day BOD time series data at MC-1
	NBODu	5.58 mg/L	Value calculated from 60-day BOD time series data at MC-1
Avondale Gardens Canal Headwater	Flow rate	0.026 m^3/sec	Velocity from drogue measurement at AGC-1 (0.07 ft/sec) divided by adjustment factor (1.16) times cross sectional area at AGC-1 (12.6 ft^2)
	Chloride	88.9 mg/L	Observed value for AGC-1
	Conductivity	760 µmhos	Observed value for AGC-1
	DO	2.91 mg/L	Estimated daily average DO for AGC-1 (based on ratio of instantaneous to daily average DO at AGC-2)
	CBODu	5.82 mg/L	Value calculated from 60-day BOD time series data at AGC-1
	NBODu	2.19 mg/L	Value calculated from 60-day BOD time series data at AGC-1

R:\projects\3110-051\report\main_c\Inputs_Calib4.doc

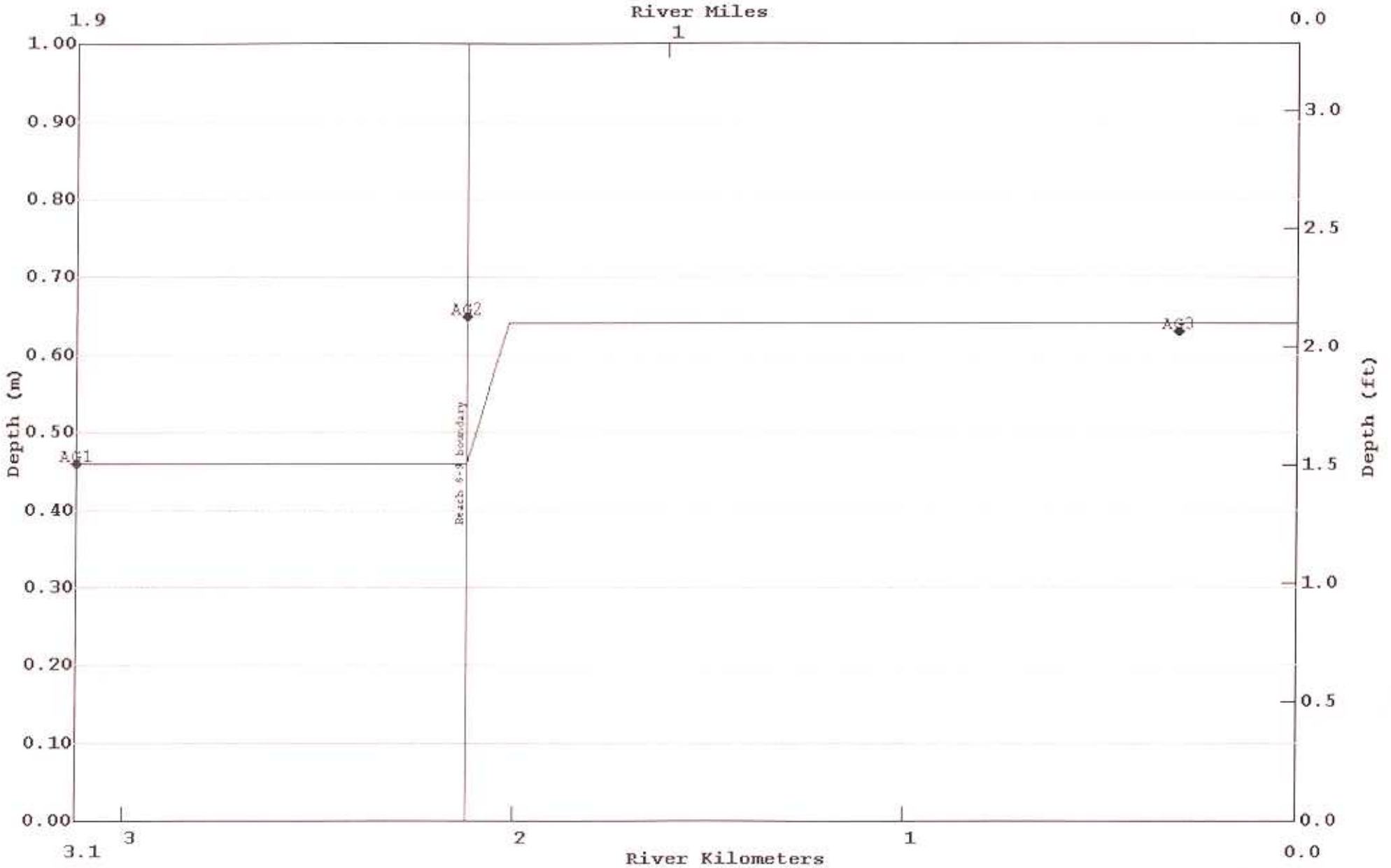
APPENDIX E

Modeled and Observed Depths and Widths

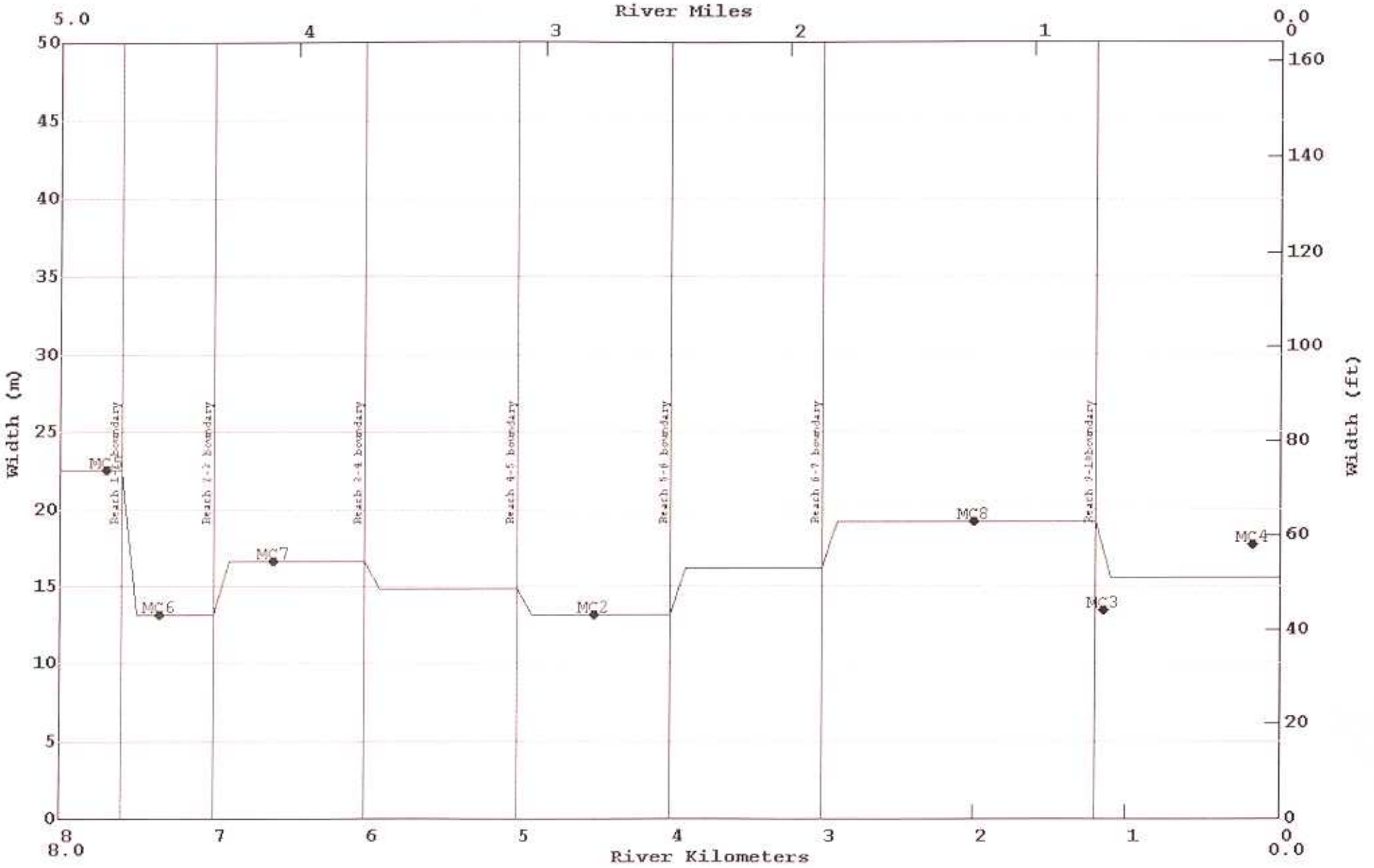
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 0.71 max= 1.28
:MC1-8



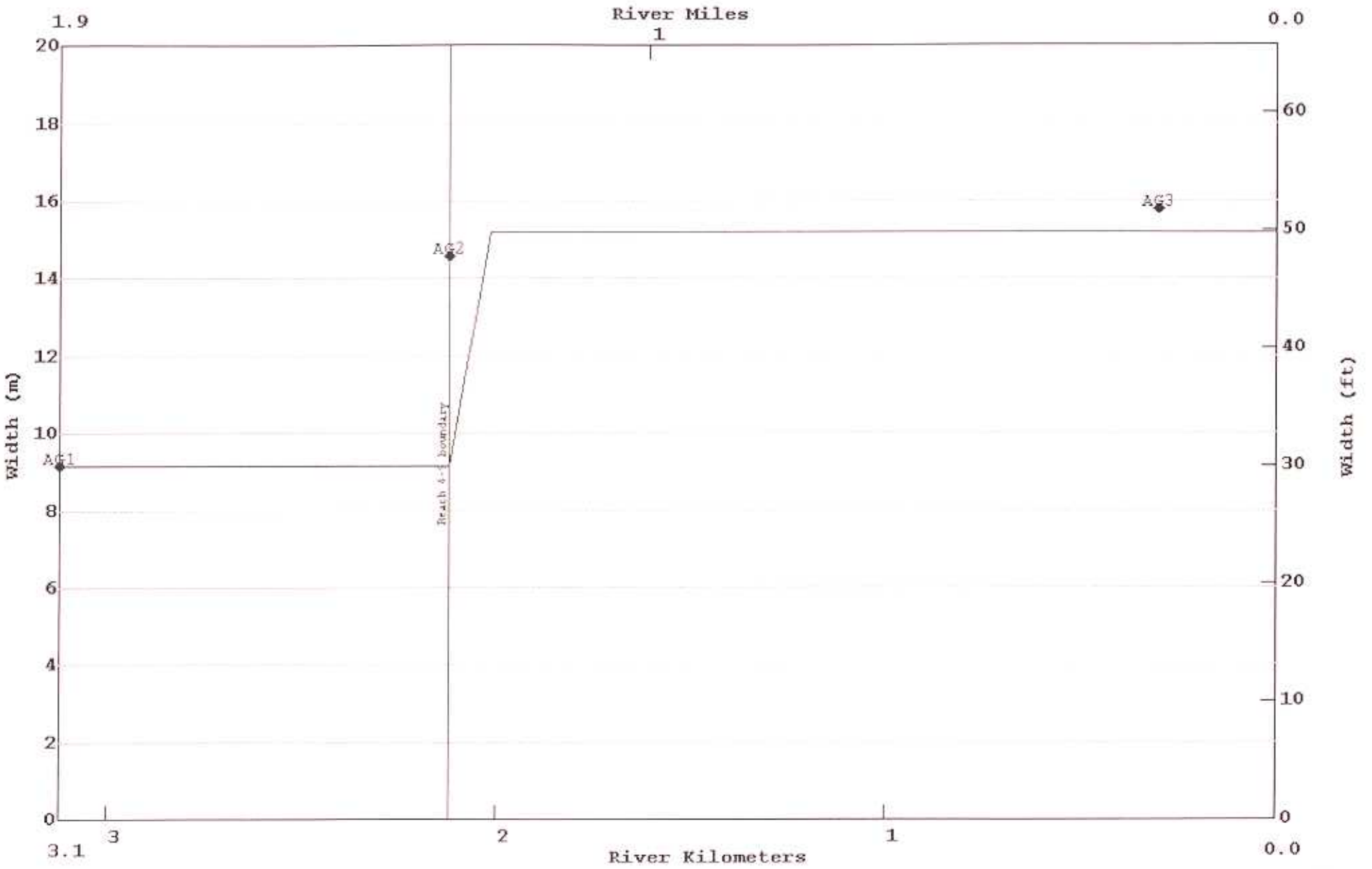
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 0.46 max= 0.64
:AGC1-3



LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 13.10 max= 22.50
:MC1-8



LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 9.14 max= 15.20
:AGC1-3



APPENDIX F

Calculation of Flows for Model Calibration

INCREMENTAL FLOW CALCULATIONS FOR MAIN CANAL

Flow at Avondale Headwater	0.022 m3/sec	velocity from drogue measurement at AGC-1 Drogue (0.0727 ft/sec) divided by 1.16 times cross sectional area at AGC-1 Drogue (12.62 ft2)
Flow at Main Canal Headwater	0.106 m3/sec	velocity from dye study between MC-1 and MC-7 (0.02 ft/sec) times avgerage of cross sectional areas at MC-6 and MC-7,(184 ft2)
Outflow at Lake Cataoutache Pumping Station (Southwest corner of subsegment)	0.690 m3/sec	two day average pumping rate for August 19 and 20, (78.56 cfs) times portion of subsegment that drains into Main Canal and Avondale Gardens Canal (0.31)
Flow difference =	0.561 m3/sec	this flow needed to be added in by incremental flow (0.69-0.106-0.022)

Length Main =	8.00	kilometers
Length Avondale =	3.13	kilometers
	11.13	kilometers

flow per length =	0.050	m3/sec per km

Reach	length (km)	incremental flow (m3/sec)	reach description
1	0.40	0.020	Main Canal
2	0.60	0.030	Main Canal
3	1.00	0.050	Main Canal
4	1.00	0.050	Main Canal
5	1.00	0.050	Main Canal
6	1.00	0.050	Main Canal
7	1.80	0.091	Main Canal
10	1.20	0.060	Main Canal
8	1.00	0.050	Avondale Gardens
9	2.12	0.107	Avondale Gardens
	11.12	0.560	

NOTE: 1. The Bayou Segnette Pump Station (on the east side of the subsgement) was not operating during the calibration time period.

FILE: R:\WP_FILES\3110-051\MAIN CANAL\PDF FILES MAIN CANAL\APPENDIX F\LA-QUAL FLOW CALCULATIONS.XLS

APPENDIX G

Daily Average and Daily Minimum DO Values

Table G.1. Continuous DO Data for MC-1

Continuous Monitoring Data				Instantaneous Data				
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average	Station	DATE	TIME	Measured DO (mg/L)	Estimated daily average DO (mg/L)at sampling location
8/20/2002	0:00	3.20	0.5988					
8/20/2002	0:15	3.08	0.5763					
8/20/2002	0:30	3.03	0.5670					
8/20/2002	0:45	3.00	0.5614					
8/20/2002	1:00	2.98	0.5576					
8/20/2002	1:15	2.90	0.5426					
8/20/2002	1:30	2.81	0.5258					
8/20/2002	1:45	2.74	0.5127					
8/20/2002	2:00	2.67	0.4996					
8/20/2002	2:15	2.65	0.4959					
8/20/2002	2:30	2.60	0.4865					
8/20/2002	2:45	2.47	0.4622					
8/20/2002	3:00	2.47	0.4622					
8/20/2002	3:15	2.46	0.4603					
8/20/2002	3:30	2.43	0.4547					
8/20/2002	3:45	2.34	0.4379					
8/20/2002	4:00	2.28	0.4266					
8/20/2002	4:15	2.19	0.4098					
8/20/2002	4:30	2.06	0.3855					
8/20/2002	4:45	1.95	0.3649					
8/20/2002	5:00	1.89	0.3537					
8/20/2002	5:15	1.78	0.3331					
8/20/2002	5:30	1.74	0.3256					
8/20/2002	5:45	1.66	0.3106					
8/20/2002	6:00	1.59	0.2975					
8/20/2002	6:15	1.58	0.2956					
8/20/2002	6:30	1.65	0.3087					
8/20/2002	6:45	1.57	0.2938					
8/20/2002	7:00	1.61	0.3013					
8/20/2002	7:15	1.61	0.3013					
8/20/2002	7:30	1.57	0.2938					
8/20/2002	7:45	1.56	0.2919					
8/20/2002	8:00	1.66	0.3106					
8/20/2002	8:15	1.60	0.2994					
8/20/2002	8:30	1.53	0.2863					
8/20/2002	8:45	1.59	0.2975					
8/20/2002	9:00	1.73	0.3237					
8/20/2002	9:15	1.96	0.3668					
8/20/2002	9:30	2.10	0.3929					
8/20/2002	9:45	2.10	0.3929					
8/20/2002	10:00	2.43	0.4547					
8/20/2002	10:15	2.46	0.4603					
8/20/2002	10:30	2.70	0.5052					

Continuous Monitoring Data				Instantaneous Data				
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average	Station	DATE	TIME	Measured DO (mg/L)	Estimated daily average DO (mg/L)at sampling location
8/20/2002	10:45	2.61	0.4884					
8/20/2002	11:00	2.55	0.4772					
8/20/2002	11:15	3.04	0.5688					
8/20/2002	11:30	3.33	0.6231					
8/20/2002	11:45	3.70	0.6923					
8/20/2002	12:00	3.96	0.7410					
8/20/2002	12:15	4.00	0.7485					
8/20/2002	12:30	5.30	0.9917					
8/20/2002	12:45	5.02	0.9393					
8/20/2002	13:00	5.77	1.0797					
8/20/2002	13:15	6.36	1.1901					
8/20/2002	13:30	7.21	1.3491					
8/20/2002	13:45	7.76	1.4520	RC1	8/20/2002	13:47	2.98	2.05
8/20/2002	14:00	8.38	1.5680					
8/20/2002	14:15	8.92	1.6691					
8/20/2002	14:30	9.08	1.6990					
8/20/2002	14:45	8.86	1.6579					
8/20/2002	15:00	9.28	1.7365					
8/20/2002	15:15	9.41	1.7608					
8/20/2002	15:30	9.03	1.6897	UC1	8/20/2002	15:37	5.39	3.19
8/20/2002	15:45	9.98	1.8674					
8/20/2002	16:00	9.51	1.7795					
8/20/2002	16:15	9.56	1.7888					
8/20/2002	16:30	9.51	1.7795					
8/20/2002	16:45	9.06	1.6953					
8/20/2002	17:00	8.63	1.6148					
8/20/2002	17:15	9.86	1.8450					
8/20/2002	17:30	9.85	1.8431					
8/20/2002	17:45	8.64	1.6167					
8/20/2002	18:00	8.36	1.5643					
8/20/2002	18:15	8.16	1.5269					
8/20/2002	18:30	8.29	1.5512					
8/20/2002	18:45	8.84	1.6541					
8/20/2002	19:00	9.44	1.7664					
8/20/2002	19:15	9.64	1.8038					
8/20/2002	19:30	9.51	1.7795					
8/20/2002	19:45	10.07	1.8843					
8/20/2002	20:00	10.20	1.9086					
8/20/2002	20:15	9.88	1.8487					
8/20/2002	20:30	9.87	1.8469					
8/20/2002	20:45	9.70	1.8150					
8/20/2002	21:00	9.38	1.7552					
8/20/2002	21:15	9.22	1.7252					
8/20/2002	21:30	8.95	1.6747					
8/20/2002	21:45	8.70	1.6279					

Continuous Monitoring Data				Instantaneous Data				
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average	Station	DATE	TIME	Measured DO (mg/L)	Estimated daily average DO (mg/L)at sampling location
8/20/2002	22:00	8.29	1.5512					
8/20/2002	22:15	8.21	1.5362					
8/20/2002	22:30	7.96	1.4895					
8/20/2002	22:45	8.00	1.4969					
8/20/2002	23:00	8.02	1.5007					
8/20/2002	23:15	7.59	1.4202					
8/20/2002	23:30	7.05	1.3192					
8/20/2002	23:45	6.56	1.2275					
8/21/2002	0:00	6.35	1.1882					
	AVG =	5.34						
	MIN =	1.53						

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\DO CALCULATIONS-MAIN.XLS

Table G.2. Continuous DO Data for MC-2

Continuous Monitoring Data			
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	0:00	5.78	1.0912
8/20/2002	0:15	5.64	1.0648
8/20/2002	0:30	5.54	1.0459
8/20/2002	0:45	5.42	1.0232
8/20/2002	1:00	5.27	0.9949
8/20/2002	1:15	5.14	0.9704
8/20/2002	1:30	5.07	0.9572
8/20/2002	1:45	4.97	0.9383
8/20/2002	2:00	4.88	0.9213
8/20/2002	2:15	4.79	0.9043
8/20/2002	2:30	4.68	0.8835
8/20/2002	2:45	4.61	0.8703
8/20/2002	3:00	4.56	0.8609
8/20/2002	3:15	4.50	0.8496
8/20/2002	3:30	4.38	0.8269
8/20/2002	3:45	4.32	0.8156
8/20/2002	4:00	4.27	0.8061
8/20/2002	4:15	4.17	0.7873
8/20/2002	4:30	4.10	0.7740
8/20/2002	4:45	3.98	0.7514
8/20/2002	5:00	3.90	0.7363
8/20/2002	5:15	3.80	0.7174
8/20/2002	5:30	3.78	0.7136
8/20/2002	5:45	3.71	0.7004
8/20/2002	6:00	3.60	0.6796
8/20/2002	6:15	3.52	0.6645
8/20/2002	6:30	3.43	0.6475
8/20/2002	6:45	3.33	0.6287
8/20/2002	7:00	3.27	0.6173
8/20/2002	7:15	3.17	0.5985
8/20/2002	7:30	3.18	0.6004
8/20/2002	7:45	3.13	0.5909
8/20/2002	8:00	3.09	0.5834
8/20/2002	8:15	3.06	0.5777
8/20/2002	8:30	3.04	0.5739
8/20/2002	8:45	3.06	0.5777
8/20/2002	9:00	3.01	0.5683
8/20/2002	9:15	3.00	0.5664
8/20/2002	9:30	3.06	0.5777
8/20/2002	9:45	3.04	0.5739
8/20/2002	10:00	3.26	0.6155
8/20/2002	10:15	3.53	0.6664
8/20/2002	10:30	3.58	0.6759
8/20/2002	10:45	3.74	0.7061

Continuous Monitoring Data

DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	11:00	3.92	0.7401
8/20/2002	11:15	3.96	0.7476
8/20/2002	11:30	3.92	0.7401
8/20/2002	11:45	3.91	0.7382
8/20/2002	12:00	4.26	0.8042
8/20/2002	12:15	4.48	0.8458
8/20/2002	12:30	4.54	0.8571
8/20/2002	12:45	4.97	0.9383
8/20/2002	13:00	5.30	1.0006
8/20/2002	13:15	5.72	1.0799
8/20/2002	13:30	5.86	1.1063
8/20/2002	13:45	6.15	1.1611
8/20/2002	14:00	6.57	1.2403
8/20/2002	14:15	7.19	1.3574
8/20/2002	14:30	7.31	1.3801
8/20/2002	14:45	7.50	1.4159
8/20/2002	15:00	7.86	1.4839
8/20/2002	15:15	8.03	1.5160
8/20/2002	15:30	8.00	1.5103
8/20/2002	15:45	7.58	1.4310
8/20/2002	16:00	7.54	1.4235
8/20/2002	16:15	8.00	1.5103
8/20/2002	16:30	8.31	1.5688
8/20/2002	16:45	7.98	1.5065
8/20/2002	17:00	8.29	1.5651
8/20/2002	17:15	9.22	1.7406
8/20/2002	17:30	9.24	1.7444
8/20/2002	17:45	8.25	1.5575
8/20/2002	18:00	8.03	1.5160
8/20/2002	18:15	7.53	1.4216
8/20/2002	18:30	7.32	1.3819
8/20/2002	18:45	7.46	1.4084
8/20/2002	19:00	7.56	1.4272
8/20/2002	19:15	7.58	1.4310
8/20/2002	19:30	7.32	1.3819
8/20/2002	19:45	7.05	1.3310
8/20/2002	20:00	6.98	1.3178
8/20/2002	20:15	6.70	1.2649
8/20/2002	20:30	6.61	1.2479
8/20/2002	20:45	6.44	1.2158
8/20/2002	21:00	6.25	1.1799
8/20/2002	21:15	6.03	1.1384
8/20/2002	21:30	5.25	0.9911
8/20/2002	21:45	4.60	0.8684
8/20/2002	22:00	4.75	0.8967
8/20/2002	22:15	5.10	0.9628

Continuous Monitoring Data

DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	22:30	5.23	0.9874
8/20/2002	22:45	5.17	0.9760
8/20/2002	23:00	5.10	0.9628
8/20/2002	23:15	5.05	0.9534
8/20/2002	23:30	4.95	0.9345
8/20/2002	23:45	4.80	0.9062
8/21/2002	0:00	4.72	0.8911
	AVG =	5.30	
	MIN =	3.00	

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\DO CALCULATIONS-MAIN.XLS

Table G.3. Continuous DO Data for MC-3

Continuous Monitoring Data			
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	0:00	4.83	1.9680
8/20/2002	0:15	4.78	1.9476
8/20/2002	0:30	4.66	1.8987
8/20/2002	0:45	4.47	1.8213
8/20/2002	1:00	4.40	1.7928
8/20/2002	1:15	4.34	1.7683
8/20/2002	1:30	4.25	1.7316
8/20/2002	1:45	4.15	1.6909
8/20/2002	2:00	3.98	1.6216
8/20/2002	2:15	3.85	1.5687
8/20/2002	2:30	3.76	1.5320
8/20/2002	2:45	3.65	1.4872
8/20/2002	3:00	3.59	1.4627
8/20/2002	3:15	3.50	1.4261
8/20/2002	3:30	3.41	1.3894
8/20/2002	3:45	3.29	1.3405
8/20/2002	4:00	3.17	1.2916
8/20/2002	4:15	3.12	1.2712
8/20/2002	4:30	3.01	1.2264
8/20/2002	4:45	2.81	1.1449
8/20/2002	5:00	2.71	1.1042
8/20/2002	5:15	2.64	1.0757
8/20/2002	5:30	2.49	1.0145
8/20/2002	5:45	2.34	0.9534
8/20/2002	6:00	2.28	0.9290
8/20/2002	6:15	2.22	0.9045
8/20/2002	6:30	2.13	0.8679
8/20/2002	6:45	1.95	0.7945
8/20/2002	7:00	1.81	0.7375
8/20/2002	7:15	1.61	0.6560
8/20/2002	7:30	1.53	0.6234
8/20/2002	7:45	1.36	0.5541
8/20/2002	8:00	1.16	0.4726
8/20/2002	8:15	0.90	0.3667
8/20/2002	8:30	0.67	0.2730
8/20/2002	8:45	0.58	0.2363
8/20/2002	9:00	0.52	0.2119
8/20/2002	9:15	0.48	0.1956
8/20/2002	9:30	0.48	0.1956
8/20/2002	9:45	0.41	0.1671
8/20/2002	10:00	0.34	0.1385
8/20/2002	10:15	0.33	0.1345
8/20/2002	10:30	0.43	0.1752
8/20/2002	10:45	0.52	0.2119

Continuous Monitoring Data

DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	11:00	0.46	0.1874
8/20/2002	11:15	0.57	0.2322
8/20/2002	11:30	0.65	0.2648
8/20/2002	11:45	0.64	0.2608
8/20/2002	12:00	0.80	0.3260
8/20/2002	12:15	0.78	0.3178
8/20/2002	12:30	0.85	0.3463
8/20/2002	12:45	0.98	0.3993
8/20/2002	13:00	0.87	0.3545
8/20/2002	13:15	0.80	0.3260
8/20/2002	13:30	0.69	0.2811
8/20/2002	13:45	0.51	0.2078
8/20/2002	14:00	0.17	0.0693
8/20/2002	14:15	0.16	0.0652
8/20/2002	14:30	0.16	0.0652
8/20/2002	14:45	0.17	0.0693
8/20/2002	15:00	0.16	0.0652
8/20/2002	15:15	0.12	0.0489
8/20/2002	15:30	0.13	0.0530
8/20/2002	15:45	0.24	0.0978
8/20/2002	16:00	0.14	0.0570
8/20/2002	16:15	0.20	0.0815
8/20/2002	16:30	0.14	0.0570
8/20/2002	16:45	0.74	0.3015
8/20/2002	17:00	2.07	0.8434
8/20/2002	17:15	0.37	0.1508
8/20/2002	17:30	0.97	0.3952
8/20/2002	17:45	2.32	0.9453
8/20/2002	18:00	3.49	1.4220
8/20/2002	18:15	4.88	1.9883
8/20/2002	18:30	4.70	1.9150
8/20/2002	18:45	4.83	1.9680
8/20/2002	19:00	4.94	2.0128
8/20/2002	19:15	5.01	2.0413
8/20/2002	19:30	4.90	1.9965
8/20/2002	19:45	4.99	2.0331
8/20/2002	20:00	5.00	2.0372
8/20/2002	20:15	5.00	2.0372
8/20/2002	20:30	4.97	2.0250
8/20/2002	20:45	4.73	1.9272
8/20/2002	21:00	4.82	1.9639
8/20/2002	21:15	4.81	1.9598
8/20/2002	21:30	4.74	1.9313
8/20/2002	21:45	4.47	1.8213
8/20/2002	22:00	4.35	1.7724
8/20/2002	22:15	4.44	1.8090

Continuous Monitoring Data

DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	22:30	4.26	1.7357
8/20/2002	22:45	4.17	1.6990
8/20/2002	23:00	4.12	1.6787
8/20/2002	23:15	3.88	1.5809
8/20/2002	23:30	3.70	1.5075
8/20/2002	23:45	3.61	1.4709
8/21/2002	0:00	3.49	1.4220
	AVG =	2.45	
	MIN =	0.12	

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\DO CALCULATIONS-MAIN.XLS

Table G.4. Continuous DO Data Used for MC-4

Continuous Monitoring Data			
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	0:00	4.89	1.2646
8/20/2002	0:15	4.80	1.2413
8/20/2002	0:30	4.70	1.2155
8/20/2002	0:45	4.66	1.2051
8/20/2002	1:00	4.59	1.1870
8/20/2002	1:15	4.57	1.1819
8/20/2002	1:30	4.49	1.1612
8/20/2002	1:45	4.50	1.1638
8/20/2002	2:00	4.37	1.1301
8/20/2002	2:15	4.35	1.1250
8/20/2002	2:30	4.29	1.1094
8/20/2002	2:45	4.21	1.0888
8/20/2002	3:00	4.12	1.0655
8/20/2002	3:15	4.10	1.0603
8/20/2002	3:30	4.05	1.0474
8/20/2002	3:45	3.98	1.0293
8/20/2002	4:00	3.95	1.0215
8/20/2002	4:15	3.82	0.9879
8/20/2002	4:30	3.77	0.9750
8/20/2002	4:45	3.71	0.9594
8/20/2002	5:00	3.69	0.9543
8/20/2002	5:15	3.64	0.9413
8/20/2002	5:30	3.63	0.9388
8/20/2002	5:45	3.52	0.9103
8/20/2002	6:00	3.41	0.8819
8/20/2002	6:15	3.35	0.8663
8/20/2002	6:30	3.29	0.8508
8/20/2002	6:45	3.33	0.8612
8/20/2002	7:00	3.29	0.8508
8/20/2002	7:15	3.20	0.8276
8/20/2002	7:30	3.15	0.8146
8/20/2002	7:45	3.06	0.7914
8/20/2002	8:00	3.05	0.7888
8/20/2002	8:15	2.92	0.7551
8/20/2002	8:30	2.91	0.7526
8/20/2002	8:45	2.94	0.7603
8/20/2002	9:00	3.07	0.7939
8/20/2002	9:15	3.09	0.7991
8/20/2002	9:30	3.07	0.7939
8/20/2002	9:45	3.18	0.8224
8/20/2002	10:00	3.23	0.8353
8/20/2002	10:15	3.22	0.8327
8/20/2002	10:30	2.86	0.7396
8/20/2002	10:45	2.63	0.6801

Continuous Monitoring Data

DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	11:00	2.73	0.7060
8/20/2002	11:15	2.70	0.6983
8/20/2002	11:30	2.93	0.7577
8/20/2002	11:45	2.73	0.7060
8/20/2002	12:00	2.81	0.7267
8/20/2002	12:15	3.44	0.8896
8/20/2002	12:30	3.37	0.8715
8/20/2002	12:45	3.61	0.9336
8/20/2002	13:00	3.79	0.9801
8/20/2002	13:15	4.19	1.0836
8/20/2002	13:30	4.06	1.0500
8/20/2002	13:45	4.05	1.0474
8/20/2002	14:00	4.31	1.1146
8/20/2002	14:15	4.86	1.2569
8/20/2002	14:30	5.77	1.4922
8/20/2002	14:45	5.86	1.5155
8/20/2002	15:00	6.84	1.7689
8/20/2002	15:15	7.03	1.8180
8/20/2002	15:30	6.25	1.6163
8/20/2002	15:45	6.16	1.5930
8/20/2002	16:00	4.54	1.1741
8/20/2002	16:15	4.42	1.1431
8/20/2002	16:30	4.33	1.1198
8/20/2002	16:45	5.06	1.3086
8/20/2002	17:00	4.67	1.2077
8/20/2002	17:15	4.57	1.1819
8/20/2002	17:30	4.70	1.2155
8/20/2002	17:45	4.78	1.2362
8/20/2002	18:00	4.69	1.2129
8/20/2002	18:15	4.74	1.2258
8/20/2002	18:30	4.73	1.2232
8/20/2002	18:45	4.74	1.2258
8/20/2002	19:00	4.84	1.2517
8/20/2002	19:15	4.82	1.2465
8/20/2002	19:30	4.61	1.1922
8/20/2002	19:45	4.49	1.1612
8/20/2002	20:00	4.12	1.0655
8/20/2002	20:15	3.73	0.9646
8/20/2002	20:30	3.34	0.8638
8/20/2002	20:45	3.14	0.8120
8/20/2002	21:00	2.97	0.7681
8/20/2002	21:15	2.73	0.7060
8/20/2002	21:30	2.65	0.6853
8/20/2002	21:45	2.57	0.6646
8/20/2002	22:00	2.86	0.7396
8/20/2002	22:15	2.69	0.6957

Continuous Monitoring Data

DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average
8/20/2002	22:30	2.97	0.7681
8/20/2002	22:45	2.98	0.7707
8/20/2002	23:00	2.94	0.7603
8/20/2002	23:15	2.79	0.7215
8/20/2002	23:30	2.65	0.6853
8/20/2002	23:45	2.49	0.6439
8/21/2002	0:00	2.59	0.6698
	AVG =	3.87	
	MIN =	2.49	

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\DO CALCULATIONS-MAIN.XLS

Table G.5. Continuous DO Data for AGC-2

Continuous Monitoring Data				Instantaneous Data				
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average	Station	DATE	TIME	Measured DO (mg/L)	Estimated daily average DO (mg/L)at sampling location
8/20/2002	0:00	6.26	0.8761					
8/20/2002	0:15	6.01	0.8411					
8/20/2002	0:30	6.02	0.8425					
8/20/2002	0:45	6.18	0.8649					
8/20/2002	1:00	5.93	0.8299					
8/20/2002	1:15	5.87	0.8215					
8/20/2002	1:30	5.81	0.8131					
8/20/2002	1:45	5.57	0.7795					
8/20/2002	2:00	5.20	0.7277					
8/20/2002	2:15	5.45	0.7627					
8/20/2002	2:30	5.44	0.7613					
8/20/2002	2:45	5.22	0.7305					
8/20/2002	3:00	5.52	0.7725					
8/20/2002	3:15	5.46	0.7641					
8/20/2002	3:30	5.70	0.7977					
8/20/2002	3:45	5.57	0.7795					
8/20/2002	4:00	5.40	0.7557					
8/20/2002	4:15	5.26	0.7361					
8/20/2002	4:30	5.23	0.7319					
8/20/2002	4:45	5.12	0.7165					
8/20/2002	5:00	5.01	0.7012					
8/20/2002	5:15	4.99	0.6984					
8/20/2002	5:30	4.88	0.6830					
8/20/2002	5:45	4.76	0.6662					
8/20/2002	6:00	4.82	0.6746					
8/20/2002	6:15	4.65	0.6508					
8/20/2002	6:30	4.48	0.6270					
8/20/2002	6:45	4.32	0.6046					
8/20/2002	7:00	4.35	0.6088					
8/20/2002	7:15	4.29	0.6004					
8/20/2002	7:30	4.23	0.5920					
8/20/2002	7:45	4.23	0.5920					
8/20/2002	8:00	4.19	0.5864					
8/20/2002	8:15	4.26	0.5962					
8/20/2002	8:30	4.20	0.5878	AGC1	8/20/2002	8:30	1.71	2.91
8/20/2002	8:45	4.22	0.5906					
8/20/2002	9:00	4.52	0.6326					
8/20/2002	9:15	4.74	0.6634					
8/20/2002	9:30	4.88	0.6830					
8/20/2002	9:45	5.00	0.6998					
8/20/2002	10:00	5.15	0.7207					
8/20/2002	10:15	5.63	0.7879					
8/20/2002	10:30	5.84	0.8173					

Continuous Monitoring Data				Instantaneous Data				
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average	Station	DATE	TIME	Measured DO (mg/L)	Estimated daily average DO (mg/L)at sampling location
8/20/2002	10:45	6.04	0.8453					
8/20/2002	11:00	6.38	0.8929					
8/20/2002	11:15	6.71	0.9391					
8/20/2002	11:30	6.99	0.9783					
8/20/2002	11:45	7.04	0.9853					
8/20/2002	12:00	7.15	1.0006					
8/20/2002	12:15	7.21	1.0090					
8/20/2002	12:30	7.71	1.0790					
8/20/2002	12:45	7.96	1.1140					
8/20/2002	13:00	8.41	1.1770					
8/20/2002	13:15	8.71	1.2190					
8/20/2002	13:30	9.09	1.2722					
8/20/2002	13:45	9.26	1.2959					
8/20/2002	14:00	9.55	1.3365					
8/20/2002	14:15	9.67	1.3533					
8/20/2002	14:30	9.86	1.3799					
8/20/2002	14:45	10.09	1.4121					
8/20/2002	15:00	10.26	1.4359					
8/20/2002	15:15	10.47	1.4653					
8/20/2002	15:30	10.57	1.4793					
8/20/2002	15:45	10.78	1.5087					
8/20/2002	16:00	10.85	1.5185					
8/20/2002	16:15	11.00	1.5395					
8/20/2002	16:30	10.91	1.5269					
8/20/2002	16:45	10.77	1.5073					
8/20/2002	17:00	10.66	1.4919					
8/20/2002	17:15	10.71	1.4989					
8/20/2002	17:30	10.75	1.5045					
8/20/2002	17:45	10.81	1.5129					
8/20/2002	18:00	10.99	1.5381					
8/20/2002	18:15	11.29	1.5800					
8/20/2002	18:30	11.57	1.6192					
8/20/2002	18:45	11.73	1.6416					
8/20/2002	19:00	11.60	1.6234					
8/20/2002	19:15	10.96	1.5339					
8/20/2002	19:30	10.69	1.4961					
8/20/2002	19:45	10.36	1.4499					
8/20/2002	20:00	9.53	1.3337					
8/20/2002	20:15	8.78	1.2288					
8/20/2002	20:30	8.24	1.1532					
8/20/2002	20:45	7.87	1.1014					
8/20/2002	21:00	7.50	1.0496					
8/20/2002	21:15	7.22	1.0104					
8/20/2002	21:30	6.99	0.9783					
8/20/2002	21:45	6.79	0.9503					

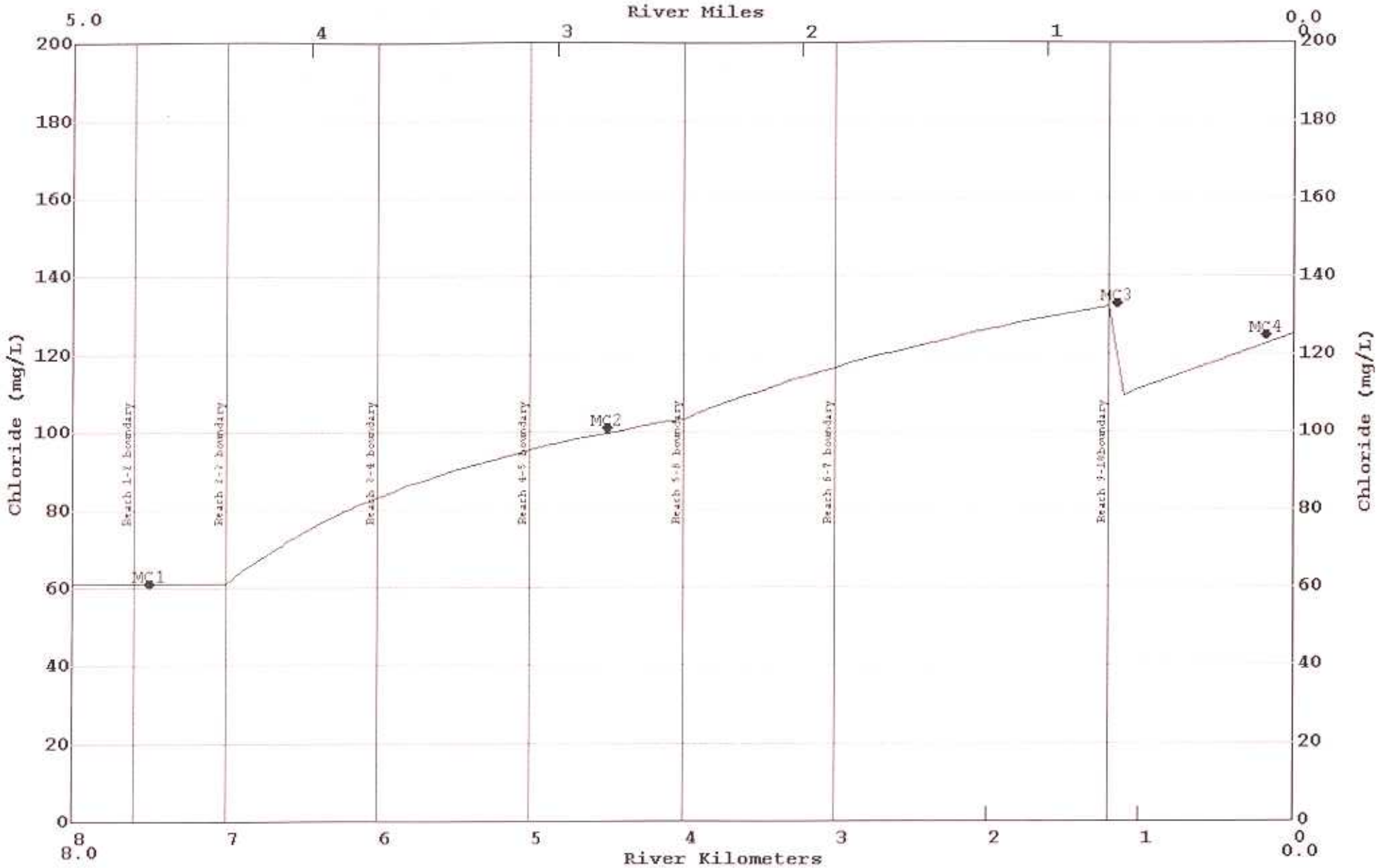
Continuous Monitoring Data				Instantaneous Data				
DATE	TIME	DO (mg/L)	Ratio of instantaneous DO to daily average	Station	DATE	TIME	Measured DO (mg/L)	Estimated daily average DO (mg/L)at sampling location
8/20/2002	22:00	6.55	0.9167					
8/20/2002	22:15	6.43	0.8999					
8/20/2002	22:30	6.34	0.8873					
8/20/2002	22:45	6.22	0.8705					
8/20/2002	23:00	6.05	0.8467					
8/20/2002	23:15	6.03	0.8439					
8/20/2002	23:30	5.90	0.8257					
8/20/2002	23:45	5.77	0.8075					
8/21/2002	0:00	5.47	0.7655					
	AVG =	7.15						
	MIN =	4.19						

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\DO CALCULATIONS-MAIN.XLS

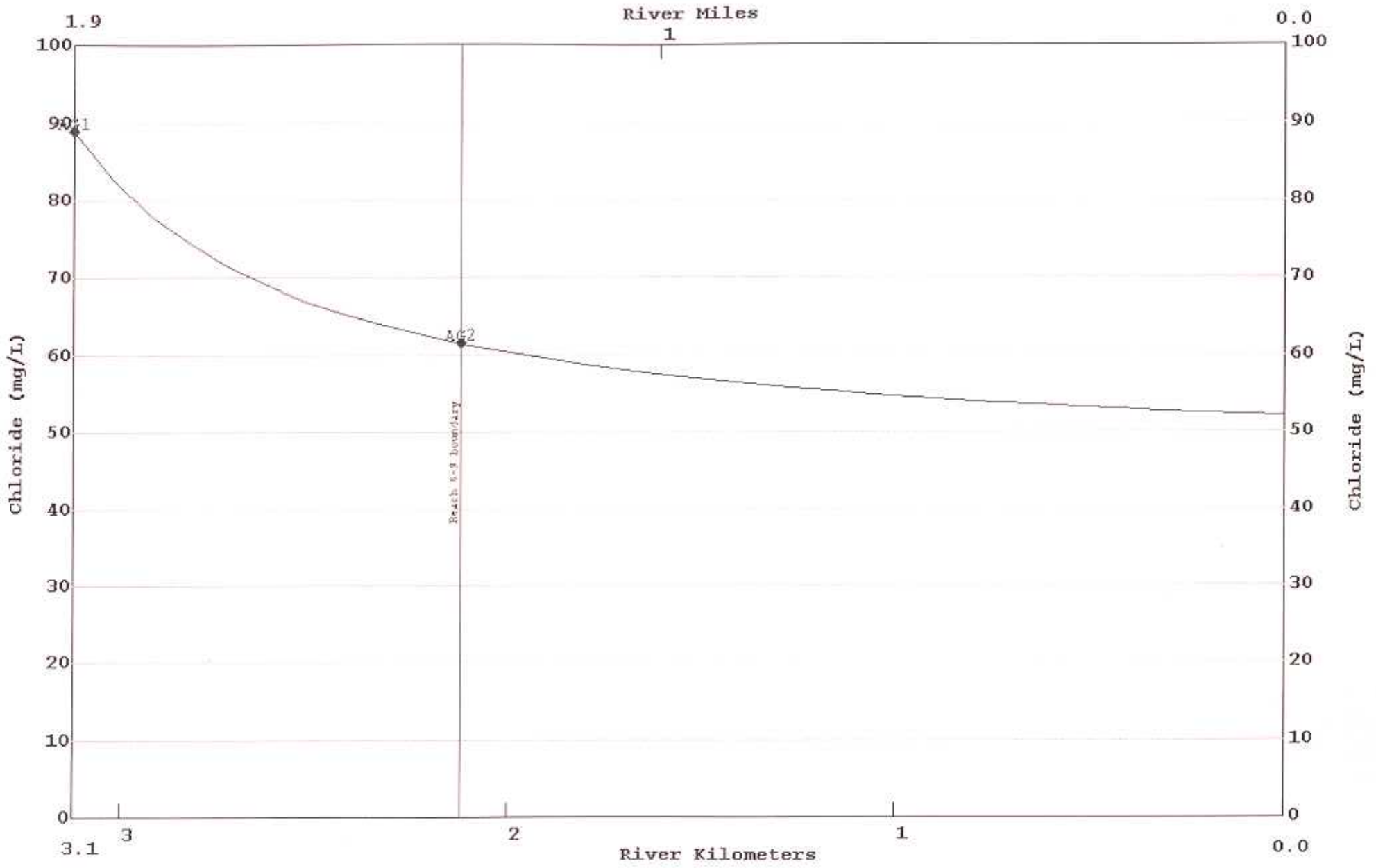
APPENDIX H

Simulation of Chloride and Conductivity

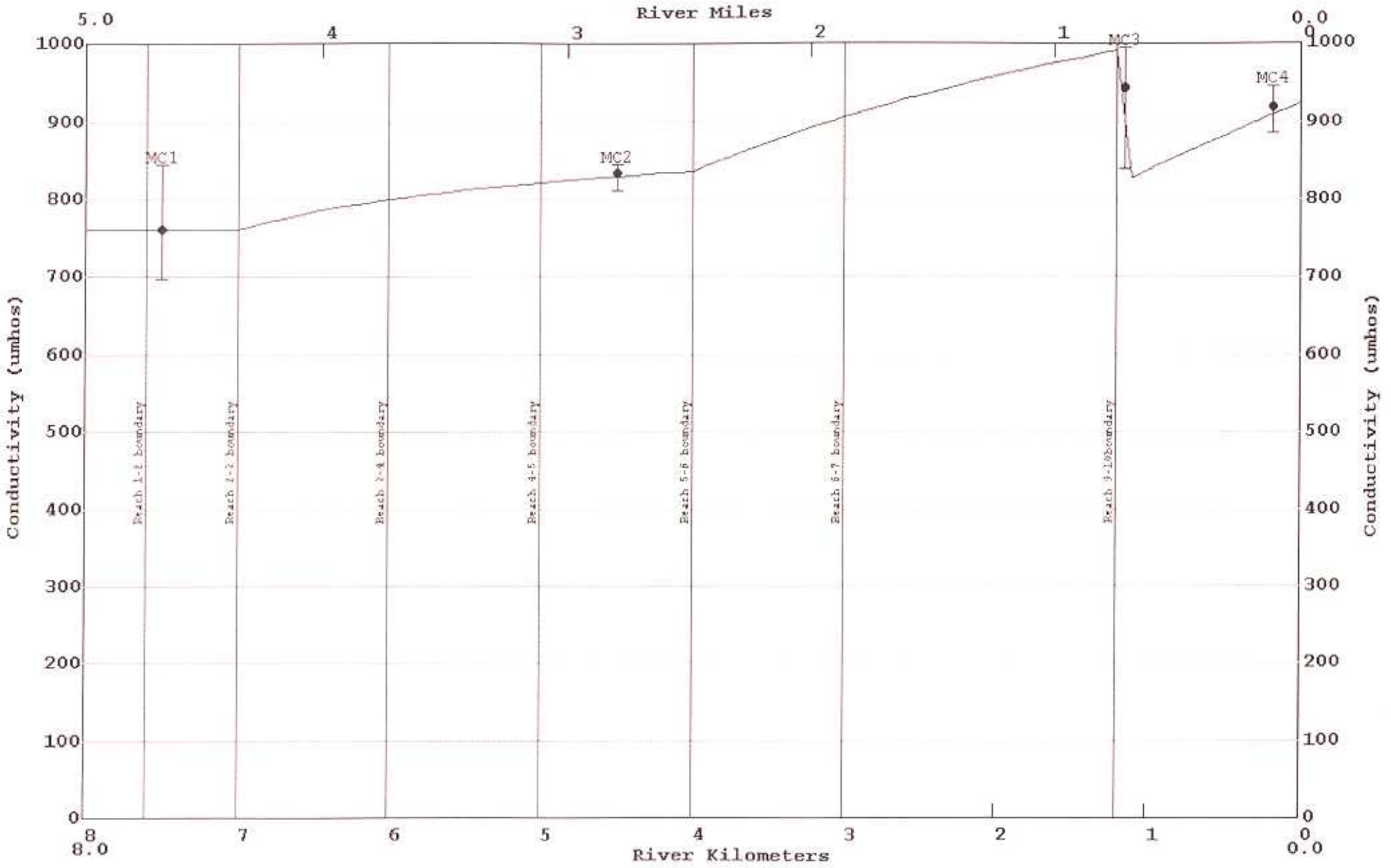
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 61.20 max= 132.41
:MC1-8



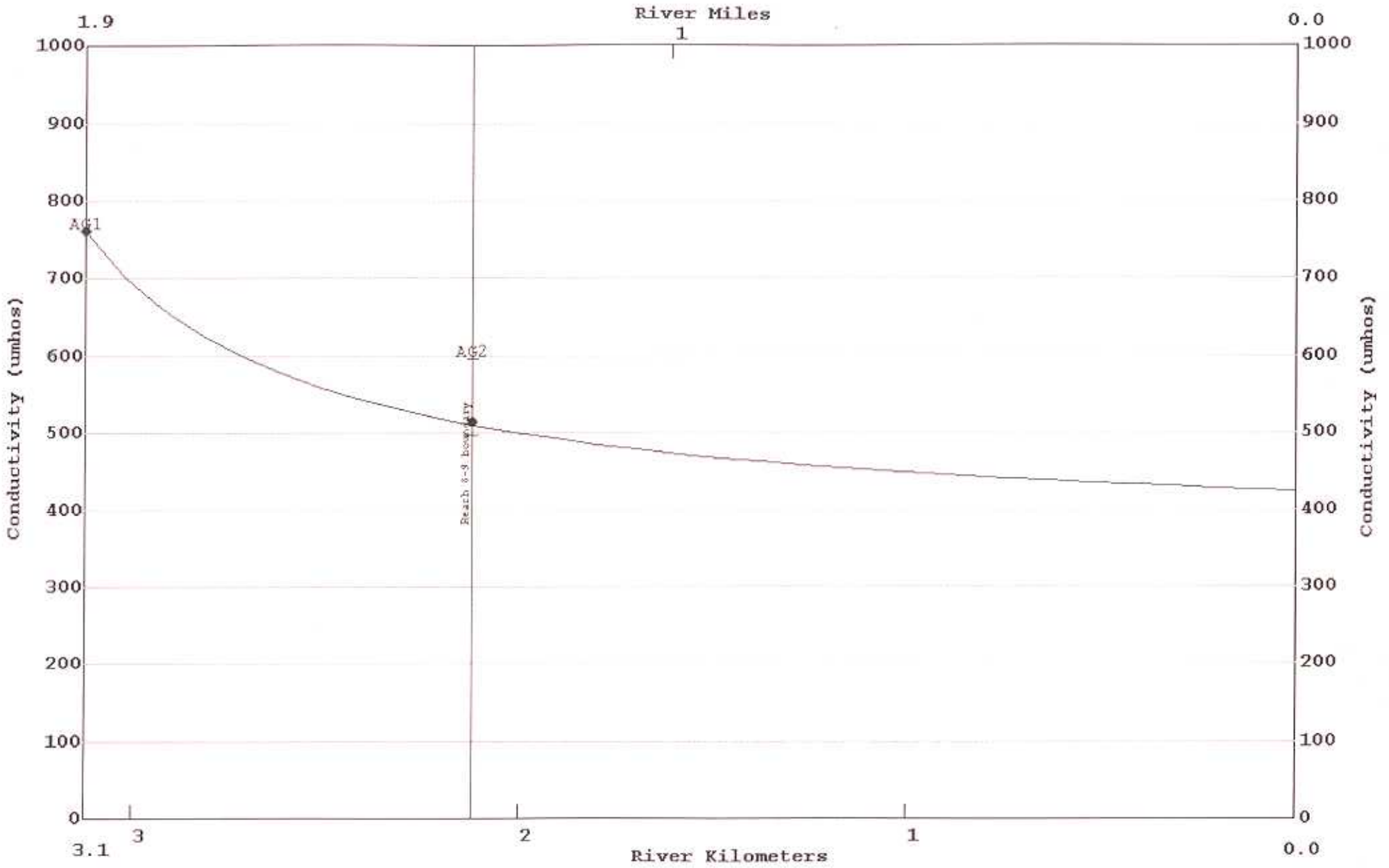
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 52.08 max= 88.90
:AGC1-3



LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 761.00 max= 991.05
:MC1-8



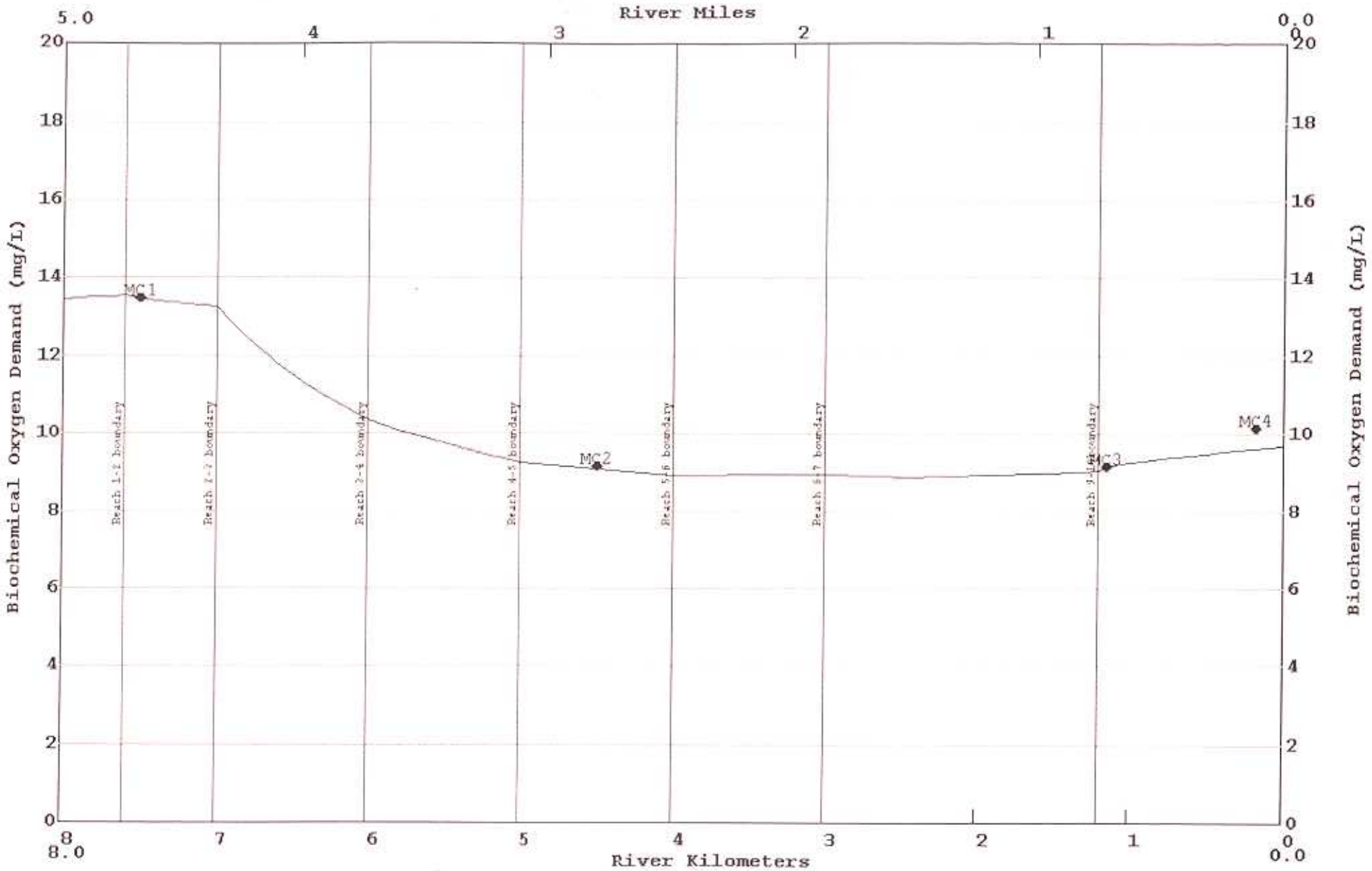
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 424.55 max= 760.20
:AGC1-3



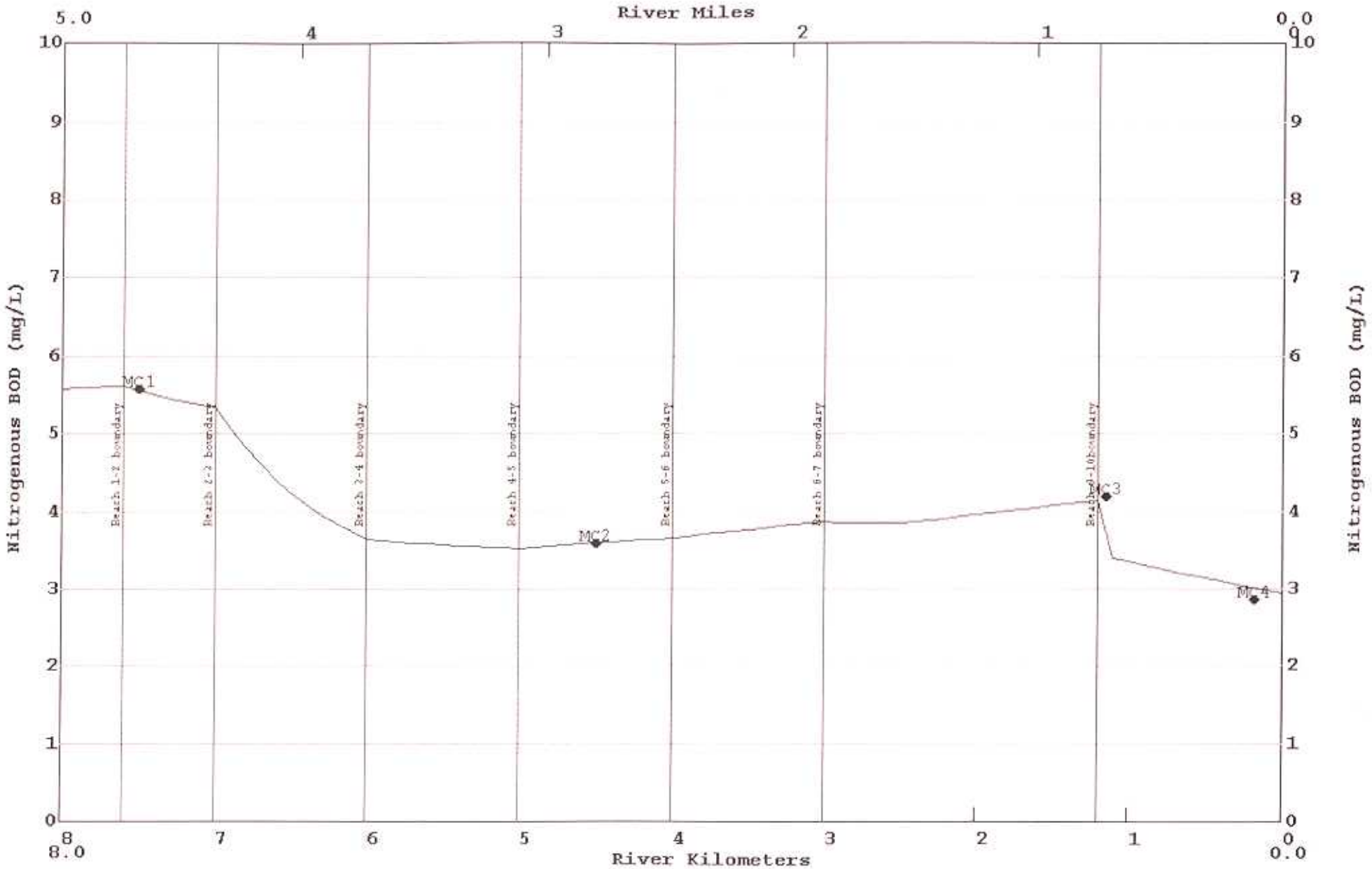
APPENDIX I

Predicted and Observed Water Quality

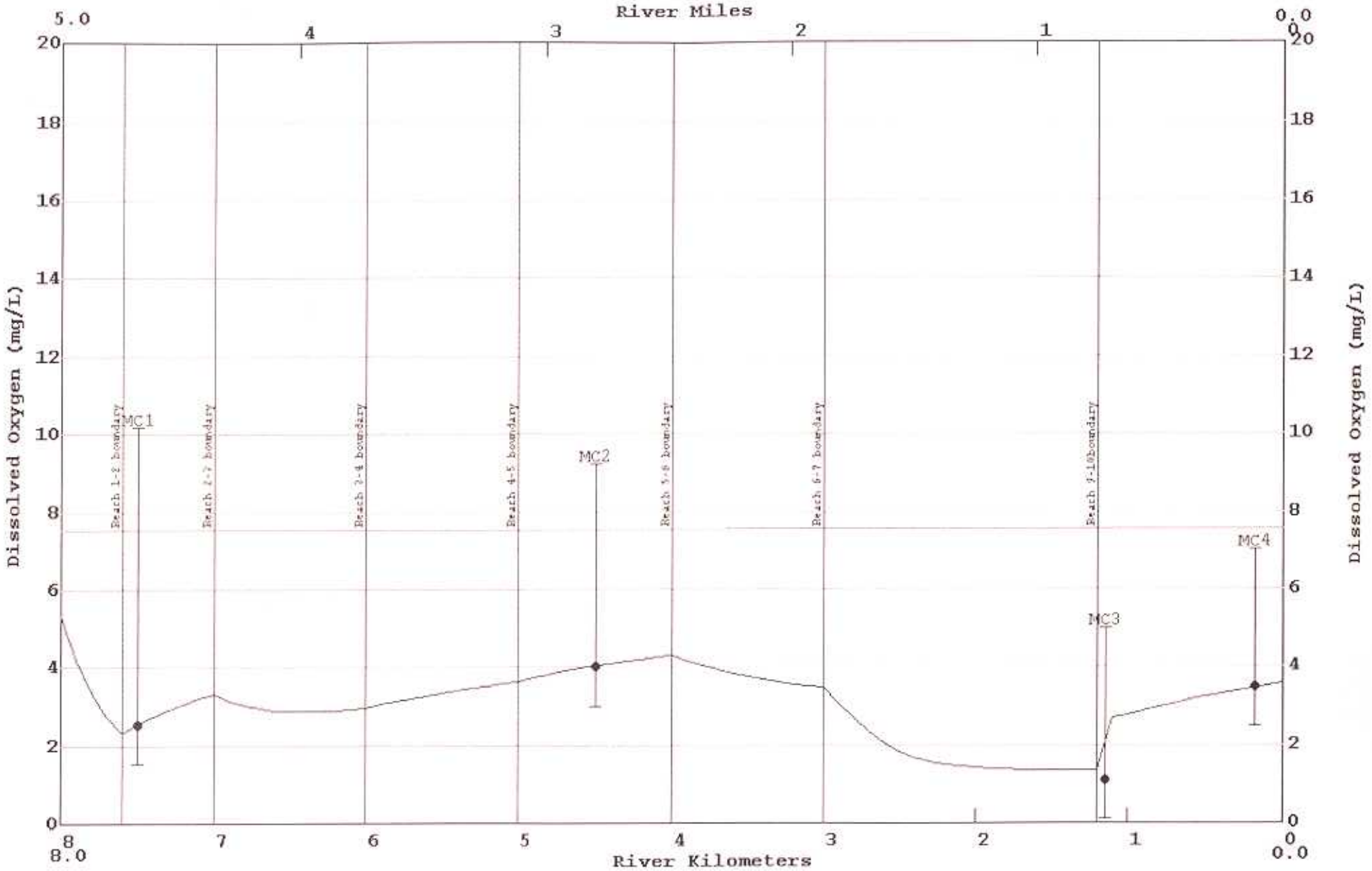
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 8.89 max= 13.54
:MC1-8



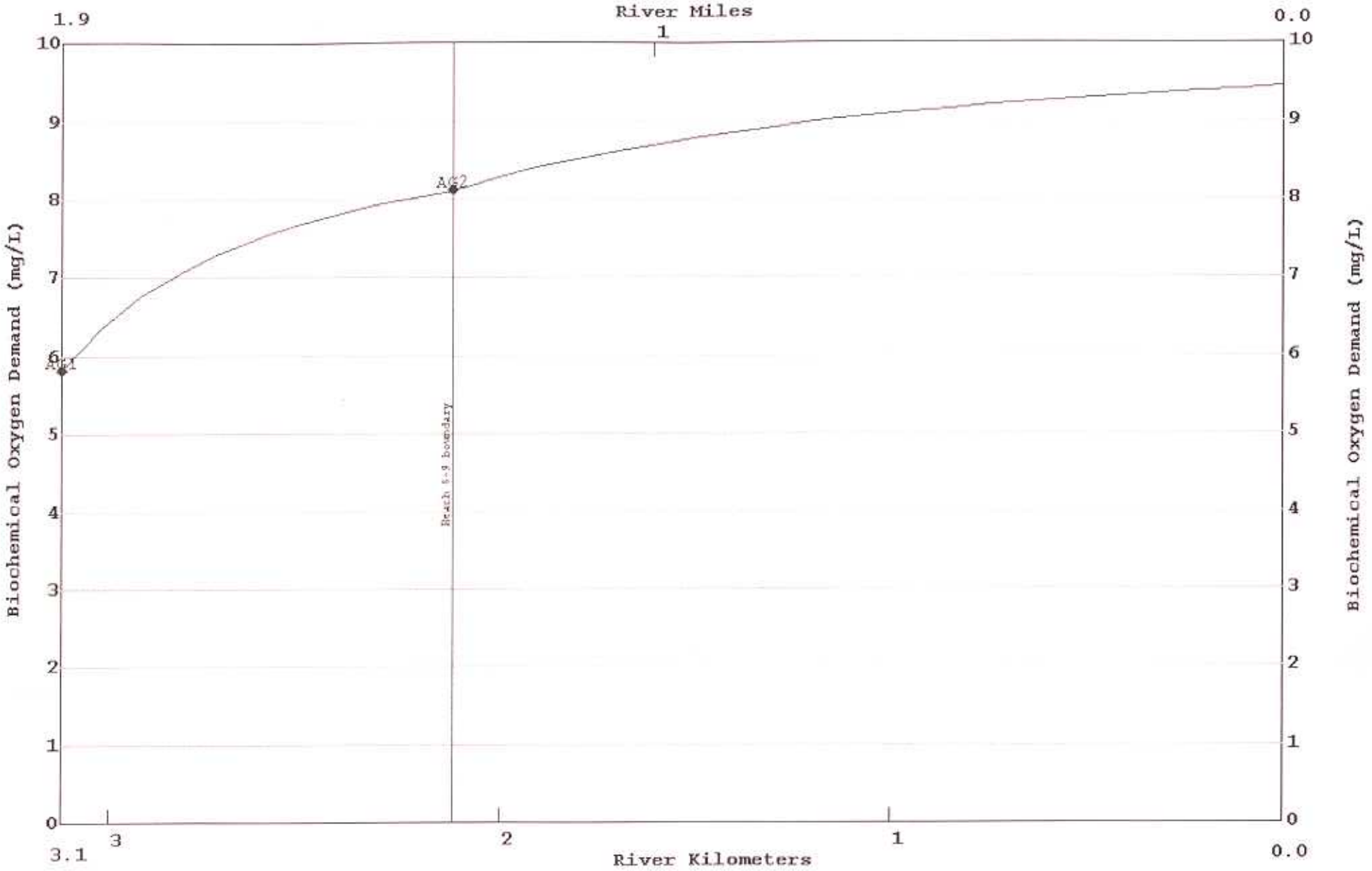
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 2.95 max= 5.61
:MC1-8



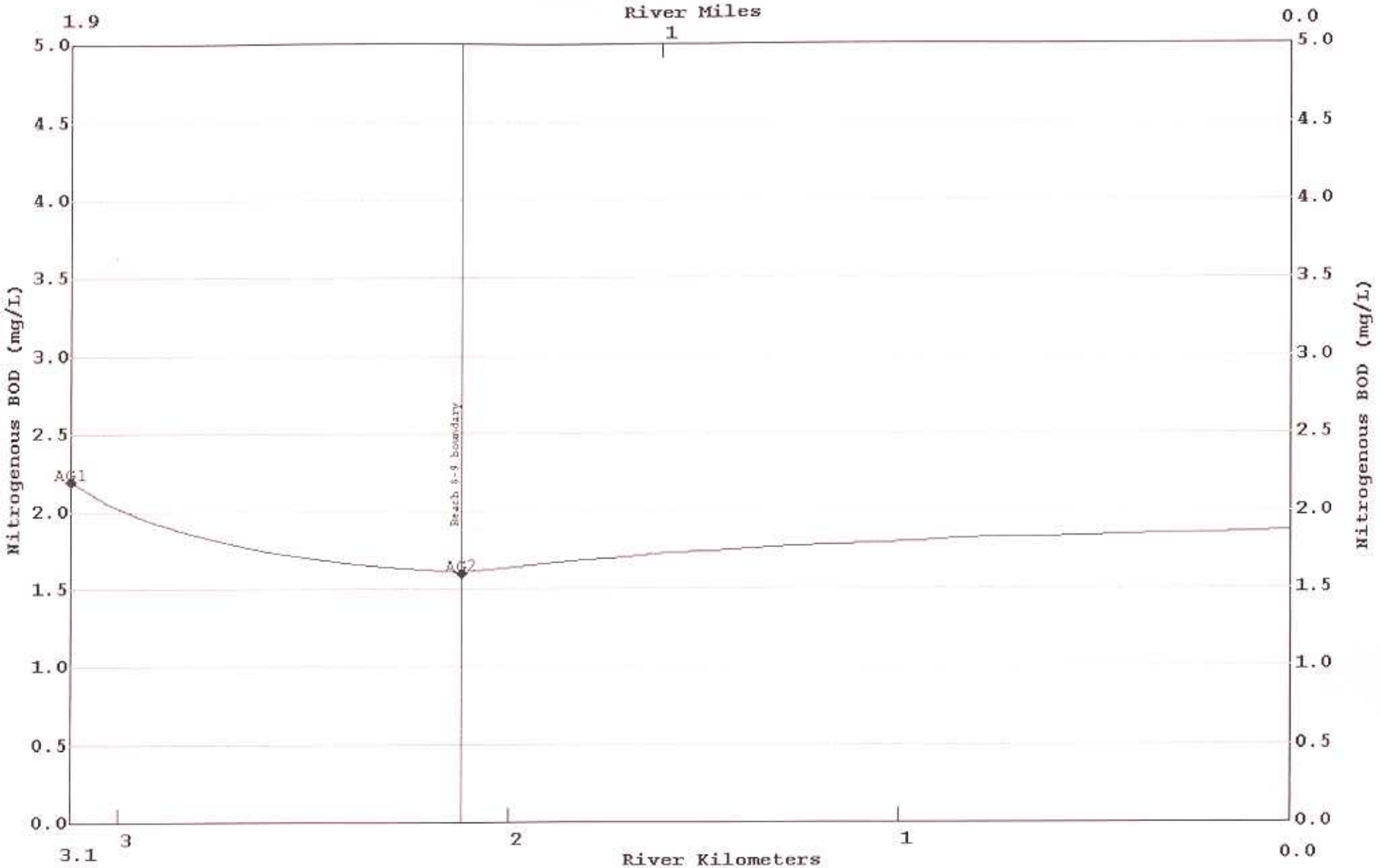
LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 1.35 max= 5.34
:MC1-8



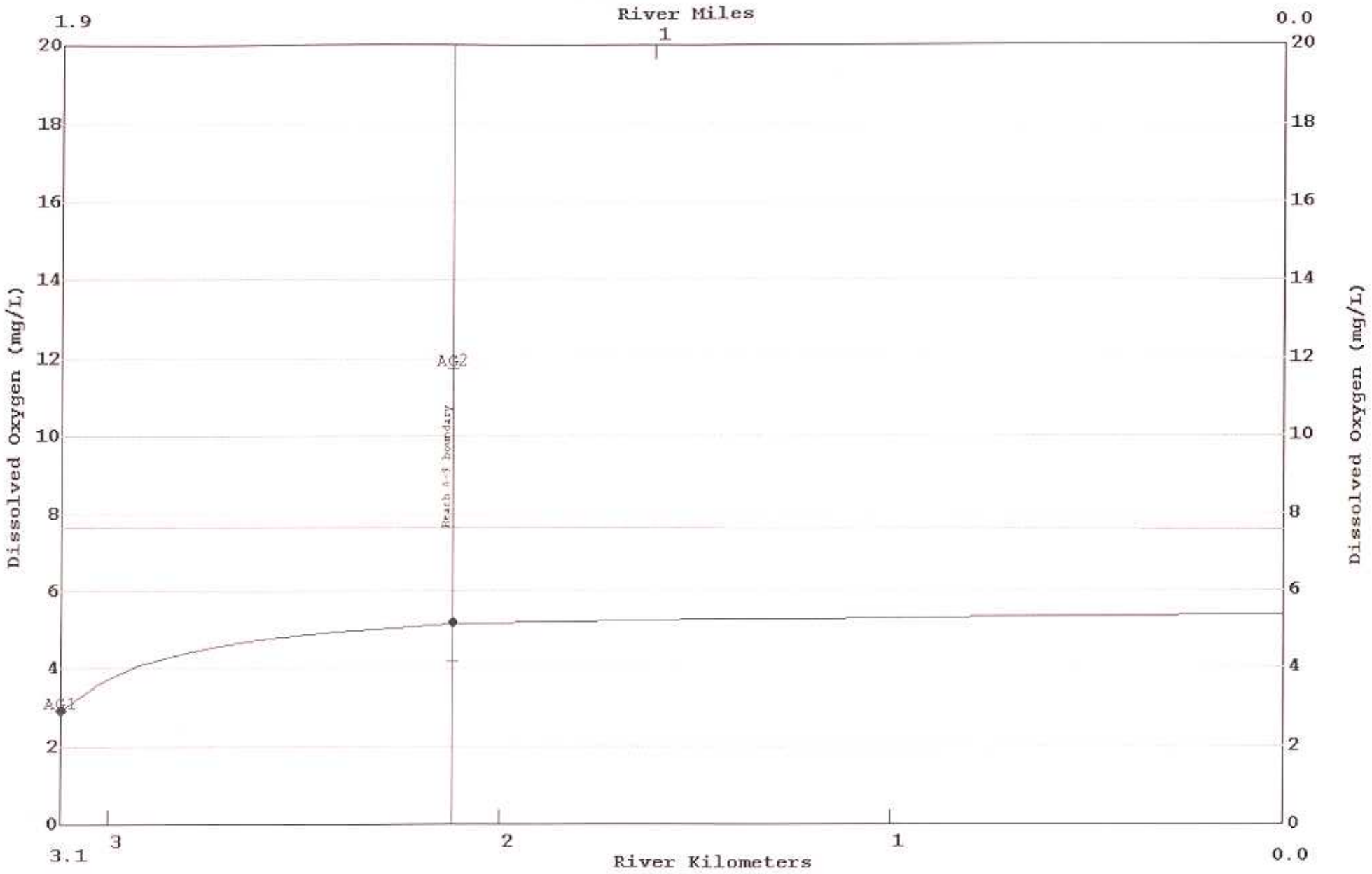
LA-QUAL Version 6.D2 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 5.82 max= 9.44
:AGC1-3



LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 1.60 max= 2.19
:AGC1-3



LA-QUAL Version 6.02 Run at 14:28 on 01/06/2004 File R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Calibration Run, MC-1 is headwater min= 2.91 max= 5.37
:AGC1-3



APPENDIX J

Printout of Model Output for Calibration

```
LA-QUAL Version 6.02
Louisiana Department of Environmental Quality

Input file is R:\projects\3110-051\la-qual\main_c\calib\recent\main_cal8.txt
Output produced at 14:28 on 01/06/2004

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

CARD TYPE       CONTROL TITLES

TITLE01         LA-QUAL model for Main Canal TMDL (subsegment 020501)
TITLE02         Calibration Run, MC-1 is headwater
CNTROL03   NO   SEQU                        <Warning: legacy control - line ignored>
CNTROL04  YES   METR
CNTROL05  YES   OXYG                        <Warning: legacy control - line ignored>
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMP
MODOPT02   NO   SALI
MODOPT03  YES   CONSERVATIVE MATERIAL  I = Chloride                  IN mg/L      CL
MODOPT04  YES   CONSERVATIVE MATERIAL II = Conductivity              IN umhos     COND
MODOPT05  YES   DISS
MODOPT06  YES   BIOC
MODOPT07   NO   NITR
MODOPT08   NO   PHOS
MODOPT09   NO   CHLO
MODOPT10   NO   MACR
MODOPT11   NO   COLI
MODOPT12  YES   NONCONSERVATIVE MATERIAL = Nitrogenous BOD           IN mg/L      NBOD
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
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

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	MC	Main Canal	8.00	TO	7.60	0.1000	0.40	4	1	4
REACH ID	2	MC	Main Canal	7.60	TO	7.00	0.1000	0.60	6	5	10
REACH ID	3	MC	Main Canal	7.00	TO	6.00	0.1000	1.00	10	11	20
REACH ID	4	MC	Main Canal	6.00	TO	5.00	0.1000	1.00	10	21	30
REACH ID	5	MC	Main Canal	5.00	TO	4.00	0.1000	1.00	10	31	40
REACH ID	6	MC	Main Canal	4.00	TO	3.00	0.1000	1.00	10	41	50
REACH ID	7	MC	Main Canal	3.00	TO	1.20	0.1000	1.80	18	51	68
REACH ID	8	AG	Avondale Gardens	3.12	TO	2.12	0.1000	1.00	10	69	78
Reach ID	9	AG	Avondale Gardens	2.12	TO	0.00	0.1060	2.12	20	79	98
REACH ID	10	MC	Main Canal	1.20	TO	0.00	0.1000	1.20	12	99	110

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	MC	0.000	0.000	22.500	0.000	0.000	1.280	0.00000	0.000
HYDR-1	2	MC	0.000	0.000	13.100	0.000	0.000	0.707	0.00000	0.000
HYDR-1	3	MC	0.000	0.000	16.600	0.000	0.000	1.080	0.00000	0.000
HYDR-1	4	MC	0.000	0.000	14.850	0.000	0.000	0.930	0.00000	0.000
HYDR-1	5	MC	0.000	0.000	13.110	0.000	0.000	0.770	0.00000	0.000
HYDR-1	6	MC	0.000	0.000	16.150	0.000	0.000	0.940	0.00000	0.000
HYDR-1	7	MC	0.000	0.000	19.200	0.000	0.000	1.120	0.00000	0.000
HYDR-1	8	AG	0.000	0.000	9.140	0.000	0.000	0.460	0.00000	0.000
HYDR-1	9	AG	0.000	0.000	15.200	0.000	0.000	0.640	0.00000	0.000
HYDR-1	10	MC	0.000	0.000	15.540	0.000	0.000	1.160	0.00000	0.000

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	MC	30.20	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	2	MC	30.20	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	3	MC	30.20	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	4	MC	30.20	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	5	MC	30.10	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	MC	30.10	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	MC	29.70	0.49	1.12	0.00	0.00	0.00	0.00	0.00
INITIAL	8	AG	29.30	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	9	AG	29.30	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	10	MC	29.80	0.48	4.54	0.00	0.00	0.00	0.00	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 BOD DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	MC	15 LOUISIANA	0.000	0.000	0.000	0.400	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	MC	15 LOUISIANA	0.000	0.000	0.000	0.400	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	MC	15 LOUISIANA	0.000	0.000	0.000	0.700	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	MC	15 LOUISIANA	0.000	0.000	0.000	0.750	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	MC	15 LOUISIANA	0.000	0.000	0.000	0.750	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	MC	15 LOUISIANA	0.000	0.000	0.000	1.750	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	MC	15 LOUISIANA	0.000	0.000	0.000	4.250	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	AG	15 LOUISIANA	0.000	0.000	0.000	0.750	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	AG	15 LOUISIANA	0.000	0.000	0.000	0.750	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	MC	15 LOUISIANA	0.000	0.000	0.000	0.100	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	ORG-N DECA	ORG-N SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE

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
COEF-4	1	MC	0.000	0.220	0.000	0.000
COEF-4	2	MC	0.000	0.220	0.000	0.000
COEF-4	3	MC	0.000	0.200	0.000	0.000
COEF-4	4	MC	0.000	0.180	0.000	0.000
COEF-4	5	MC	0.000	0.160	0.000	0.000
COEF-4	6	MC	0.000	0.190	0.000	0.000
COEF-4	7	MC	0.000	0.220	0.000	0.000
COEF-4	8	AG	0.000	0.210	0.000	0.000
COEF-4	9	AG	0.000	0.060	0.000	0.000
COEF-4	10	MC	0.000	0.210	0.000	0.000

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	MC	0.00000	0.02000	30.30	0.39	61.20	761.00	0.05000	0.00000
INCR-1	2	MC	0.00000	0.03000	30.30	0.39	61.20	761.00	0.05000	0.00000
INCR-1	3	MC	0.00000	0.05000	30.30	0.39	140.00	900.00	0.05000	0.00000
INCR-1	4	MC	0.00000	0.05000	30.30	0.39	140.00	900.00	0.05000	0.00000
INCR-1	5	MC	0.00000	0.05000	30.20	0.43	140.00	900.00	0.05000	0.00000
INCR-1	6	MC	0.00000	0.05000	30.20	0.43	190.00	1300.00	0.05000	0.00000
INCR-1	7	MC	0.00000	0.09100	30.20	0.43	190.00	1300.00	0.05056	0.00000
INCR-1	8	AG	0.00000	0.05000	26.40	0.39	45.00	360.00	0.05000	0.00000
INCR-1	9	AG	0.00000	0.10600	29.30	0.26	45.00	360.00	0.05000	0.00000
INCR-1	10	MC	0.00000	0.06000	29.75	0.49	300.00	2000.00	0.05000	0.00000

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3-N	NO3-N	BOD#2
INCR-2	1	MC	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	2	MC	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	3	MC	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	4	MC	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	5	MC	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	6	MC	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	7	MC	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	8	AG	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	9	AG	4.00	6.00	0.00	0.00	0.00	0.00
INCR-2	10	MC	4.00	6.00	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	MC	0.00	0.00	0.00	3.00
INCR-3	2	MC	0.00	0.00	0.00	3.00
INCR-3	3	MC	0.00	0.00	0.00	3.00
INCR-3	4	MC	0.00	0.00	0.00	3.00
INCR-3	5	MC	0.00	0.00	0.00	3.00
INCR-3	6	MC	0.00	0.00	0.00	3.00
INCR-3	7	MC	0.00	0.00	0.00	3.00
INCR-3	8	AG	0.00	0.00	0.00	1.00
INCR-3	9	AG	0.00	0.00	0.00	1.00
INCR-3	10	MC	0.00	0.00	0.00	3.00

ENDATA18

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

CARD TYPE	REACH	ID	BOD#1	ORG-N	COLI	NCM	DO	BOD#2
NONPOINT	1	MC	36.00	0.00	0.00	33.00	0.00	0.00
NONPOINT	2	MC	27.00	0.00	0.00	17.00	0.00	0.00
NONPOINT	3	MC	15.00	0.00	0.00	14.00	0.00	0.00
NONPOINT	4	MC	15.00	0.00	0.00	18.00	0.00	0.00
NONPOINT	5	MC	17.00	0.00	0.00	17.00	0.00	0.00
NONPOINT	6	MC	32.00	0.00	0.00	30.00	0.00	0.00
NONPOINT	7	MC	66.00	0.00	0.00	68.00	0.00	0.00
NONPOINT	8	AG	17.00	0.00	0.00	4.00	0.00	0.00
NONPOINT	9	AG	55.00	0.00	0.00	14.00	0.00	0.00
NONPOINT	10	MC	80.00	0.00	0.00	2.00	0.00	0.00

ENDATA19

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

CARD TYPE	ELEMENT	NAME	UNIT	FLOW m^3/s	FLOW cfs	TEMP deg C	SALIN ppt	CM-I mg/L	CM-II umhos
HDWTR-1	1	Main Canal	0	0.08000	2.825	30.30	0.39	61.200	761.000
HDWTR-1	69	Avondale Gardens	0	0.03000	1.059	28.60	0.39	88.900	760.200

ENDATA20

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

CARD TYPE	ELEMENT	NAME	DO mg/L	BOD#1 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	BOD#2 mg/L
HDWTR-2	1	Main Canal	5.34	13.46	0.00	0.00	0.00	0.00
HDWTR-2	69	Avondale Gardens	2.91	5.82	0.00	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     Main Canal                  0.00      0.00      0.00      5.58
HDWTR-3          69     Avondale Gardens            0.00      0.00      0.00      2.19
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

JUNCTION          99      68       1.20    Avondale Gardens
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     umhos

ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                            %
CARD TYPE     ELEMENT   NAME                          DO       BOD      RMVL     ORG-N     NH3-N    NITRIF     NO3-N     BOD#2
                                                     mg/L      mg/L                mg/L      mg/L                 mg/L      mg/L

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

ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

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 =  2
NUMBER OF REACHES IN PLOT 1 =   8
PLOT RCH  1  2  3  4  5  6  7 10
NUMBER OF REACHES IN PLOT 2 =   2
PLOT RCH  8  9
ENDATA30

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


OVERLAY 1 MACANL7.OVL                        :MC1-8
OVERLAY 2 AVGARD6.OVL                        :AGC1-3
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  40 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
```

EXPANDED CAPSULE SUMMARY FOR Main Canal

IOR	REACH	DIST km	FLOW m³/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3 mg/L	CHLA µg/L	DISP m²/s	DEPTH m	WIDTH m	ADVEC VELO m/s	MEAN VELO m/s	DO SAT mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	NH3 DECA 1/da	SOD g/m²/d
		HDWTR	0.080	30.3	0.4	5.3	13.5	0.0	0.0	0.0	0.0													
1	MC 1	7.90	0.085	30.2	0.4	4.2	13.5	0.0	0.0	0.0	0.0	0.0	1.28	22.5	0.003	0.003	7.5	0.666	0.14	0.00	0.00	0.00	0.00	0.76
2	MC 1	7.80	0.090	30.2	0.4	3.4	13.5	0.0	0.0	0.0	0.0	0.0	1.28	22.5	0.003	0.003	7.5	0.668	0.14	0.00	0.00	0.00	0.00	0.76
3	MC 1	7.70	0.095	30.2	0.4	2.8	13.5	0.0	0.0	0.0	0.0	0.0	1.28	22.5	0.003	0.003	7.5	0.670	0.14	0.00	0.00	0.00	0.00	0.76
4	MC 1	7.60	0.100	30.2	0.4	2.3	13.5	0.0	0.0	0.0	0.0	0.0	1.28	22.5	0.003	0.003	7.5	0.673	0.14	0.00	0.00	0.00	0.00	0.76
5	MC 2	7.50	0.105	30.2	0.4	2.6	13.5	0.0	0.0	0.0	0.0	0.0	0.71	13.1	0.011	0.011	7.5	1.410	0.14	0.00	0.00	0.00	0.00	0.76
6	MC 2	7.40	0.110	30.2	0.4	2.8	13.4	0.0	0.0	0.0	0.0	0.0	0.71	13.1	0.012	0.012	7.5	1.423	0.14	0.00	0.00	0.00	0.00	0.76
7	MC 2	7.30	0.115	30.2	0.4	2.9	13.4	0.0	0.0	0.0	0.0	0.0	0.71	13.1	0.012	0.012	7.5	1.436	0.14	0.00	0.00	0.00	0.00	0.76
8	MC 2	7.20	0.120	30.2	0.4	3.1	13.3	0.0	0.0	0.0	0.0	0.0	0.71	13.1	0.013	0.013	7.5	1.449	0.14	0.00	0.00	0.00	0.00	0.76
9	MC 2	7.10	0.125	30.2	0.4	3.2	13.3	0.0	0.0	0.0	0.0	0.0	0.71	13.1	0.013	0.013	7.5	1.463	0.14	0.00	0.00	0.00	0.00	0.76
10	MC 2	7.00	0.130	30.2	0.4	3.3	13.3	0.0	0.0	0.0	0.0	0.0	0.71	13.1	0.014	0.014	7.5	1.476	0.14	0.00	0.00	0.00	0.00	0.76
11	MC 3	6.90	0.135	30.2	0.4	3.1	12.8	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.008	0.008	7.5	0.862	0.14	0.00	0.00	0.00	0.00	1.33
12	MC 3	6.80	0.140	30.2	0.4	3.0	12.5	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.008	0.008	7.5	0.867	0.14	0.00	0.00	0.00	0.00	1.33
13	MC 3	6.70	0.145	30.2	0.4	2.9	12.1	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.008	0.008	7.5	0.871	0.14	0.00	0.00	0.00	0.00	1.33
14	MC 3	6.60	0.150	30.2	0.4	2.9	11.8	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.008	0.008	7.5	0.876	0.14	0.00	0.00	0.00	0.00	1.33
15	MC 3	6.50	0.155	30.2	0.4	2.9	11.5	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.009	0.009	7.5	0.880	0.14	0.00	0.00	0.00	0.00	1.33
16	MC 3	6.40	0.160	30.2	0.4	2.9	11.2	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.009	0.009	7.5	0.884	0.14	0.00	0.00	0.00	0.00	1.33
17	MC 3	6.30	0.165	30.2	0.4	2.9	11.0	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.009	0.009	7.5	0.889	0.14	0.00	0.00	0.00	0.00	1.33

18	MC	3	6.20	0.170	30.2	0.4	2.9	10.8	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.009	0.009	7.5	0.893	0.14	0.00	0.00	0.00	0.00	1.33
19	MC	3	6.10	0.175	30.2	0.4	2.9	10.6	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.010	0.010	7.5	0.898	0.14	0.00	0.00	0.00	0.00	1.33
20	MC	3	6.00	0.180	30.2	0.4	2.9	10.4	0.0	0.0	0.0	0.0	0.0	1.08	16.6	0.010	0.010	7.5	0.902	0.14	0.00	0.00	0.00	0.00	1.33
21	MC	4	5.90	0.185	30.2	0.4	3.0	10.2	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.013	0.013	7.5	1.110	0.13	0.00	0.00	0.00	0.00	1.42
22	MC	4	5.80	0.190	30.2	0.4	3.1	10.1	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.014	0.014	7.5	1.116	0.13	0.00	0.00	0.00	0.00	1.42
23	MC	4	5.70	0.195	30.2	0.4	3.2	10.0	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.014	0.014	7.5	1.123	0.13	0.00	0.00	0.00	0.00	1.42
24	MC	4	5.60	0.200	30.2	0.4	3.3	9.9	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.014	0.014	7.5	1.129	0.13	0.00	0.00	0.00	0.00	1.42
25	MC	4	5.50	0.205	30.2	0.4	3.3	9.7	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.015	0.015	7.5	1.136	0.13	0.00	0.00	0.00	0.00	1.42
26	MC	4	5.40	0.210	30.1	0.4	3.4	9.6	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.015	0.015	7.5	1.142	0.13	0.00	0.00	0.00	0.00	1.42
27	MC	4	5.30	0.215	30.1	0.4	3.5	9.5	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.016	0.016	7.5	1.149	0.13	0.00	0.00	0.00	0.00	1.42
28	MC	4	5.20	0.220	30.1	0.4	3.5	9.4	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.016	0.016	7.5	1.155	0.13	0.00	0.00	0.00	0.00	1.42
29	MC	4	5.10	0.225	30.1	0.4	3.6	9.4	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.016	0.016	7.5	1.162	0.13	0.00	0.00	0.00	0.00	1.42
30	MC	4	5.00	0.230	30.1	0.4	3.6	9.3	0.0	0.0	0.0	0.0	0.0	0.93	14.9	0.017	0.017	7.5	1.168	0.13	0.00	0.00	0.00	0.00	1.42
31	MC	5	4.90	0.235	30.1	0.4	3.7	9.2	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.023	0.023	7.5	1.559	0.13	0.00	0.00	0.00	0.00	1.42
32	MC	5	4.80	0.240	30.1	0.4	3.8	9.2	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.024	0.024	7.5	1.570	0.13	0.00	0.00	0.00	0.00	1.42
33	MC	5	4.70	0.245	30.1	0.4	3.9	9.2	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.024	0.024	7.5	1.582	0.13	0.00	0.00	0.00	0.00	1.42
34	MC	5	4.60	0.250	30.1	0.4	4.0	9.1	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.025	0.025	7.5	1.593	0.13	0.00	0.00	0.00	0.00	1.42
35	MC	5	4.50	0.255	30.1	0.4	4.0	9.1	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.025	0.025	7.5	1.604	0.13	0.00	0.00	0.00	0.00	1.42
36	MC	5	4.40	0.260	30.1	0.4	4.1	9.0	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.026	0.026	7.5	1.615	0.13	0.00	0.00	0.00	0.00	1.42
37	MC	5	4.30	0.265	30.1	0.4	4.2	9.0	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.026	0.026	7.5	1.626	0.13	0.00	0.00	0.00	0.00	1.42
38	MC	5	4.20	0.270	30.1	0.4	4.2	9.0	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.027	0.027	7.5	1.637	0.13	0.00	0.00	0.00	0.00	1.42
39	MC	5	4.10	0.275	30.1	0.4	4.3	8.9	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.027	0.027	7.5	1.648	0.13	0.00	0.00	0.00	0.00	1.42
40	MC	5	4.00	0.280	30.1	0.4	4.3	8.9	0.0	0.0	0.0	0.0	0.0	0.77	13.1	0.028	0.028	7.5	1.659	0.13	0.00	0.00	0.00	0.00	1.42
41	MC	6	3.90	0.285	30.1	0.4	4.2	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.019	0.019	7.5	1.194	0.14	0.00	0.00	0.00	0.00	3.30
42	MC	6	3.80	0.290	30.0	0.4	4.0	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.019	0.019	7.5	1.199	0.14	0.00	0.00	0.00	0.00	3.29
43	MC	6	3.70	0.295	30.0	0.4	3.9	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.019	0.019	7.5	1.204	0.14	0.00	0.00	0.00	0.00	3.28
44	MC	6	3.60	0.300	29.9	0.5	3.8	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.020	0.020	7.5	1.210	0.14	0.00	0.00	0.00	0.00	3.27
45	MC	6	3.50	0.305	29.9	0.5	3.8	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.020	0.020	7.6	1.215	0.14	0.00	0.00	0.00	0.00	3.26
46	MC	6	3.40	0.310	29.9	0.5	3.7	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.020	0.020	7.6	1.220	0.14	0.00	0.00	0.00	0.00	3.26
47	MC	6	3.30	0.315	29.8	0.5	3.6	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.021	0.021	7.6	1.225	0.14	0.00	0.00	0.00	0.00	3.25
48	MC	6	3.20	0.320	29.8	0.5	3.6	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.021	0.021	7.6	1.230	0.14	0.00	0.00	0.00	0.00	3.24
49	MC	6	3.10	0.325	29.7	0.5	3.5	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.021	0.021	7.6	1.235	0.14	0.00	0.00	0.00	0.00	3.23
50	MC	6	3.00	0.330	29.7	0.5	3.5	8.9	0.0	0.0	0.0	0.0	0.0	0.94	16.1	0.022	0.022	7.6	1.240	0.14	0.00	0.00	0.00	0.00	3.22
51	MC	7	2.90	0.335	29.7	0.5	3.1	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.016	0.016	7.6	0.947	0.15	0.00	0.00	0.00	0.00	7.83
52	MC	7	2.80	0.340	29.7	0.5	2.7	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.016	0.016	7.6	0.951	0.15	0.00	0.00	0.00	0.00	7.83
53	MC	7	2.70	0.345	29.7	0.5	2.4	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.016	0.016	7.6	0.955	0.15	0.00	0.00	0.00	0.00	7.84
54	MC	7	2.60	0.350	29.7	0.5	2.0	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.016	0.016	7.6	0.958	0.15	0.00	0.00	0.00	0.00	7.84
55	MC	7	2.50	0.355	29.7	0.5	1.8	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.017	0.017	7.6	0.962	0.13	0.00	0.00	0.00	0.00	7.17
56	MC	7	2.40	0.360	29.7	0.5	1.7	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.017	0.017	7.6	0.966	0.12	0.00	0.00	0.00	0.00	6.57
57	MC	7	2.30	0.365	29.7	0.5	1.6	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.017	0.017	7.6	0.969	0.11	0.00	0.00	0.00	0.00	6.16
58	MC	7	2.20	0.370	29.7	0.5	1.5	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.017	0.017	7.6	0.973	0.11	0.00	0.00	0.00	0.00	5.88
59	MC	7	2.10	0.375	29.8	0.5	1.4	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.017	0.017	7.6	0.977	0.11	0.00	0.00	0.00	0.00	5.69
60	MC	7	2.00	0.381	29.8	0.5	1.4	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.018	0.018	7.6	0.980	0.10	0.00	0.00	0.00	0.00	5.56
61	MC	7	1.90	0.386	29.8	0.5	1.4	8.9	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.018	0.018	7.6	0.984	0.10	0.00	0.00	0.00	0.00	5.47
62	MC	7	1.80	0.391	29.8	0.5	1.4	9.0	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.018	0.018	7.6	0.988	0.10	0.00	0.00	0.00	0.00	5.41
63	MC	7	1.70	0.396	29.8	0.5	1.4	9.0	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.018	0.018	7.6	0.991	0.10	0.00	0.00	0.00	0.00	5.37
64	MC	7	1.60	0.401	29.8	0.5	1.4	9.0	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.019	0.019	7.6	0.995	0.10	0.00	0.00	0.00	0.00	5.34
65	MC	7	1.50	0.406	29.8	0.5	1.4	9.0	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.019	0.019	7.6	0.999	0.10	0.00	0.00	0.00	0.00	5.32
66	MC	7	1.40	0.411	29.8	0.5	1.4	9.0	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.019	0.019	7.6	1.003	0.10	0.00	0.00	0.00	0.00	5.32
67	MC	7	1.30	0.416	29.8	0.5	1.3	9.0	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.019	0.019	7.6	1.006	0.10	0.00	0.00	0.00	0.00	5.31
68	MC	7	1.20	0.421	29.8	0.5	1.3	9.0	0.0	0.0	0.0	0.0	0.0	1.12	19.2	0.020	0.020	7.6	1.010	0.10	0.00	0.00	0.00	0.00	5.31
	TRIBUTARY # 069 (Avondale Gardens) ENTERS HERE																								
99	MC	10	1.10	0.612	29.8	0.5	2.7	9.2	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.034	0.034	7.6	1.187	0.16	0.00	0.00	0.00	0.00	0.19

100	MC	10	1.00	0.617	29.8	0.5	2.8	9.3	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.034	0.034	7.6	1.191	0.16	0.00	0.00	0.00	0.00	0.19
101	MC	10	0.90	0.622	29.8	0.5	2.9	9.3	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.035	0.035	7.6	1.195	0.16	0.00	0.00	0.00	0.00	0.19
102	MC	10	0.80	0.627	29.8	0.5	3.0	9.4	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.035	0.035	7.6	1.200	0.16	0.00	0.00	0.00	0.00	0.19

EXPANDED CAPSULE SUMMARY FOR Main Canal

IOR	REACH	DIST km	FLOW m³/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3 mg/L	CHLA µg/L	DISP m²/s	DEPTH m	WIDTH m	ADVEC VELO m/s	MEAN VELO m/s	DO SAT mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	NH3 DECA 1/da	SOD g/m²/d
103	MC 10	0.70	0.632	29.8	0.5	3.1	9.4	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.035	0.035	7.6	1.204	0.16	0.00	0.00	0.00	0.00	0.19
104	MC 10	0.60	0.637	29.8	0.5	3.2	9.4	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.035	0.035	7.6	1.208	0.16	0.00	0.00	0.00	0.00	0.19
105	MC 10	0.50	0.642	29.8	0.5	3.2	9.5	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.036	0.036	7.6	1.212	0.16	0.00	0.00	0.00	0.00	0.19
106	MC 10	0.40	0.647	29.8	0.5	3.3	9.5	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.036	0.036	7.6	1.216	0.16	0.00	0.00	0.00	0.00	0.19
107	MC 10	0.30	0.652	29.8	0.5	3.4	9.6	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.036	0.036	7.6	1.220	0.16	0.00	0.00	0.00	0.00	0.19
108	MC 10	0.20	0.657	29.8	0.5	3.5	9.6	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.036	0.036	7.6	1.224	0.16	0.00	0.00	0.00	0.00	0.19
109	MC 10	0.10	0.662	29.8	0.5	3.5	9.7	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.037	0.037	7.6	1.228	0.16	0.00	0.00	0.00	0.00	0.19
110	MC 10	0.00	0.667	29.8	0.5	3.6	9.7	0.0	0.0	0.0	0.0	0.0	1.16	15.5	0.037	0.037	7.6	1.232	0.16	0.00	0.00	0.00	0.00	0.19

EXPANDED CAPSULE SUMMARY FOR Avondale Gardens

IOR	REACH	DIST km	FLOW m³/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3 mg/L	CHLA µg/L	DISP m²/s	DEPTH m	WIDTH m	ADVEC VELO m/s	MEAN VELO m/s	DO SAT mg/L	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	NH3 DECA 1/da	SOD g/m²/d
69	AG 8	3.02	0.035	29.3	0.3	3.6	6.4	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.008	0.008	7.6	2.022	0.06	0.00	0.00	0.00	0.00	1.35
70	AG 8	2.92	0.040	29.3	0.3	4.1	6.8	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.010	0.010	7.6	2.066	0.06	0.00	0.00	0.00	0.00	1.35
71	AG 8	2.82	0.045	29.3	0.3	4.4	7.1	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.011	0.011	7.6	2.110	0.06	0.00	0.00	0.00	0.00	1.35
72	AG 8	2.72	0.050	29.3	0.3	4.6	7.3	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.012	0.012	7.6	2.154	0.06	0.00	0.00	0.00	0.00	1.35
73	AG 8	2.62	0.055	29.3	0.3	4.7	7.5	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.013	0.013	7.6	2.198	0.06	0.00	0.00	0.00	0.00	1.35
74	AG 8	2.52	0.060	29.3	0.3	4.8	7.7	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.014	0.014	7.6	2.242	0.06	0.00	0.00	0.00	0.00	1.35
75	AG 8	2.42	0.065	29.3	0.3	4.9	7.8	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.015	0.015	7.6	2.286	0.06	0.00	0.00	0.00	0.00	1.35
76	AG 8	2.32	0.070	29.3	0.3	5.0	7.9	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.017	0.017	7.6	2.330	0.06	0.00	0.00	0.00	0.00	1.35
77	AG 8	2.22	0.075	29.3	0.3	5.1	8.0	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.018	0.018	7.6	2.374	0.06	0.00	0.00	0.00	0.00	1.35
78	AG 8	2.12	0.080	29.3	0.3	5.1	8.1	0.0	0.0	0.0	0.0	0.0	0.46	9.1	0.019	0.019	7.6	2.418	0.06	0.00	0.00	0.00	0.00	1.35
79	AG 9	2.01	0.085	29.3	0.3	5.2	8.3	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.009	0.009	7.6	1.466	0.08	0.00	0.00	0.00	0.00	1.35
80	AG 9	1.91	0.091	29.3	0.3	5.2	8.4	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.009	0.009	7.6	1.481	0.08	0.00	0.00	0.00	0.00	1.35
81	AG 9	1.80	0.096	29.4	0.3	5.2	8.5	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.010	0.010	7.6	1.496	0.08	0.00	0.00	0.00	0.00	1.35
82	AG 9	1.70	0.101	29.4	0.3	5.2	8.6	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.010	0.010	7.6	1.511	0.08	0.00	0.00	0.00	0.00	1.36
83	AG 9	1.59	0.107	29.4	0.3	5.2	8.7	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.011	0.011	7.6	1.527	0.08	0.00	0.00	0.00	0.00	1.36
84	AG 9	1.48	0.112	29.4	0.3	5.2	8.8	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.011	0.011	7.6	1.542	0.08	0.00	0.00	0.00	0.00	1.36
85	AG 9	1.38	0.117	29.5	0.3	5.3	8.9	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.012	0.012	7.6	1.557	0.08	0.00	0.00	0.00	0.00	1.36
86	AG 9	1.27	0.122	29.5	0.3	5.3	8.9	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.013	0.013	7.6	1.572	0.08	0.00	0.00	0.00	0.00	1.36
87	AG 9	1.17	0.128	29.5	0.4	5.3	9.0	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.013	0.013	7.6	1.587	0.08	0.00	0.00	0.00	0.00	1.37
88	AG 9	1.06	0.133	29.5	0.4	5.3	9.1	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.014	0.014	7.6	1.602	0.08	0.00	0.00	0.00	0.00	1.37
89	AG 9	0.95	0.138	29.6	0.4	5.3	9.1	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.014	0.014	7.6	1.618	0.08	0.00	0.00	0.00	0.00	1.37
90	AG 9	0.85	0.144	29.6	0.4	5.3	9.2	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.015	0.015	7.6	1.633	0.08	0.00	0.00	0.00	0.00	1.37
91	AG 9	0.74	0.149	29.6	0.4	5.3	9.2	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.015	0.015	7.6	1.648	0.08	0.00	0.00	0.00	0.00	1.37
92	AG 9	0.64	0.154	29.6	0.4	5.3	9.2	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.016	0.016	7.6	1.663	0.08	0.00	0.00	0.00	0.00	1.38
93	AG 9	0.53	0.160	29.7	0.4	5.3	9.3	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.016	0.016	7.6	1.679	0.08	0.00	0.00	0.00	0.00	1.38
94	AG 9	0.42	0.165	29.7	0.4	5.3	9.3	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.017	0.017	7.6	1.694	0.08	0.00	0.00	0.00	0.00	1.38
95	AG 9	0.32	0.170	29.7	0.4	5.3	9.3	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.017	0.017	7.6	1.709	0.08	0.00	0.00	0.00	0.00	1.38
96	AG 9	0.21	0.175	29.8	0.5	5.4	9.4	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.018	0.018	7.6	1.724	0.08	0.00	0.00	0.00	0.00	1.39
97	AG 9	0.11	0.181	29.8	0.5	5.4	9.4	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.019	0.019	7.6	1.740	0.08	0.00	0.00	0.00	0.00	1.39
98	AG 9	0.00	0.186	29.8	0.5	5.4	9.4	0.0	0.0	0.0	0.0	0.0	0.64	15.2	0.019	0.019	7.6	1.755	0.08	0.00	0.00	0.00	0.00	1.39

FINAL REPORT Main Canal — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 1 Main Canal — Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
1	HDWTR	0.08000	30.30	0.39	61.20	761.00	5.34	13.46	0.00	13.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.58
EACH	INCR	0.00500	30.30	0.39	61.20	761.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	3.00	

********** 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	8.00	7.90	0.08500	0.0	0.00295	0.39	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.003
2	7.90	7.80	0.09000	0.0	0.00313	0.37	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.003
3	7.80	7.70	0.09500	0.0	0.00330	0.35	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.003
4	7.70	7.60	0.10000	0.0	0.00347	0.33	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.003
TOT						1.45			11520.00	9000.00					
AVG					0.00320		1.28	22.50			28.80				
CUM						1.45									

********** 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	7.900	7.52	0.67	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
2	7.800	7.52	0.67	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
3	7.700	7.52	0.67	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
4	7.600	7.52	0.67	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
AVG 20 DEG C RATE			0.55	0.09	0.00	0.00	0.00	0.00	0.00	0.40			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
1	7.900	30.20	0.39	61.20	761.00	4.18	13.49	0.00	13.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.59
2	7.800	30.20	0.39	61.20	761.00	3.35	13.51	0.00	13.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.60
3	7.700	30.20	0.39	61.20	761.00	2.75	13.53	0.00	13.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.60

4	7.600	30.20	0.39	61.20	761.00	2.31	13.54	0.00	13.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.61

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 2 Main Canal Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
5	UPR RCH	0.10000	30.20	0.39	61.20	761.00	2.31	13.54	0.00	13.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.61
EACH	INCR	0.00500	30.30	0.39	61.20	761.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	3.00	

********** 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
5	7.60	7.50	0.10500	0.0	0.01134	0.10	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.011
6	7.50	7.40	0.11000	0.0	0.01188	0.10	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.012
7	7.40	7.30	0.11500	0.0	0.01242	0.09	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.012
8	7.30	7.20	0.12000	0.0	0.01296	0.09	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.013
9	7.20	7.10	0.12500	0.0	0.01350	0.09	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.013
10	7.10	7.00	0.13000	0.0	0.01404	0.08	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.014
TOT						0.55			5557.02	7860.00					
AVG					0.01262		0.71	13.10			9.26				
CUM						2.00									

********** 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
5	7.500	7.52	1.41	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
6	7.400	7.52	1.42	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
7	7.300	7.52	1.44	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
8	7.200	7.52	1.45	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
9	7.100	7.52	1.46	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
10	7.000	7.52	1.48	0.14	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00
AVG 20 DEG C RATE			1.20	0.09	0.00	0.00	0.00	0.00	0.00	0.40			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
5	7.500	30.20	0.39	61.20	761.00	2.55	13.48	0.00	13.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.55
6	7.400	30.20	0.39	61.20	761.00	2.75	13.43	0.00	13.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.50
7	7.300	30.20	0.39	61.20	761.00	2.92	13.38	0.00	13.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.45
8	7.200	30.20	0.39	61.20	761.00	3.06	13.33	0.00	13.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.41
9	7.100	30.20	0.39	61.20	761.00	3.18	13.29	0.00	13.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.37
10	7.000	30.20	0.39	61.20	761.00	3.29	13.26	0.00	13.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.34

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 3 Main Canal Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
11	UPR RCH	0.13000	30.20	0.39	61.20	761.00	3.29	13.26	0.00	13.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.34
EACH	INCR	0.00500	30.30	0.39	140.00	900.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	3.00	

********** 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
11	7.00	6.90	0.13500	0.0	0.00753	0.15	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.008
12	6.90	6.80	0.14000	0.0	0.00781	0.15	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.008
13	6.80	6.70	0.14500	0.0	0.00809	0.14	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.008
14	6.70	6.60	0.15000	0.0	0.00837	0.14	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.008
15	6.60	6.50	0.15500	0.0	0.00865	0.13	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.009
16	6.50	6.40	0.16000	0.0	0.00892	0.13	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.009
17	6.40	6.30	0.16500	0.0	0.00920	0.13	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.009
18	6.30	6.20	0.17000	0.0	0.00948	0.12	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.009
19	6.20	6.10	0.17500	0.0	0.00976	0.12	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.010
20	6.10	6.00	0.18000	0.0	0.01004	0.12	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.010
TOT						1.33			17928.00	16600.00					
AVG					0.00871		1.08	16.60			17.93				
CUM						3.33									

********** 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
11	6.900	7.52	0.86	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
12	6.800	7.52	0.87	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
13	6.700	7.52	0.87	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
14	6.600	7.52	0.88	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
15	6.500	7.52	0.88	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
16	6.400	7.52	0.88	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
17	6.300	7.52	0.89	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
18	6.200	7.52	0.89	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
19	6.100	7.52	0.90	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
20	6.000	7.52	0.90	0.14	0.00	0.00	0.00	0.00	0.00	1.33	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
AVG 20 DEG C RATE			0.73	0.09	0.00	0.00	0.00	0.00	0.00	0.70			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.20	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
11	6.900	30.20	0.39	64.12	766.15	3.12	12.84	0.00	12.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	5.06
12	6.800	30.20	0.39	66.83	770.93	3.01	12.46	0.00	12.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.82
13	6.700	30.20	0.39	69.35	775.38	2.94	12.12	0.00	12.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.61
14	6.600	30.20	0.39	71.71	779.53	2.89	11.80	0.00	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.42
15	6.500	30.20	0.39	73.91	783.42	2.87	11.52	0.00	11.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.25
16	6.400	30.20	0.39	75.98	787.06	2.86	11.25	0.00	11.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.10
17	6.300	30.20	0.39	77.92	790.48	2.87	11.00	0.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.97
18	6.200	30.20	0.39	79.74	793.71	2.89	10.77	0.00	10.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.85
19	6.100	30.20	0.39	81.46	796.74	2.91	10.56	0.00	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.74
20	6.000	30.20	0.39	83.09	799.61	2.94	10.37	0.00	10.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.64

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 4 Main Canal Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
21	UPR RCH	0.18000	30.20	0.39	83.09	799.61	2.94	10.37	0.00	10.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.64
EACH	INCR	0.00500	30.30	0.39	140.00	900.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	3.00	

********** 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
21	6.00	5.90	0.18500	0.0	0.01340	0.09	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.013
22	5.90	5.80	0.19000	0.0	0.01376	0.08	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.014
23	5.80	5.70	0.19500	0.0	0.01412	0.08	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.014
24	5.70	5.60	0.20000	0.0	0.01448	0.08	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.014
25	5.60	5.50	0.20500	0.0	0.01484	0.08	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.015
26	5.50	5.40	0.21000	0.0	0.01521	0.08	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.015
27	5.40	5.30	0.21500	0.0	0.01557	0.07	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.016
28	5.30	5.20	0.22000	0.0	0.01593	0.07	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.016
29	5.20	5.10	0.22500	0.0	0.01629	0.07	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.016
30	5.10	5.00	0.23000	0.0	0.01665	0.07	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.017
TOT						0.77			13810.50	14850.00					
AVG					0.01495		0.93	14.85			13.81				
CUM						4.10									

********** 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
21	5.900	7.52	1.11	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
22	5.800	7.52	1.12	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
23	5.700	7.52	1.12	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
24	5.600	7.52	1.13	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
25	5.500	7.52	1.14	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
26	5.400	7.52	1.14	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
27	5.300	7.52	1.15	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
28	5.200	7.53	1.16	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
29	5.100	7.53	1.16	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
30	5.000	7.53	1.17	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
AVG 20 DEG C RATE			0.94	0.08	0.00	0.00	0.00	0.00	0.00	0.75			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.18	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
21	5.900	30.19	0.39	84.63	802.32	3.04	10.23	0.00	10.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.62
22	5.800	30.18	0.40	86.08	804.89	3.13	10.09	0.00	10.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.61
23	5.700	30.17	0.40	87.47	807.33	3.21	9.97	0.00	9.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.59
24	5.600	30.16	0.41	88.78	809.65	3.28	9.85	0.00	9.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.58

25	5.500	30.15	0.41	90.03	811.85	3.35	9.74	0.00	9.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.57
26	5.400	30.14	0.41	91.22	813.95	3.41	9.64	0.00	9.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.56
27	5.300	30.13	0.42	92.35	815.95	3.47	9.54	0.00	9.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.55
28	5.200	30.12	0.42	93.44	817.86	3.53	9.45	0.00	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.54
29	5.100	30.11	0.43	94.47	819.69	3.58	9.36	0.00	9.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.53
30	5.000	30.10	0.43	95.46	821.44	3.62	9.28	0.00	9.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.52

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 5 Main Canal Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
31	UPR RCH	0.23000	30.10	0.43	95.46	821.44	3.62	9.28	0.00	9.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.52
EACH	INCR	0.00500	30.20	0.43	140.00	900.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	3.00	

********** 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
31	5.00	4.90	0.23500	0.0	0.02328	0.05	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.023
32	4.90	4.80	0.24000	0.0	0.02377	0.05	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.024
33	4.80	4.70	0.24500	0.0	0.02427	0.05	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.024
34	4.70	4.60	0.25000	0.0	0.02477	0.05	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.025
35	4.60	4.50	0.25500	0.0	0.02526	0.05	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.025
36	4.50	4.40	0.26000	0.0	0.02576	0.04	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.026
37	4.40	4.30	0.26500	0.0	0.02625	0.04	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.026
38	4.30	4.20	0.27000	0.0	0.02675	0.04	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.027
39	4.20	4.10	0.27500	0.0	0.02724	0.04	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.027
40	4.10	4.00	0.28000	0.0	0.02774	0.04	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.028
TOT						0.46			10094.70	13110.00					
AVG					0.02543		0.77	13.11			10.09				
CUM						4.55									

********** 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
31	4.900	7.53	1.56	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
32	4.800	7.53	1.57	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
33	4.700	7.53	1.58	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
34	4.600	7.53	1.59	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00

35	4.500	7.53	1.60	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
36	4.400	7.53	1.61	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
37	4.300	7.53	1.63	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
38	4.200	7.53	1.64	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
39	4.100	7.53	1.65	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
40	4.000	7.53	1.66	0.13	0.00	0.00	0.00	0.00	0.00	1.42	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
AVG 20 DEG C RATE			1.34	0.08	0.00	0.00	0.00	0.00	0.00	0.75			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.16	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
31	4.900	30.10	0.43	96.41	823.11	3.72	9.24	0.00	9.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.54
32	4.800	30.10	0.43	97.32	824.71	3.81	9.19	0.00	9.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.55
33	4.700	30.10	0.43	98.19	826.25	3.89	9.15	0.00	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.57
34	4.600	30.10	0.43	99.02	827.72	3.97	9.11	0.00	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.58
35	4.500	30.10	0.43	99.83	829.14	4.03	9.08	0.00	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.60
36	4.400	30.10	0.43	100.60	830.50	4.10	9.04	0.00	9.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.61
37	4.300	30.10	0.43	101.34	831.81	4.15	9.01	0.00	9.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.62
38	4.200	30.10	0.43	102.06	833.07	4.21	8.98	0.00	8.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.63
39	4.100	30.10	0.43	102.75	834.29	4.26	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.64
40	4.000	30.10	0.43	103.41	835.46	4.30	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.65

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 6 Main Canal Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
41	UPR RCH	0.28000	30.10	0.43	103.41	835.46	4.30	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.65
EACH	INCR	0.00500	30.20	0.43	190.00	1300.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	3.00	

********** 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
41	4.00	3.90	0.28500	0.0	0.01877	0.06	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.019
42	3.90	3.80	0.29000	0.0	0.01910	0.06	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.019
43	3.80	3.70	0.29500	0.0	0.01943	0.06	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.019
44	3.70	3.60	0.30000	0.0	0.01976	0.06	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.020
45	3.60	3.50	0.30500	0.0	0.02009	0.06	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.020

46	3.50	3.40	0.31000	0.0	0.02042	0.06	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.020
47	3.40	3.30	0.31500	0.0	0.02075	0.06	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.021
48	3.30	3.20	0.32000	0.0	0.02108	0.05	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.021
49	3.20	3.10	0.32500	0.0	0.02141	0.05	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.021
50	3.10	3.00	0.33000	0.0	0.02174	0.05	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.022
TOT						0.57			15181.00	16150.00					
AVG					0.02021		0.94	16.15			15.18				
CUM						5.13									

********** 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
41	3.900	7.53	1.19	0.14	0.00	0.00	0.00	0.00	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
42	3.800	7.54	1.20	0.14	0.00	0.00	0.00	0.00	0.00	3.29	3.29	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
43	3.700	7.54	1.20	0.14	0.00	0.00	0.00	0.00	0.00	3.28	3.28	3.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
44	3.600	7.55	1.21	0.14	0.00	0.00	0.00	0.00	0.00	3.27	3.27	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
45	3.500	7.55	1.21	0.14	0.00	0.00	0.00	0.00	0.00	3.26	3.26	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
46	3.400	7.56	1.22	0.14	0.00	0.00	0.00	0.00	0.00	3.26	3.26	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
47	3.300	7.56	1.23	0.14	0.00	0.00	0.00	0.00	0.00	3.25	3.25	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
48	3.200	7.57	1.23	0.14	0.00	0.00	0.00	0.00	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
49	3.100	7.57	1.24	0.14	0.00	0.00	0.00	0.00	0.00	3.23	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
50	3.000	7.58	1.24	0.14	0.00	0.00	0.00	0.00	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00
AVG 20 DEG C RATE			1.01	0.09	0.00	0.00	0.00	0.00	0.00	1.75			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.19	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
41	3.900	30.06	0.44	104.93	843.61	4.17	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.68
42	3.800	30.02	0.44	106.40	851.48	4.05	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.70
43	3.700	29.98	0.45	107.82	859.09	3.94	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.73
44	3.600	29.94	0.45	109.19	866.43	3.85	8.93	0.00	8.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.75
45	3.500	29.90	0.46	110.51	873.54	3.76	8.93	0.00	8.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.77
46	3.400	29.86	0.47	111.79	880.42	3.69	8.93	0.00	8.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.79
47	3.300	29.82	0.47	113.03	887.08	3.62	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.81
48	3.200	29.78	0.48	114.24	893.53	3.57	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.83
49	3.100	29.74	0.48	115.40	899.79	3.52	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.84
50	3.000	29.70	0.49	116.53	905.85	3.47	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.86

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
51	UPR RCH	0.33000	29.70	0.49	116.53	905.85	3.47	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.86
EACH	INCR	0.00506	30.20	0.43	190.00	1300.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	3.00	

********** 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
51	3.00	2.90	0.33506	0.0	0.01558	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.016
52	2.90	2.80	0.34011	0.0	0.01582	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.016
53	2.80	2.70	0.34517	0.0	0.01605	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.016
54	2.70	2.60	0.35022	0.0	0.01629	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.016
55	2.60	2.50	0.35528	0.0	0.01652	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.017
56	2.50	2.40	0.36033	0.0	0.01676	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.017
57	2.40	2.30	0.36539	0.0	0.01699	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.017
58	2.30	2.20	0.37044	0.0	0.01723	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.017
59	2.20	2.10	0.37550	0.0	0.01746	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.017
60	2.10	2.00	0.38056	0.0	0.01770	0.07	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.018
61	2.00	1.90	0.38561	0.0	0.01793	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.018
62	1.90	1.80	0.39067	0.0	0.01817	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.018
63	1.80	1.70	0.39572	0.0	0.01840	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.018
64	1.70	1.60	0.40078	0.0	0.01864	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.019
65	1.60	1.50	0.40583	0.0	0.01887	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.019
66	1.50	1.40	0.41089	0.0	0.01911	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.019
67	1.40	1.30	0.41594	0.0	0.01934	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.019
68	1.30	1.20	0.42100	0.0	0.01958	0.06	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.020
TOT						1.19			38707.20	34560.00					
AVG					0.01749		1.12	19.20			21.50				
CUM						6.32									

********** 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
51	2.900	7.58	0.95	0.15	0.00	0.00	0.00	0.00	0.00	7.83	7.83	7.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00
52	2.800	7.58	0.95	0.15	0.00	0.00	0.00	0.00	0.00	7.83	7.83	7.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00
53	2.700	7.58	0.95	0.15	0.00	0.00	0.00	0.00	0.00	7.84	7.84	7.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00
54	2.600	7.57	0.96	0.15	0.00	0.00	0.00	0.00	0.00	7.84	7.84	7.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00
55	2.500	7.57	0.96	0.13	0.00	0.00	0.00	0.00	0.00	7.84	7.84	7.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
56	2.400	7.57	0.97	0.12	0.00	0.00	0.00	0.00	0.00	7.84	7.84	6.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
57	2.300	7.57	0.97	0.11	0.00	0.00	0.00	0.00	0.00	7.85	7.85	6.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00

58	2.200	7.57	0.97	0.11	0.00	0.00	0.00	0.00	0.00	7.85	7.85	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00
59	2.100	7.57	0.98	0.11	0.00	0.00	0.00	0.00	0.00	7.85	7.85	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00
60	2.000	7.57	0.98	0.10	0.00	0.00	0.00	0.00	0.00	7.86	7.86	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
61	1.900	7.57	0.98	0.10	0.00	0.00	0.00	0.00	0.00	7.86	7.86	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
62	1.800	7.57	0.99	0.10	0.00	0.00	0.00	0.00	0.00	7.86	7.86	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
63	1.700	7.57	0.99	0.10	0.00	0.00	0.00	0.00	0.00	7.86	7.86	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
64	1.600	7.57	1.00	0.10	0.00	0.00	0.00	0.00	0.00	7.87	7.87	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
65	1.500	7.57	1.00	0.10	0.00	0.00	0.00	0.00	0.00	7.87	7.87	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
66	1.400	7.57	1.00	0.10	0.00	0.00	0.00	0.00	0.00	7.87	7.87	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
67	1.300	7.57	1.01	0.10	0.00	0.00	0.00	0.00	0.00	7.88	7.88	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
68	1.200	7.56	1.01	0.10	0.00	0.00	0.00	0.00	0.00	7.88	7.88	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00
AVG 20 DEG C RATE			0.82	0.09	0.00	0.00	0.00	0.00	0.00	4.25			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
51	2.900	29.71	0.49	117.64	911.80	3.06	8.93	0.00	8.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.86
52	2.800	29.71	0.49	118.72	917.57	2.69	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.85
53	2.700	29.72	0.49	119.76	923.17	2.35	8.90	0.00	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.85
54	2.600	29.72	0.49	120.78	928.61	2.05	8.89	0.00	8.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.85
55	2.500	29.73	0.49	121.76	933.89	1.83	8.89	0.00	8.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.85
56	2.400	29.73	0.49	122.72	939.03	1.68	8.89	0.00	8.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.87
57	2.300	29.74	0.49	123.65	944.02	1.57	8.90	0.00	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.89
58	2.200	29.74	0.49	124.55	948.88	1.50	8.91	0.00	8.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.91
59	2.100	29.75	0.49	125.44	953.61	1.45	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.93
60	2.000	29.76	0.48	126.29	958.21	1.42	8.93	0.00	8.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.96
61	1.900	29.76	0.48	127.13	962.69	1.39	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.98
62	1.800	29.77	0.48	127.94	967.06	1.38	8.96	0.00	8.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.01
63	1.700	29.77	0.48	128.73	971.31	1.36	8.97	0.00	8.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.03
64	1.600	29.78	0.48	129.51	975.46	1.36	8.98	0.00	8.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.05
65	1.500	29.78	0.48	130.26	979.50	1.35	9.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.08
66	1.400	29.79	0.48	131.00	983.44	1.35	9.01	0.00	9.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.10
67	1.300	29.79	0.48	131.71	987.29	1.35	9.02	0.00	9.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.12
68	1.200	29.80	0.48	132.41	991.05	1.35	9.03	0.00	9.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.14

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 10 Main Canal Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
99	UPR RCH	0.42100	29.80	0.48	132.41	991.05	1.35	9.03	0.00	9.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14
99	TRIB	0.18600	29.80	0.48	52.08	424.55	5.37	9.44	0.00	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87

EACH	INCR	0.00500	29.75	0.49	300.00	2000.00	4.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00

********** 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
99	1.20	1.10	0.61200	0.0	0.03395	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.034
100	1.10	1.00	0.61700	0.0	0.03423	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.034
101	1.00	0.90	0.62200	0.0	0.03450	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.035
102	0.90	0.80	0.62700	0.0	0.03478	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.035
103	0.80	0.70	0.63200	0.0	0.03506	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.035
104	0.70	0.60	0.63700	0.0	0.03534	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.035
105	0.60	0.50	0.64200	0.0	0.03561	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.036
106	0.50	0.40	0.64700	0.0	0.03589	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.036
107	0.40	0.30	0.65200	0.0	0.03617	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.036
108	0.30	0.20	0.65700	0.0	0.03645	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.036
109	0.20	0.10	0.66200	0.0	0.03672	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.037
110	0.10	0.00	0.66700	0.0	0.03700	0.03	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.037
TOT						0.39			21631.68	18648.00					
AVG					0.03545		1.16	15.54			18.03				
CUM						6.71									

********** 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
99	1.100	7.56	1.19	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
100	1.000	7.56	1.19	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
101	0.900	7.56	1.20	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
102	0.800	7.56	1.20	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
103	0.700	7.56	1.20	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
104	0.600	7.56	1.21	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
105	0.500	7.56	1.21	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
106	0.400	7.56	1.22	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
107	0.300	7.56	1.22	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
108	0.200	7.56	1.22	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
109	0.100	7.56	1.23	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
110	0.000	7.56	1.23	0.16	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
AVG 20 DEG C RATE			1.01	0.10	0.00	0.00	0.00	0.00	0.00	0.10			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
99	1.100	29.80	0.48	109.37	827.12	2.69	9.21	0.00	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.40
100	1.000	29.80	0.48	110.91	836.62	2.79	9.26	0.00	9.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.35
101	0.900	29.80	0.48	112.43	845.97	2.89	9.31	0.00	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.30
102	0.800	29.80	0.48	113.93	855.18	2.98	9.35	0.00	9.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.26
103	0.700	29.80	0.48	115.40	864.23	3.07	9.40	0.00	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.22
104	0.600	29.80	0.48	116.85	873.15	3.16	9.45	0.00	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.18
105	0.500	29.80	0.48	118.28	881.93	3.24	9.49	0.00	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.14
106	0.400	29.80	0.48	119.68	890.57	3.32	9.54	0.00	9.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.10
107	0.300	29.80	0.48	121.06	899.07	3.39	9.58	0.00	9.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.06
108	0.200	29.80	0.48	122.42	907.45	3.46	9.62	0.00	9.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.02
109	0.100	29.80	0.48	123.77	915.70	3.53	9.66	0.00	9.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.99
110	0.000	29.80	0.48	125.09	923.83	3.60	9.70	0.00	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.95

STREAM SUMMARY
Main Canal

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Calibration Run, MC-1 is headwater

TRAVEL TIME = 6.71 DAYS

MAXIMUM EFFLUENT = 0.00 PERCENT

FLOW	=	0.08500	TO	0.66700	m³/s
DISPERSION	=	0.0000	TO	0.0000	m²/s
VELOCITY	=	0.00295	TO	0.03700	m/s
DEPTH	=	0.71	TO	1.28	m
WIDTH	=	13.10	TO	22.50	m
BOD DECAY	=	0.10	TO	0.16	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.19	TO	7.84	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	0.67	TO	1.66	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day
TEMPERATURE	=	29.70	TO	30.20	deg C
DISSOLVED OXYGEN	=	1.35	TO	4.30	mg/L

FINAL REPORT Avondale Gardens
REACH NO. 8 Avondale Gardens

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
69	HDWTR	0.03000	28.60	0.39	88.90	760.20	2.91	5.82	0.00	5.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.19
EACH	INCR	0.00500	26.40	0.39	45.00	360.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	1.00	

********** 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
69	3.12	3.02	0.03500	0.0	0.00832	0.14	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.008
70	3.02	2.92	0.04000	0.0	0.00951	0.12	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.010
71	2.92	2.82	0.04500	0.0	0.01070	0.11	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.011
72	2.82	2.72	0.05000	0.0	0.01189	0.10	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.012
73	2.72	2.62	0.05500	0.0	0.01308	0.09	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.013
74	2.62	2.52	0.06000	0.0	0.01427	0.08	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.014
75	2.52	2.42	0.06500	0.0	0.01546	0.07	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.015
76	2.42	2.32	0.07000	0.0	0.01665	0.07	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.017
77	2.32	2.22	0.07500	0.0	0.01784	0.06	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.018
78	2.22	2.12	0.08000	0.0	0.01903	0.06	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.019
TOT						0.91			4204.40	9140.00					
AVG					0.01278		0.46	9.14			4.20				
CUM						0.91									

********** 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
69	3.020	7.64	2.02	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
70	2.920	7.64	2.07	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
71	2.820	7.64	2.11	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
72	2.720	7.64	2.15	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
73	2.620	7.64	2.20	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
74	2.520	7.64	2.24	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
75	2.420	7.64	2.29	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
76	2.320	7.64	2.33	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
77	2.220	7.64	2.37	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
78	2.120	7.64	2.42	0.06	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
AVG 20 DEG C RATE			1.87	0.04	0.00	0.00	0.00	0.00	0.00	0.75			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
69	3.020	29.30	0.26	82.63	703.03	3.62	6.35	0.00	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04
70	2.920	29.30	0.26	77.92	660.15	4.07	6.75	0.00	6.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.93
71	2.820	29.30	0.26	74.27	626.80	4.37	7.06	0.00	7.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.85
72	2.720	29.30	0.26	71.34	600.12	4.57	7.30	0.00	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.79
73	2.620	29.30	0.26	68.95	578.29	4.73	7.50	0.00	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.74
74	2.520	29.30	0.26	66.95	560.10	4.85	7.67	0.00	7.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.70
75	2.420	29.30	0.26	65.26	544.71	4.94	7.80	0.00	7.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.67
76	2.320	29.30	0.26	63.81	531.51	5.01	7.92	0.00	7.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.65
77	2.220	29.30	0.26	62.56	520.08	5.08	8.03	0.00	8.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.62
78	2.120	29.30	0.26	61.46	510.07	5.13	8.11	0.00	8.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.60

FINAL REPORT Avondale Gardens LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 9 Avondale Gardens Calibration Run, MC-1 is headwater

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
79	UPR RCH	0.08000	29.30	0.26	61.46	510.07	5.13	8.11	0.00	8.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60
EACH	INCR	0.00530	29.30	0.26	45.00	360.00	4.00	6.00	0.00			0.00	0.00	0.00	0.00	0.00	1.00	

********** 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
79	2.12	2.01	0.08530	0.0	0.00877	0.14	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.009
80	2.01	1.91	0.09060	0.0	0.00931	0.13	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.009
81	1.91	1.80	0.09590	0.0	0.00986	0.12	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.010
82	1.80	1.70	0.10120	0.0	0.01040	0.12	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.010
83	1.70	1.59	0.10650	0.0	0.01095	0.11	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.011
84	1.59	1.48	0.11180	0.0	0.01149	0.11	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.011
85	1.48	1.38	0.11710	0.0	0.01204	0.10	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.012
86	1.38	1.27	0.12240	0.0	0.01258	0.10	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.013
87	1.27	1.17	0.12770	0.0	0.01313	0.09	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.013
88	1.17	1.06	0.13300	0.0	0.01367	0.09	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.014
89	1.06	0.95	0.13830	0.0	0.01422	0.09	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.014
90	0.95	0.85	0.14360	0.0	0.01476	0.08	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.015
91	0.85	0.74	0.14890	0.0	0.01531	0.08	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.015
92	0.74	0.64	0.15420	0.0	0.01585	0.08	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.016
93	0.64	0.53	0.15950	0.0	0.01640	0.07	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.016
94	0.53	0.42	0.16480	0.0	0.01694	0.07	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.017
95	0.42	0.32	0.17010	0.0	0.01749	0.07	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.017

96	0.32	0.21	0.17540	0.0	0.01803	0.07	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.018
97	0.21	0.11	0.18070	0.0	0.01858	0.07	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.019
98	0.11	0.00	0.18600	0.0	0.01912	0.06	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.019
TOT						1.86			20623.36	32223.99					
AVG					0.01321		0.64	15.20			9.73				
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
79	2.014	7.64	1.47	0.08	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
80	1.908	7.63	1.48	0.08	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
81	1.802	7.63	1.50	0.08	0.00	0.00	0.00	0.00	0.00	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
82	1.696	7.62	1.51	0.08	0.00	0.00	0.00	0.00	0.00	1.36	1.36	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
83	1.590	7.62	1.53	0.08	0.00	0.00	0.00	0.00	0.00	1.36	1.36	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
84	1.484	7.62	1.54	0.08	0.00	0.00	0.00	0.00	0.00	1.36	1.36	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
85	1.378	7.61	1.56	0.08	0.00	0.00	0.00	0.00	0.00	1.36	1.36	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
86	1.272	7.61	1.57	0.08	0.00	0.00	0.00	0.00	0.00	1.36	1.36	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
87	1.166	7.61	1.59	0.08	0.00	0.00	0.00	0.00	0.00	1.37	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
88	1.060	7.60	1.60	0.08	0.00	0.00	0.00	0.00	0.00	1.37	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
89	0.954	7.60	1.62	0.08	0.00	0.00	0.00	0.00	0.00	1.37	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
90	0.848	7.59	1.63	0.08	0.00	0.00	0.00	0.00	0.00	1.37	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
91	0.742	7.59	1.65	0.08	0.00	0.00	0.00	0.00	0.00	1.37	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
92	0.636	7.59	1.66	0.08	0.00	0.00	0.00	0.00	0.00	1.38	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
93	0.530	7.58	1.68	0.08	0.00	0.00	0.00	0.00	0.00	1.38	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
94	0.424	7.58	1.69	0.08	0.00	0.00	0.00	0.00	0.00	1.38	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
95	0.318	7.58	1.71	0.08	0.00	0.00	0.00	0.00	0.00	1.38	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
96	0.212	7.57	1.72	0.08	0.00	0.00	0.00	0.00	0.00	1.39	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
97	0.106	7.57	1.74	0.08	0.00	0.00	0.00	0.00	0.00	1.39	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
98	0.000	7.56	1.76	0.08	0.00	0.00	0.00	0.00	0.00	1.39	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
AVG 20 DEG C RATE			1.35	0.05	0.00	0.00	0.00	0.00	0.00	0.75			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.06	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
79	2.014	29.32	0.27	60.44	500.75	5.16	8.27	0.00	8.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.63
80	1.908	29.35	0.28	59.54	492.52	5.18	8.40	0.00	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.66
81	1.802	29.38	0.29	58.73	485.19	5.20	8.52	0.00	8.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.69
82	1.696	29.40	0.30	58.01	478.64	5.22	8.62	0.00	8.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
83	1.590	29.42	0.31	57.37	472.73	5.23	8.72	0.00	8.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.73
84	1.484	29.45	0.33	56.78	467.39	5.24	8.80	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.74
85	1.378	29.47	0.34	56.25	462.53	5.25	8.87	0.00	8.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.76

86	1.272	29.50	0.35	55.76	458.09	5.26	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.77
87	1.166	29.52	0.36	55.31	454.02	5.27	9.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.78
88	1.060	29.55	0.37	54.90	450.27	5.28	9.06	0.00	9.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.80
89	0.954	29.57	0.38	54.52	446.81	5.29	9.11	0.00	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.81
90	0.848	29.60	0.39	54.17	443.61	5.30	9.16	0.00	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.82
91	0.742	29.62	0.40	53.84	440.63	5.31	9.20	0.00	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.82
92	0.636	29.65	0.41	53.54	437.86	5.32	9.24	0.00	9.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.83
93	0.530	29.67	0.42	53.26	435.27	5.33	9.28	0.00	9.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.84
94	0.424	29.70	0.44	52.99	432.85	5.33	9.32	0.00	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.85
95	0.318	29.72	0.45	52.74	430.58	5.34	9.35	0.00	9.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.85
96	0.212	29.75	0.46	52.51	428.45	5.35	9.38	0.00	9.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.86
97	0.106	29.77	0.47	52.29	426.44	5.36	9.41	0.00	9.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.86
98	0.000	29.80	0.48	52.08	424.55	5.37	9.44	0.00	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.87

STREAM SUMMARY
Avondale Gardens

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Calibration Run, MC-1 is headwater

TRAVEL TIME	=	2.76	DAYS		
MAXIMUM EFFLUENT	=	0.00	PERCENT		
FLOW	=	0.03500	TO	0.18600	m^3/s
DISPERSION	=	0.0000	TO	0.0000	m^2/s
VELOCITY	=	0.00832	TO	0.01912	m/s
DEPTH	=	0.46	TO	0.64	m
WIDTH	=	9.14	TO	15.20	m
BOD DECAY	=	0.06	TO	0.08	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	1.35	TO	1.39	$g/m^2/d$
NH3 SOURCE	=	0.00	TO	0.00	$g/m^2/d$
REAERATION	=	1.47	TO	2.42	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day
TEMPERATURE	=	29.30	TO	29.80	deg C
DISSOLVED OXYGEN	=	3.62	TO	5.37	mg/L

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Calibration Run, MC-1 is headwater

INPUT/OUTPUT LOADING SUMMARY

	FLOW m^3/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER INFLOW	0.110	44.5	108.1	0.0	0.0	0.0	0.0	0.0	0.0	44.2
INCREMENTAL INFLOW	0.557	192.5	288.7	0.0	0.0	0.0	0.0	0.0	0.0	117.4
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTFLOW THRU LOWER BNDRY	-0.667	-207.4	-559.2	0.0	0.0	0.0	0.0	0.0	0.0	-170.2
DISPERSION THRU LOWER BNDRY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NON-POINT INPUT		0.0	360.0	0.0	0.0					217.0
NATURAL REAERATION		777.2								
DAM REAERATION		0.0								
BACKGROUND SOD		-400.7								
BOD#1 DECAY		-197.7	-197.7							
BOD#1 SETTLING		0.0	0.0							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0		0.0						
BOD#2 SETTLING		0.0		0.0						
ANAEROBIC BOD#2 DECAY				0.0						
ORG-N DECAY		0.0			0.0	0.0				
ORG-N SETTLING					0.0	0.0				
NH3 DECAY		0.0				0.0	0.0			
BACKGROUND NH3 SOURCE						0.0				
OTHER DENITRIFICATION							0.0			
PHOSPHORUS SOURCE								0.0		
ALGAE PHOTOSYNTHESIS		0.0				0.0	0.0	0.0	0.0	
ALGAE RESPIRATION		0.0				0.0		0.0	0.0	
ALGAE SETTLING		0.0							0.0	
MACRO PHOTOSYNTHESIS		0.0				0.0	0.0	0.0		
NCM DECAY		-208.5								-208.5
NCM SETTLING		0.0								0.0
TOTAL INPUTS	0.667	1014.2	756.9	0.0	0.0	0.0	0.0	0.0	0.0	378.7
TOTAL OUTPUTS	-0.667	-1014.2	-756.9	0.0	0.0	0.0	0.0	0.0	0.0	-378.7
NET CONVERGENCE ERROR	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

.....EXECUTION COMPLETED

APPENDIX K

Calculation of 90th Percentile Temperatures

90TH PERCENTILE TEMPERATURES

Bayou Segnette near Westwego, Louisiana (020701 station 0296)
Data retreived from LDEQ website (http://www.deq.state.la.us/surveillance/wqdata/wqnsites.stm)

summer 90th percentile 30.89 interpolated
winter 90th percentile 22.74 interpolated

DATE	WATER TEMP (C)	Season	Percentile	DATE	WATER TEMP (C)	Season	Percentile
8/12/1997	20.69	summer	1.04	1/9/1996	6.85	winter	0.96
10/15/1996	21.89	summer	3.13	1/11/1994	10.61	winter	2.88
10/11/1994	21.95	summer	5.21	12/12/1995	10.82	winter	4.81
10/13/1992	22.05	summer	7.29	2/14/1995	10.94	winter	6.73
5/10/1994	22.31	summer	9.38	3/12/1996	11.61	winter	8.65
10/17/2000	22.33	summer	11.46	12/19/2000	11.66	winter	10.58
10/10/1995	22.36	summer	13.54	2/9/1993	12.02	winter	12.50
6/11/1991	23.00	summer	15.63	1/25/2000	12.46	winter	14.42
10/12/1993	23.20	summer	17.71	2/10/1998	12.91	winter	16.35
5/13/1997	23.99	summer	19.79	11/18/1997	13.00	winter	18.27
10/14/1997	24.60	summer	21.88	2/11/1992	13.20	winter	20.19
5/11/1993	24.71	summer	23.96	1/15/1991	13.30	winter	22.12
5/12/1992	25.41	summer	26.04	1/7/1992	13.31	winter	24.04
7/12/1994	26.05	summer	28.13	2/18/1997	13.40	winter	25.96
9/19/2000	26.73	summer	30.21	1/10/1995	13.58	winter	27.88
5/14/1996	26.87	summer	32.29	12/13/1994	13.59	winter	29.81
6/10/1997	27.50	summer	34.38	12/14/1993	13.66	winter	31.73
6/13/1995	27.53	summer	36.46	2/13/1996	13.90	winter	33.65
5/12/1998	27.76	summer	38.54	3/10/1998	14.48	winter	35.58
8/13/1996	28.04	summer	40.63	12/9/1997	14.71	winter	37.50
9/12/1995	28.05	summer	42.71	12/10/1996	15.16	winter	39.42
9/10/1991	28.10	summer	44.79	11/17/1992	15.41	winter	41.35
9/14/1992	28.27	summer	46.88	1/7/1997	15.68	winter	43.27
7/9/1996	28.30	summer	48.96	11/14/1995	15.81	winter	45.19
8/13/1991	28.60	summer	51.04	11/14/2000	16.17	winter	47.12
6/27/2000	28.61	summer	53.13	12/15/1992	16.26	winter	49.04
9/13/1994	28.62	summer	55.21	4/15/1997	16.28	winter	50.96
9/9/1997	28.76	summer	57.29	1/13/1998	16.39	winter	52.88
5/23/2000	28.91	summer	59.38	2/4/1991	16.70	winter	54.81
6/11/1996	28.97	summer	61.46	3/14/1995	16.74	winter	56.73
5/14/1991	29.00	summer	63.54	12/10/1991	16.95	winter	58.65
9/10/1996	29.01	summer	65.63	3/9/1993	17.26	winter	60.58
6/14/1994	29.03	summer	67.71	3/15/1994	17.45	winter	62.50
8/11/1992	29.12	summer	69.79	2/8/1994	17.94	winter	64.42
7/13/1993	29.15	summer	71.88	1/12/1993	18.26	winter	66.35
9/14/1993	29.17	summer	73.96	2/22/2000	18.29	winter	68.27
7/16/1991	29.30	summer	76.04	3/12/1991	18.30	winter	70.19
8/9/1994	29.33	summer	78.13	11/18/1991	18.59	winter	72.12
6/16/1992	29.85	summer	80.21	4/9/1996	19.00	winter	74.04

7/25/2000	29.95	summer	82.29
7/15/1997	29.95	summer	84.38
8/15/1995	30.19	summer	86.46
7/11/1995	30.69	summer	88.54
8/10/1993	30.97	summer	90.63
8/22/2000	31.29	summer	92.71
10/15/1991	31.48	summer	94.79
7/14/1992	31.61	summer	96.88
6/15/1993	33.55	summer	98.96

4/7/1992	19.20	winter	75.96
11/19/1996	19.67	winter	77.88
4/4/1995	19.83	winter	79.81
11/16/1993	20.26	winter	81.73
3/10/1992	21.08	winter	83.65
11/15/1994	21.41	winter	85.58
3/11/1997	22.41	winter	87.50
4/13/1993	22.70	winter	89.42
4/14/1998	22.83	winter	91.35
3/28/2000	22.88	winter	93.27
4/16/1991	23.50	winter	95.19
4/25/2000	23.57	winter	97.12
4/12/1994	24.20	winter	99.04

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\90TH PERCENTILE TEMPS 0910,0292, AND 0296.XLS

ADJUSTMENT OF 90TH PERCENTILE TEMPERATURES

Temperature data for Main Canal South of Waggaman, Lousinia
Data retreived from LDEQ website (http://www.deq.state.la.us/surveillance/wqdata/wqnsites.stm)

Main Canal (LDEQ 0904) WATER TEMP			Bayou Segnette (LDEQ 0296) WATER TEMP		
DATE	(C)		DATE	(C)	
########	12.4	winter	########	11.7	winter
########	14.9	winter	########	16.2	winter
########	21.6	summer	########	22.3	summer
9/19/2000	25.5	summer	9/19/2000	26.7	summer
8/22/2000	30.2	summer	8/22/2000	31.3	summer
7/25/2000	29.5	summer	7/25/2000	30.0	summer
6/27/2000	26.8	summer	6/27/2000	28.6	summer
5/23/2000	24.9	summer	5/23/2000	28.9	summer
4/25/2000	22.4	winter	4/25/2000	23.6	winter
3/28/2000	21.0	winter	3/28/2000	22.9	winter
2/22/2000	16.9	winter	2/22/2000	18.3	winter
1/25/2000	11.6	winter	1/25/2000	12.5	winter

SUMMER

Averages for May through October (LTP definition of summer)

26.40 27.97

Difference between stations = -1.57 C

From Previous page, 90th percentile summer temp for Bayou Segnette = 30.89 C

Adjusted 90th percentile temp for Main Canal = 30.89-1.57 = 29.32 C

WINTER

Averages for Jan-April and Nov-Dec (LTP definition of winter)

16.54 17.51

Difference between stations = -0.97 C

From Previous page, 90th percentile winter temp for Bayou Segnette = 22.74 C

Adjusted 90th percentile temp for Main Canal = 22.74-0.97 = 21.77 C

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\90TH PERCENTILE TEMPS 0084,0083,0919, AND 0904.XLS

APPENDIX L

Input Values for Projection Runs

MAIN CANAL MODEL INPUTS FOR SUMMER NO LOAD PROJECTION

Table L.1. Summer No Load Inputs for Initial Conditions (Data Type 11).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Temperature	1-11	29.3EC	90th percentile temperature

Table L.2. Summer No Load Inputs for SOD and NPS Loads (Data Types 12 and 19).

Reach	SOD ($g/m^2/day$)	CBODu mass load (kg/day)	NBODu mass load (kg/day)	Data Source / Comment
1	0.10	9	8	These values were calculated in the TMDL spreadsheet.
2	0.13	9	6	
3	0.57	12	11	
4	0.50	10	12	
5	0.45	10	10	
6	0.63	11	11	
7	1.05	16	17	
8	0.49	11	3	
9	0.59	36	9	
10	0.04	36	1	

Table L.3. Summer No Load Inputs for Headwater (Data Types 20 and 21).

Name of inflow	Parameter name	Value used in model	Data Source / Comment
Main Canal Headwater	Flow rate	0.003 m^3/sec	Default low flow for summer (0.1 cfs)
	Temperature	29.3°C	90th percentile temperature
	DO	6.89 mg/L	90% saturation at 90th percentile temp.
	CBODu	6.36 mg/L	Calculated in the TMDL spreadsheet
	NBODu	2.64 mg/L	
Avondale Gardens Canal Headwater	Flow rate	0.003 m^3/sec	Default low flow for summer (0.1 cfs)
	Temperature	29.3°C	90th percentile temperature
	DO	6.89 mg/L	90% saturation at 90th percentile temp.
	CBODu	5.82 mg/L	Calculated in the TMDL spreadsheet
	NBODu	2.19 mg/L	

MAIN CANAL MODEL INPUTS FOR WINTER NO LOAD PROJECTION

Table L.4. Winter No Load Inputs for Initial Conditions (Data Type 11).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Temperature	1-11	21.8EC	90th percentile temperature

Table L.5. Winter No Load Inputs for SOD and NPS Loads (Data Types 12 and 19).

Reach	SOD ($g/m^2/day$)	CBODu mass load (kg/day)	NBODu mass load (kg/day)	Data Source / Comment
1	0.10	9	8	These values were calculated in the TMDL spreadsheet.
2	0.13	9	6	
3	0.56	12	11	
4	0.49	10	12	
5	0.44	10	10	
6	0.61	11	11	
7	1.02	16	16	
8	0.48	11	3	
9	0.58	35	9	
10	0.04	35	1	

Table L.6. Winter No Load Inputs for Headwater (Data Types 20 and 21).

Name of inflow	Parameter name	Value used in model	Data Source / Comment
Main Canal Headwater	Flow rate	0.028 m^3/sec	Default low flow for winter (1.0 cfs)
	Temperature	21.8°C	90th percentile temperature
	DO	7.90 mg/L	90% saturation at 90th percentile temp.
	CBODu	6.36 mg/L	Calculated in the TMDL spreadsheet
	NBODu	2.64 mg/L	
Avondale Gardens Canal Headwater	Flow rate	0.028 m^3/sec	Default low flow for winter (1.0 cfs)
	Temperature	21.8°C	90th percentile temperature
	DO	7.90 mg/L	90% saturation at 90th percentile temp.
	CBODu	5.82 mg/L	Calculated in the TMDL spreadsheet
	NBODu	2.19 mg/L	

MAIN CANAL MODEL INPUTS FOR SUMMER PROJECTION

Table L.7. Summer Projection Inputs for Initial Conditions (Data Type 11).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Temperature	1-11	29.3EC	90th percentile temperature

Table L.8. Summer Projection Inputs for SOD and NPS Loads (Data Types 12 and 19).

Reach	SOD ($g/m^2/day$)	CBODu mass load (kg/day)	NBODu mass load (kg/day)	Data Source / Comment
1	0.07	6	6	These values were calculated in the TMDL spreadsheet.
2	0.09	6	4	
3	0.39	8	8	
4	0.34	7	8	
5	0.31	7	7	
6	0.43	8	7	
7	0.71	11	11	
8	0.33	8	2	
9	0.40	26	6	
10	0.03	24	1	

Table L.9. Summer Projection Inputs for Headwater (Data Types 20 and 21).

Name of inflow	Parameter name	Value used in model	Data Source / Comment
Main Canal Headwater	Flow rate	0.003 m^3/sec	Default low flow for summer (0.1 cfs)
	Temperature	29.3°C	90th percentile temperature
	DO	6.89 mg/L	90% saturation at 90th percentile temp.
	CBODu	4.33 mg/L	Calculated in the TMDL spreadsheet
	NBODu	1.79 mg/L	
Avondale Gardens Canal Headwater	Flow rate	0.003 m^3/sec	Default low flow for summer (0.1 cfs)
	Temperature	29.3°C	90th percentile temperature
	DO	6.89 mg/L	90% saturation at 90th percentile temp.
	CBODu	3.96 mg/L	Calculated in the TMDL spreadsheet
	NBODu	1.49 mg/L	

MAIN CANAL MODEL INPUTS FOR WINTER PROJECTION

Table L.10. Winter Projection Inputs for Initial Conditions (Data Type 11).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Temperature	1-11	21.8EC	90th percentile temperature

Table L.11. Winter Projection Inputs for SOD and NPS Loads (Data Types 12 and 19).

Reach	SOD ($g/m^2/day$)	CBODu mass load (kg/day)	NBODu mass load (kg/day)	Data Source / Comment
1	0.10	9	8	These values were calculated in the TMDL spreadsheet.
2	0.13	9	6	
3	0.56	12	11	
4	0.49	10	12	
5	0.44	10	10	
6	0.61	11	10	
7	1.02	16	16	
8	0.48	11	3	
9	0.58	35	9	
10	0.04	35	1	

Table L.12. Winter Projection Inputs for Headwater (Data Types 20 and 21).

Name of inflow	Parameter name	Value used in model	Data Source / Comment
Main Canal Headwater	Flow rate	0.028 m^3/sec	Default low flow for winter (1.0 cfs)
	Temperature	21.8°C	90th percentile temperature
	DO	7.90 mg/L	90% saturation at 90th percentile temp.
	CBODu	6.24 mg/L	Calculated in the TMDL spreadsheet
	NBODu	2.58 mg/L	
Avondale Gardens Canal Headwater	Flow rate	0.028 m^3/sec	Default low flow for winter (1.0 cfs)
	Temperature	21.8°C	90th percentile temperature
	DO	7.90 mg/L	90% saturation at 90th percentile temp.
	CBODu	5.70 mg/L	Calculated in the TMDL spreadsheet
	NBODu	2.15 mg/L	

APPENDIX M

NPS Load Calculations for No Load Runs

Calibration Model Non-Point Load Equivalent Calculations:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

REACH NUMBER & DESCRIPTION	Calibration Model Reach Length (km)	Calibration Model Average Reach Width (meters)	Calibration Model UCBOD Nonpoint loading (kg/day)	Calibration Model UNBOD Nonpoint loading (kg/day)	Calibration Model UCBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model UNBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model SOD (gm O_2/m^2/day)	Calibration Model TOTAL Benthic Load (gm O_2/m^2/day)
	A	**B**	**C**	**D**	**E = C / (A x B)**	**F = D / (A x B)**	**G**	**H = E + F + G**
Reach 1: Main Canal	0.40	22.50	36	33	4.000	3.667	0.40	**8.07**
Reach 2: Main Canal	0.60	13.10	27	17	3.435	2.163	0.40	**6.00**
Reach 3: Main Canal	1.00	16.60	15	14	0.904	0.843	0.70	**2.45**
Reach 4: Main Canal	1.00	14.85	15	18	1.010	1.212	0.75	**2.97**
Reach 5: Main Canal	1.00	13.11	17	17	1.297	1.297	0.75	**3.34**
Reach 6: Main Canal	1.00	16.15	32	30	1.981	1.858	1.75	**5.59**
Reach 7: Main Canal	1.80	19.20	66	68	1.910	1.968	4.25	**8.13**
Reach 8: Avondale Gardens Canal	1.00	9.14	17	4	1.860	0.438	0.75	**3.05**
Reach 9: Avondale Gardens Canal	2.12	15.20	55	14	1.707	0.434	0.75	**2.89**
Reach 10: Main Canal	1.20	15.54	80	2	4.290	0.107	0.10	**4.50**

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

Main Canal 3.21 6.335

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

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Background UCBOD conc. (mg/l)	Background UNBOD conc. (mg/l)	Background % Reduction	Background UCBOD Load (kg/day)	Background UNBOD Load (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**F**	**G**	**H1**	**H = (1-H1) (86.4)(A)(F)**	**I = (1-H1) (86.4)(A)(G)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Main Canal	0.0028	13.46	5.58	3.26	1.35	6.36	2.64	0%	1.54	0.64	100%	1.54	0.64	1.54	0.64	6.36	2.64	**0.00**	**2.18**
Avondale Gardens Canal	0.0028	5.82	2.19	1.41	0.53	5.82	2.19	0%	1.41	0.53	100%	1.41	0.53	1.41	0.53	5.82	2.19	**0.00**	**1.94**
SUB-TOTAL TMDL LOADING				**5**	**2**				**3**	**1**		**3**	**1**	**3**	**1**			**0**	**4**

FILE: R:\PROJECTS\3110-051\LA-QUAL\MAIN_C\REVISED\TMDL LOAD CALC FOR MAIN CANAL-NAT.XLS

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) = **20%**

Summer Projection, No Man-Made Loading, Non-Point Benthic Load Input and TMDL:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values												Projection Model Equivalents				Projected Model Loads				Margin of Safety Loads					
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	TCBL adjusted for % reduction (Reduced TCBL)	Reduced TCBL adjusted for MOS	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Total Projection Benthic Load **(LA+MOS)**	MOS Total Benthic Load @ 20°C	MOS SOD @ 20°C	Non-Point UCBOD MOS Loads	Non-Point UNBOD MOS Loads	Adjusted SOD MOS @ Proj. temp	Adjusted Total MOS @ Proj. temp
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	**B,** (note 1)	**C,** (note 1)	**D,** (note 1)	**E,** (note 1)	**F1**	**F2**	**F = F1*(1-F2)**	**G**	**I**	**H**	**J,** (note 2)	**K,** (note 3)	**L = (K)(A / D)**	**M = (K)(B / D)**	**N = (K)(C / D)**	**O = (E)(G)(L)**	**P = (E)(G)(M)**	**Q,** (note 4)	**O + P + Q**	**R = (K-J)(E)(G)**	**S = (R)(C/D)**	**T = (R)(A/D)**	**U = (R)(B/D)**	**V,** (note 5)	**T + U + V**
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	0%	2.00	22.50	29.30	100.0%	2.00	2.00	0.992	0.909	0.10	9	8	2	18.71	0	0	0	0	0	0
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	0%	2.00	13.10	29.30	100.0%	2.00	2.00	1.145	0.721	0.13	9	6	2	16.55	0	0	0	0	0	0
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	0%	2.00	16.60	29.30	100.0%	2.00	2.00	0.739	0.689	0.57	12	11	17	40.76	0	0	0	0	0	0
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	0%	2.00	14.85	29.30	100.0%	2.00	2.00	0.680	0.816	0.50	10	12	13	35.67	0	0	0	0	0	0
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	0%	2.00	13.11	29.30	100.0%	2.00	2.00	0.776	0.776	0.45	10	10	11	30.90	0	0	0	0	0	0
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	0%	2.00	16.15	29.30	100.0%	2.00	2.00	0.709	0.665	0.63	11	11	18	40.35	0	0	0	0	0	0
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	0%	2.00	19.20	29.30	100.0%	2.00	2.00	0.470	0.484	1.05	16	17	65	97.90	0	0	0	0	0	0
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	0%	2.00	9.14	29.30	100.0%	2.00	2.00	1.221	0.287	0.49	11	3	8	21.86	0	0	0	0	0	0
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	0%	2.00	15.20	29.30	100.0%	2.00	2.00	1.181	0.301	0.52	38	10	30	77.76	0	0	0	0	0	0
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	0%	2.00	15.54	29.30	100.0%	2.00	2.00	1.908	0.048	0.04	36	1	1	37.96	0	0	0	0	0	0
Sub-Total												20.00					163	88	167	**418**	0		0	0	0	**0**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x $1.065^{(I-20)}$

Note 5, **V** = **S** x $1.065^{(I-20)}$

Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(I-20)}$

EXPLICIT MARGINS:

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

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL-NATURAL.XLS

Summer Projection, No Man-Made Loading, Non-Point Benthic Load Input and TMDL:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values											Man-made Model equivalents				Man-made Model loads				Background Model loads			
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	Manmade portion of TCBL	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	**B,** (note 1)	**C,** (note 1)	**D,** (note 1)	**E,** (note 1)	**F1**	**F2**	**F = F1*(1-F2)**	**G**	**I**	**H**	**W = K - F**	**X = (W)(A / D)**	**Y = (W)(B / D)**	**Z = (W)(C / D)**	**AA = (E)(G)(X)**	**AB = (E)(G)(Y)**	**AC,** (note 6)	**AA + AB + AC**	**AD = O - AA**	**AE = P - AB**	**AF = Q - AC**	**AD + AE + AF**
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	0%	2.00	22.50	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	9	8	2	18.71
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	0%	2.00	13.10	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	9	6	2	16.55
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	0%	2.00	16.60	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	12	11	17	40.76
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	0%	2.00	14.85	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	10	12	13	35.67
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	0%	2.00	13.11	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	10	10	11	30.90
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	0%	2.00	16.15	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	11	11	18	40.35
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	0%	2.00	19.20	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	16	17	65	97.90
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	0%	2.00	9.14	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	11	3	8	21.86
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	0%	2.00	15.20	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	38	10	30	77.76
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	0%	2.00	15.54	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	36	1	1	37.96
Sub-Total																0	0	0	**0**	163	88	167	**418**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x $1.065^{(I-20)}$

Note 5, **V** = **S** x $1.065^{(I-20)}$

Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(I-20)}$

EXPLICIT MARGINS:

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

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL-NATURAL.XLS

Calibration Model Non-Point Load Equivalent Calculations:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

REACH NUMBER & DESCRIPTION	Calibration Model Reach Length (km)	Calibration Model Average Reach Width (meters)	Calibration Model UCBOD Nonpoint loading (kg/day)	Calibration Model UNBOD Nonpoint loading (kg/day)	Calibration Model UCBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model UNBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model SOD (gm O_2/m^2/day)	Calibration Model TOTAL Benthic Load (gm O_2/m^2/day)
	A	**B**	**C**	**D**	**E = C / (A x B)**	**F = D / (A x B)**	**G**	**H = E + F + G**
Reach 1: Main Canal	0.40	22.50	36	33	4.000	3.667	0.40	**8.07**
Reach 2: Main Canal	0.60	13.10	27	17	3.435	2.163	0.40	**6.00**
Reach 3: Main Canal	1.00	16.60	15	14	0.904	0.843	0.70	**2.45**
Reach 4: Main Canal	1.00	14.85	15	18	1.010	1.212	0.75	**2.97**
Reach 5: Main Canal	1.00	13.11	17	17	1.297	1.297	0.75	**3.34**
Reach 6: Main Canal	1.00	16.15	32	30	1.981	1.858	1.75	**5.59**
Reach 7: Main Canal	1.80	19.20	66	68	1.910	1.968	4.25	**8.13**
Reach 8: Avondale Gardens Canal	1.00	9.14	17	4	1.860	0.438	0.75	**3.05**
Reach 9: Avondale Gardens Canal	2.12	15.20	55	14	1.707	0.434	0.75	**2.89**
Reach 10: Main Canal	1.20	15.54	80	2	4.290	0.107	0.10	**4.50**

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

Main Canal

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

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Background UCBOD conc. (mg/l)	Background UNBOD conc. (mg/l)	Background % Reduction	Background UCBOD Load (kg/day)	Background UNBOD Load (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**F**	**G**	**H1**	**H = (1-H1) (86.4)(A)(F)**	**I = (1-H1) (86.4)(A)(G)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Main Canal	0.028	13.46	5.58	32.56	13.50	6.36	2.64	0%	15.39	6.38	100%	15.39	6.38	15.39	6.38	6.36	2.64	**0.00**	**21.77**
Avondale Gardens Canal	0.028	5.82	2.19	14.08	5.30	5.82	2.19	0%	14.08	5.30	100%	14.08	5.30	14.08	5.30	5.82	2.19	**0.00**	**19.38**
SUB-TOTAL TMDL LOADING				**47**	**19**				**29**	**12**		**29**	**12**	**29**	**12**			**0**	**41**

FILE: R:\PROJECTS\3110-051\LA-QUAL\MAIN_C\REVISED\TMDL LOAD CALC FOR MAIN CANAL-NAT.XLS

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) =	**20%**

Winter Projection, No Man-Made Loading, Non-Point Benthic Load Input and TMDL:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values												Projection Model Equivalents				Projected Model Loads				Margin of Safety Loads				
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	TCBL adjusted for % reduction (Reduced TCBL)	Reduced TCBL adjusted for MOS	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Total Projection Benthic Load (LA+MOS)	MOS Total Benthic Load @ 20°C	MOS SOD @ 20°C	Non-Point UCBOD MOS Loads	Non-Point UNBOD MOS Loads	Adjusted SOD MOS @ Proj. temp
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	B, (note 1)	C, (note 1)	D, (note 1)	E, (note 1)	F1	F2	F = F1*(1-F2)	G	I	H	J, (note 2)	K, (note 3)	L = (K)(A / D)	M = (K)(B / D)	N = (K)(C / D)	O = (E)(G)(L)	P = (E)(G)(M)	Q, (note 4)	O + P + Q	R = (K-J)(E)(G)	S = (R)(C/D)	T = (R)(A/D)	U = (R)(B/D)	V, (note 5)
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	0%	2.00	22.50	21.80	100.0%	2.00	2.00	0.992	0.909	0.10	9	8	1	18.11	0	0	0	0	0
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	0%	2.00	13.10	21.80	100.0%	2.00	2.00	1.145	0.721	0.13	9	6	1	15.85	0	0	0	0	0
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	0%	2.00	16.60	21.80	100.0%	2.00	2.00	0.739	0.689	0.57	12	11	11	34.34	0	0	0	0	0
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	0%	2.00	14.85	21.80	100.0%	2.00	2.00	0.680	0.816	0.50	10	12	8	30.60	0	0	0	0	0
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	0%	2.00	13.11	21.80	100.0%	2.00	2.00	0.776	0.776	0.45	10	10	7	26.93	0	0	0	0	0
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	0%	2.00	16.15	21.80	100.0%	2.00	2.00	0.709	0.665	0.63	11	11	11	33.51	0	0	0	0	0
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	0%	2.00	19.20	21.80	100.0%	2.00	2.00	0.470	0.484	1.05	16	17	40	73.46	0	0	0	0	0
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	0%	2.00	9.14	21.80	100.0%	2.00	2.00	1.221	0.287	0.49	11	3	5	18.82	0	0	0	0	0
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	0%	2.00	15.20	21.80	100.0%	2.00	2.00	1.181	0.301	0.52	38	10	19	66.45	0	0	0	0	0
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	0%	2.00	15.54	21.80	100.0%	2.00	2.00	1.908	0.048	0.04	36	1	1	37.40	0	0	0	0	0
Sub-Total												20.00					163	88	104	**355**	0		0	0	0

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x $1.065^{(T-20)}$

Note 5, **V** = **S** x $1.065^{(T-20)}$

Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(T-20)}$

EXPLICIT MARGINS:

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

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL-NATURAL.XLS

Winter Projection, No Man-Made Loading, Non-Point Benthic Load Input and TMDL:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values												Man-made Model equivalents				Man-made Model loads				Background Model loads			
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	Adjusted Total MOS @ Proj. temp	Manmade portion of TCBL	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	(kg/day)	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	B, (note 1)	C, (note 1)	D, (note 1)	E, (note 1)	F1	F2	F = F1*(1-F2)	G	I	H	T + U + V	W = K - F	X = (W)(A / D)	Y = (W)(B / D)	Z = (W)(C / D)	AA = (E)(G)(X)	AB = (E)(G)(Y)	AC, (note 6)	AA + AB + AC	AD = O - AA	AE = P - AB	AF = Q - AC	AD + AE + AF
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	0%	2.00	22.50	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	9	8	1	18.11
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	0%	2.00	13.10	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	9	6	1	15.85
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	0%	2.00	16.60	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	12	11	11	34.34
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	0%	2.00	14.85	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	10	12	8	30.60
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	0%	2.00	13.11	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	10	10	7	26.93
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	0%	2.00	16.15	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	11	11	11	33.51
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	0%	2.00	19.20	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	16	17	40	73.46
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	0%	2.00	9.14	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	11	3	5	18.82
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	0%	2.00	15.20	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	38	10	19	66.45
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	0%	2.00	15.54	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	36	1	1	37.40
Sub-Total												**0**					0	0	0	**0**	163	88	104	**355**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x $1.065^{(T-20)}$

Note 5, **V** = **S** x $1.065^{(T-20)}$

Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(T-20)}$

EXPLICIT MARGINS:

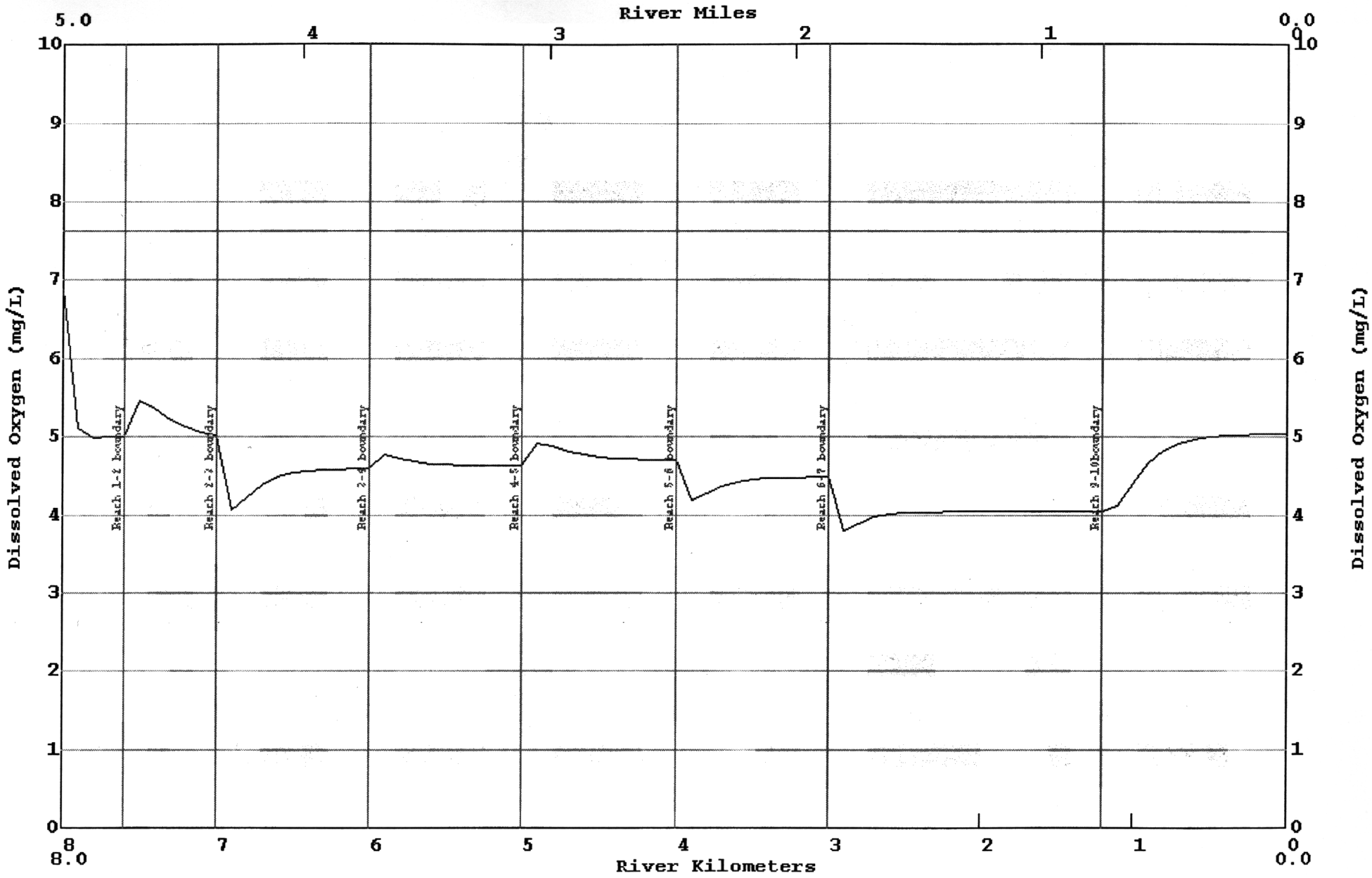
MARGIN OF SAFETY (MOS) (%) = [MOG + MOU] =	**20%**

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL-NATURAL.XLS

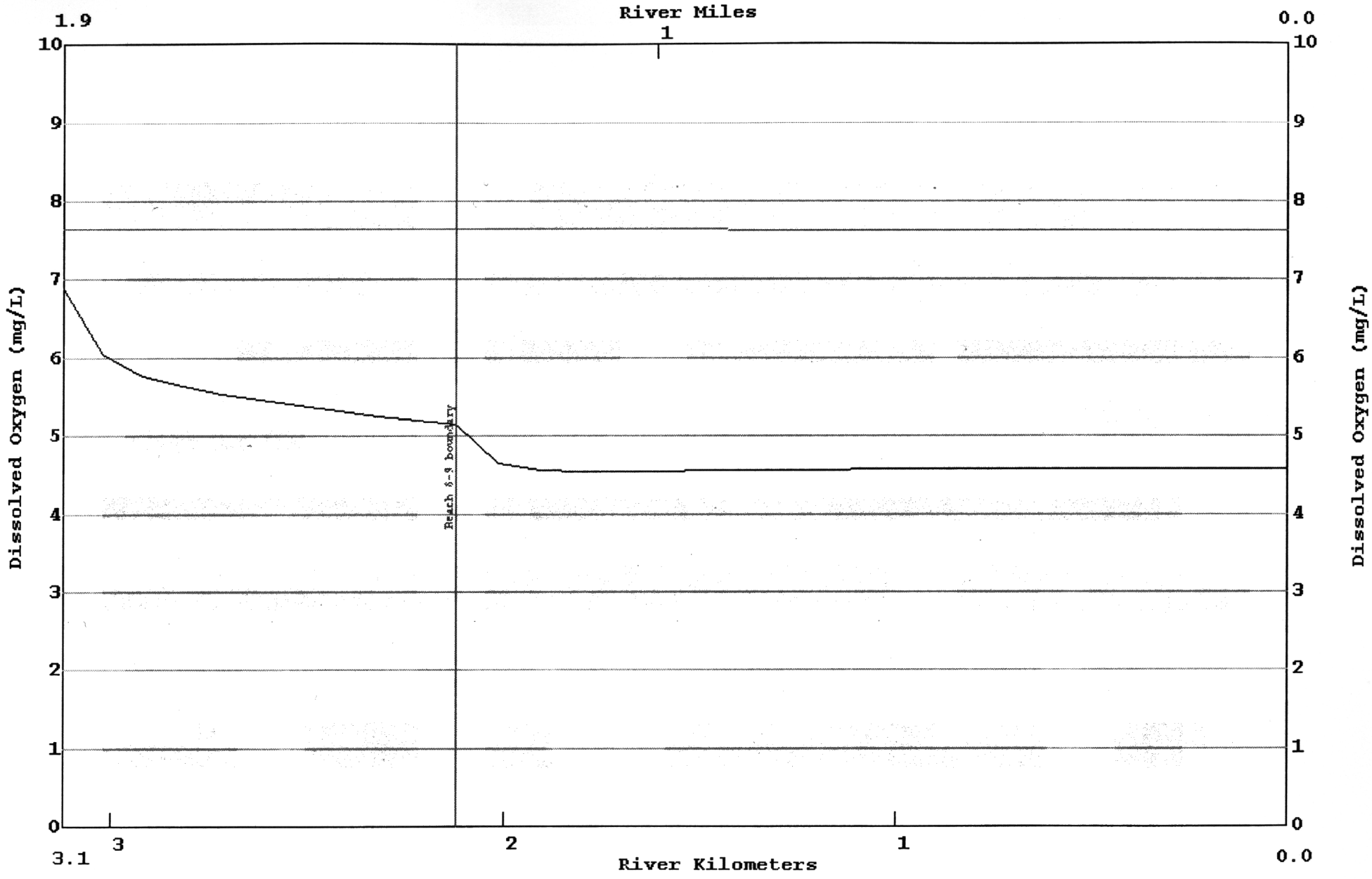
APPENDIX N

Model Output for No Load Runs

LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\summer\nat\mproj_sum_nt.txt
Summer Projection Natural (No Man Made Loads) Model min= 3.80 max= 6.89
1-8



LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\summer\nat\mproj_sum_nt.txt
Summer Projection Natural (No Man Made Loads) Model min= 4.54 max= 6.89
G



```
LA-QUAL Version 6.02
Louisiana Department of Environmental Quality

Input file is R:\projects\3110-051\la-qual\main_c\revised\proj\summer\nat\mproj_sum_nt.txt
Output produced at 16:31 on 03/30/2004

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

CARD TYPE       CONTROL TITLES

TITLE01         LA-QUAL model for Main Canal TMDL (subsegment 020501)
TITLE02         Summer Projection Natural (No Man Made Loads) Model
CNTROL03   NO   SEQU                        <Warning: legacy control - line ignored>
CNTROL04  YES   METR
CNTROL05  YES   OXYG                        <Warning: legacy control - line ignored>
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMP
MODOPT02   NO   SALI
MODOPT03  YES   CONSERVATIVE MATERIAL  I = Chloride                  IN mg/L      CL
MODOPT04  YES   CONSERVATIVE MATERIAL II = Conductivity              IN umhos     COND
MODOPT05  YES   DISS
MODOPT06  YES   BIOC
MODOPT07   NO   NITR
MODOPT08   NO   PHOS
MODOPT09   NO   CHLO
MODOPT10   NO   MACR
MODOPT11   NO   COLI
MODOPT12  YES   NONCONSERVATIVE MATERIAL = Nitrogenous BOD           IN mg/L      NBOD
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         MAXIMUM ITERATION LIMIT            =       500.00000
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
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

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	MC	Main Canal	8.00	TO	7.60	0.1000	0.40	4	1	4
REACH ID	2	MC	Main Canal	7.60	TO	7.00	0.1000	0.60	6	5	10
REACH ID	3	MC	Main Canal	7.00	TO	6.00	0.1000	1.00	10	11	20
REACH ID	4	MC	Main Canal	6.00	TO	5.00	0.1000	1.00	10	21	30
REACH ID	5	MC	Main Canal	5.00	TO	4.00	0.1000	1.00	10	31	40
REACH ID	6	MC	Main Canal	4.00	TO	3.00	0.1000	1.00	10	41	50
REACH ID	7	MC	Main Canal	3.00	TO	1.20	0.1000	1.80	18	51	68
REACH ID	8	AG	Avondale Gardens	3.12	TO	2.12	0.1000	1.00	10	69	78
Reach ID	9	AG	Avondale Gardens	2.12	TO	0.00	0.1060	2.12	20	79	98
REACH ID	10	MC	Main Canal	1.20	TO	0.00	0.1000	1.20	12	99	110

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	MC	0.000	0.000	22.500	0.000	0.000	1.280	0.00000	0.000
HYDR-1	2	MC	0.000	0.000	13.100	0.000	0.000	0.707	0.00000	0.000
HYDR-1	3	MC	0.000	0.000	16.600	0.000	0.000	1.080	0.00000	0.000
HYDR-1	4	MC	0.000	0.000	14.850	0.000	0.000	0.930	0.00000	0.000
HYDR-1	5	MC	0.000	0.000	13.110	0.000	0.000	0.770	0.00000	0.000
HYDR-1	6	MC	0.000	0.000	16.150	0.000	0.000	0.940	0.00000	0.000
HYDR-1	7	MC	0.000	0.000	19.200	0.000	0.000	1.120	0.00000	0.000
HYDR-1	8	AG	0.000	0.000	9.140	0.000	0.000	0.460	0.00000	0.000
HYDR-1	9	AG	0.000	0.000	15.200	0.000	0.000	0.640	0.00000	0.000
HYDR-1	10	MC	0.000	0.000	15.540	0.000	0.000	1.160	0.00000	0.000

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	2	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	3	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	4	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	5	MC	29.30	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	MC	29.30	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	MC	29.30	0.49	1.12	0.00	0.00	0.00	0.00	0.00
INITIAL	8	AG	29.30	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	9	AG	29.30	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	10	MC	29.30	0.48	4.54	0.00	0.00	0.00	0.00	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 BOD DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	MC	15 LOUISIANA	0.000	0.000	0.000	0.100	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	MC	15 LOUISIANA	0.000	0.000	0.000	0.130	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	MC	15 LOUISIANA	0.000	0.000	0.000	0.570	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	MC	15 LOUISIANA	0.000	0.000	0.000	0.500	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	MC	15 LOUISIANA	0.000	0.000	0.000	0.450	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	MC	15 LOUISIANA	0.000	0.000	0.000	0.630	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	MC	15 LOUISIANA	0.000	0.000	0.000	1.050	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	AG	15 LOUISIANA	0.000	0.000	0.000	0.490	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	AG	15 LOUISIANA	0.000	0.000	0.000	0.520	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	MC	15 LOUISIANA	0.000	0.000	0.000	0.040	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	ORG-N DECA	ORG-N SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE

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
COEF-4	1	MC	0.000	0.220	0.000	0.000
COEF-4	2	MC	0.000	0.220	0.000	0.000
COEF-4	3	MC	0.000	0.200	0.000	0.000
COEF-4	4	MC	0.000	0.180	0.000	0.000
COEF-4	5	MC	0.000	0.160	0.000	0.000
COEF-4	6	MC	0.000	0.190	0.000	0.000
COEF-4	7	MC	0.000	0.220	0.000	0.000
COEF-4	8	AG	0.000	0.210	0.000	0.000
COEF-4	9	AG	0.000	0.060	0.000	0.000
COEF-4	10	MC	0.000	0.210	0.000	0.000

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

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3-N	NO3-N	BOD#2

ENDATA17

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

CARD TYPE	REACH	ID	PHOS	CHL A	COLI	NCM

ENDATA18

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

CARD TYPE	REACH	ID	BOD#1	ORG-N	COLI	NCM	DO	BOD#2
NONPOINT	1	MC	9.00	0.00	0.00	8.00	0.00	0.00
NONPOINT	2	MC	9.00	0.00	0.00	6.00	0.00	0.00
NONPOINT	3	MC	12.00	0.00	0.00	11.00	0.00	0.00
NONPOINT	4	MC	10.00	0.00	0.00	12.00	0.00	0.00
NONPOINT	5	MC	10.00	0.00	0.00	10.00	0.00	0.00
NONPOINT	6	MC	11.00	0.00	0.00	11.00	0.00	0.00
NONPOINT	7	MC	16.00	0.00	0.00	17.00	0.00	0.00
NONPOINT	8	AG	11.00	0.00	0.00	3.00	0.00	0.00
NONPOINT	9	AG	38.00	0.00	0.00	10.00	0.00	0.00
NONPOINT	10	MC	36.00	0.00	0.00	1.00	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     umhos

HDWTR-1           1     Main Canal              0   0.00300    0.106   29.30     0.51    61.200   763.400
HDWTR-1          69     Avondale Gardens        0   0.00300    0.106   29.30     0.39    88.900   760.200
ENDATA20

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

CARD TYPE     ELEMENT   NAME                        DO     BOD#1     ORG-N     NH3-N     NO3-N     BOD#2
                                                    mg/L      mg/L      mg/L      mg/L      mg/L      mg/L

HDWTR-2           1     Main Canal                 6.89      6.36      0.00      0.00      0.00      0.00
HDWTR-2          69     Avondale Gardens           6.89      5.82      0.00      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     Main Canal                 0.00      0.00      0.00      2.64
HDWTR-3          69     Avondale Gardens           0.00      0.00      0.00      2.19
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

JUNCTION          99      68       1.20    Avondale Gardens
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     umhos

ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                          %
CARD TYPE     ELEMENT   NAME                        DO       BOD      RMVL     ORG-N     NH3-N    NITRIF     NO3-N     BOD#2
                                                    mg/L      mg/L                mg/L      mg/L                mg/L      mg/L

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

ENDATA26
```

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

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 =  2
NUMBER OF REACHES IN PLOT 1 =   8
PLOT RCH  1  2  3  4  5  6  7 10
NUMBER OF REACHES IN PLOT 2 =   2
PLOT RCH  8  9
ENDATA30

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


OVERLAY 1 MAC.OVL                       :MC1-8
OVERLAY 2 AVG.OVL                       :AVG
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  83 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12


CONDENSED CAPSULE SUMMARY FOR Main Canal

                                                                  REAER BOD1 BOD1 BOD2 BOD2  NH3
    DIST     FLOW   TEMP SALN    DO  EBOD1 EBOD2 ORGN  NH3  CHLA   RATE  DECA SETT DECA SETT DECA  SOD
      km     m³/s  deg C  ppt   mg/L  mg/L  mg/L mg/L µg/L  1/da   1/da  1/da 1/da 1/da 1/da 1/da   g/m²/d

   HDWTR   0.00300 29.30 0.51   6.89  6.36  0.00 0.00 0.00  0.00
    7.90   0.00300 29.30 0.39   5.10  5.94  0.00 0.00 0.00  0.00   0.62  0.14 0.00 0.00 0.00 0.00  0.18
    7.80   0.00300 29.30 0.39   4.99  5.77  0.00 0.00 0.00  0.00   0.62  0.14 0.00 0.00 0.00 0.00  0.18
    7.70   0.00300 29.30 0.39   5.00  5.71  0.00 0.00 0.00  0.00   0.62  0.14 0.00 0.00 0.00 0.00  0.18
```

7.60	0.00300	29.30	0.39	5.01	5.68	0.00	0.00	0.00	0.00	0.62	0.14	0.00	0.00	0.00	0.00	0.18
7.50	0.00300	29.30	0.39	5.46	7.68	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.23
7.40	0.00300	29.30	0.39	5.35	9.02	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.23
7.30	0.00300	29.30	0.39	5.22	9.92	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.23
7.20	0.00300	29.30	0.39	5.12	10.52	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.23
7.10	0.00300	29.30	0.39	5.06	10.92	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.23
7.00	0.00300	29.30	0.39	5.02	11.19	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.23
6.90	0.00300	29.30	0.39	4.06	8.23	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.80	0.00300	29.30	0.39	4.22	6.69	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.70	0.00300	29.30	0.39	4.39	5.89	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.60	0.00300	29.30	0.39	4.49	5.47	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.50	0.00300	29.30	0.39	4.54	5.25	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.40	0.00300	29.30	0.39	4.56	5.14	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.30	0.00300	29.30	0.39	4.58	5.08	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.20	0.00300	29.30	0.39	4.58	5.05	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.10	0.00300	29.30	0.39	4.59	5.04	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
6.00	0.00300	29.30	0.39	4.59	5.03	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	1.02
5.90	0.00300	29.30	0.39	4.78	5.30	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.80	0.00300	29.30	0.40	4.73	5.46	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.70	0.00300	29.30	0.40	4.68	5.55	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.60	0.00300	29.30	0.41	4.66	5.61	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.50	0.00300	29.30	0.41	4.64	5.64	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.40	0.00300	29.30	0.41	4.64	5.66	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.30	0.00300	29.30	0.42	4.63	5.67	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.20	0.00300	29.30	0.42	4.63	5.68	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.10	0.00300	29.30	0.43	4.63	5.68	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
5.00	0.00300	29.30	0.43	4.63	5.69	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.90
4.90	0.00300	29.30	0.43	4.91	6.46	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.80	0.00300	29.30	0.43	4.88	6.98	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.70	0.00300	29.30	0.43	4.82	7.34	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.60	0.00300	29.30	0.43	4.77	7.58	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.50	0.00300	29.30	0.43	4.75	7.74	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.40	0.00300	29.30	0.43	4.73	7.85	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.30	0.00300	29.30	0.43	4.72	7.92	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.20	0.00300	29.30	0.43	4.71	7.97	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.10	0.00300	29.30	0.43	4.70	8.01	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
4.00	0.00300	29.30	0.43	4.70	8.03	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.81
3.90	0.00300	29.30	0.44	4.18	6.89	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.80	0.00300	29.30	0.44	4.28	6.25	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.70	0.00300	29.30	0.45	4.37	5.89	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.60	0.00300	29.30	0.45	4.43	5.69	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.50	0.00300	29.30	0.46	4.45	5.58	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.40	0.00300	29.30	0.47	4.47	5.51	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.30	0.00300	29.30	0.47	4.47	5.48	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.20	0.00300	29.30	0.48	4.48	5.46	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.10	0.00300	29.30	0.48	4.48	5.45	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
3.00	0.00300	29.30	0.49	4.49	5.45	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	1.13
2.90	0.00300	29.30	0.49	3.80	4.08	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.88
2.80	0.00300	29.30	0.49	3.89	3.44	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.88
2.70	0.00300	29.30	0.49	3.97	3.15	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.88
2.60	0.00300	29.30	0.49	4.01	3.01	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
2.50	0.00300	29.30	0.49	4.03	2.95	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
2.40	0.00300	29.30	0.49	4.03	2.92	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
2.30	0.00300	29.30	0.49	4.04	2.91	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
2.20	0.00300	29.30	0.49	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
2.10	0.00300	29.30	0.49	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89

2.00	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.90	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.80	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.70	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.60	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.50	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.40	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.30	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.20	0.00300	29.30	0.48	4.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.89
1.10	0.00600	29.30	0.48	4.12	12.57	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
1.00	0.00600	29.30	0.48	4.41	11.97	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.90	0.00600	29.30	0.48	4.66	11.59	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.80	0.00600	29.30	0.48	4.82	11.33	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.70	0.00600	29.30	0.48	4.92	11.17	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.60	0.00600	29.30	0.48	4.97	11.06	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.50	0.00600	29.30	0.48	5.00	10.99	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.40	0.00600	29.30	0.48	5.02	10.94	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.30	0.00600	29.30	0.48	5.03	10.91	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.20	0.00600	29.30	0.48	5.03	10.89	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.10	0.00600	29.30	0.48	5.04	10.88	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07
0.00	0.00600	29.30	0.48	5.04	10.87	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.07

CONDENSED CAPSULE SUMMARY FOR Avondale Gardens

DIST km	FLOW m^3/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORGN mg/L	NH3 µg/L	CHLA 1/da	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	NH3 DECA 1/da	SOD $g/m^2/d$
HDWTR	0.00300	29.30	0.39	6.89	5.82	0.00	0.00	0.00	0.00							
3.02	0.00300	29.30	0.26	6.05	9.15	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.92	0.00300	29.30	0.26	5.77	12.19	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.82	0.00300	29.30	0.26	5.63	14.94	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.72	0.00300	29.30	0.26	5.54	17.45	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.62	0.00300	29.30	0.26	5.46	19.73	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.52	0.00300	29.30	0.26	5.39	21.81	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.42	0.00300	29.30	0.26	5.32	23.69	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.32	0.00300	29.30	0.26	5.26	25.41	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.22	0.00300	29.30	0.26	5.20	26.97	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.12	0.00300	29.30	0.26	5.15	28.39	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.88
2.01	0.00300	29.30	0.27	4.64	27.38	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.91	0.00300	29.30	0.28	4.55	26.60	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.80	0.00300	29.30	0.29	4.54	26.00	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.70	0.00300	29.30	0.30	4.54	25.54	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.59	0.00300	29.30	0.31	4.55	25.19	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.48	0.00300	29.30	0.33	4.55	24.92	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.38	0.00300	29.30	0.34	4.56	24.72	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.27	0.00300	29.30	0.35	4.56	24.56	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.17	0.00300	29.30	0.36	4.57	24.44	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
1.06	0.00300	29.30	0.37	4.57	24.34	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.95	0.00300	29.30	0.38	4.57	24.27	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.85	0.00300	29.30	0.39	4.57	24.22	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.74	0.00300	29.30	0.40	4.58	24.18	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.64	0.00300	29.30	0.41	4.58	24.15	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.53	0.00300	29.30	0.42	4.58	24.12	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.42	0.00300	29.30	0.44	4.58	24.10	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93

0.32	0.00300	29.30	0.45	4.58	24.09	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.21	0.00300	29.30	0.46	4.58	24.08	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.11	0.00300	29.30	0.47	4.58	24.07	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93
0.00	0.00300	29.30	0.48	4.58	24.06	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.93

FINAL REPORT Main Canal — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 1 Main Canal — Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
1	HDWTR	0.00300	29.30	0.51	61.20	763.40	6.89	6.36	0.00	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64

********** 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	8.00	7.90	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
2	7.90	7.80	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
3	7.80	7.70	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
4	7.70	7.60	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
TOT						44.44			11520.00	9000.00					
AVG					0.00010		1.28	22.50			28.80				
CUM						44.44									

********** 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
1	7.900	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
2	7.800	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
3	7.700	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
4	7.600	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
AVG 20 DEG C RATE			0.52	0.09	0.00	0.00	0.00	0.00	0.00	0.10			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
1	7.900	29.30	0.39	61.20	763.40	5.10	5.94	0.00	5.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.85
2	7.800	29.30	0.39	61.20	763.40	4.99	5.77	0.00	5.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
3	7.700	29.30	0.39	61.20	763.40	5.00	5.71	0.00	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.69
4	7.600	29.30	0.39	61.20	763.40	5.01	5.68	0.00	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.68

FINAL REPORT Main Canal — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 2 Main Canal — Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
5	UPR RCH	0.00300	29.30	0.39	61.20	763.40	5.01	5.68	0.00	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68

********** 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
5	7.60	7.50	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
6	7.50	7.40	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
7	7.40	7.30	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
8	7.30	7.20	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
9	7.20	7.10	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
10	7.10	7.00	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
TOT						21.44			5557.02	7860.00					
AVG					0.00032		0.71	13.10			9.26				
CUM						65.88									

********** 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
5	7.500	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
6	7.400	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
7	7.300	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
8	7.200	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
9	7.100	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
10	7.000	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
AVG 20 DEG C RATE			0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.13			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
5	7.500	29.30	0.39	61.20	763.40	5.46	7.68	0.00	7.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.24
6	7.400	29.30	0.39	61.20	763.40	5.35	9.02	0.00	9.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.46
7	7.300	29.30	0.39	61.20	763.40	5.22	9.92	0.00	9.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.55
8	7.200	29.30	0.39	61.20	763.40	5.12	10.52	0.00	10.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.59
9	7.100	29.30	0.39	61.20	763.40	5.06	10.92	0.00	10.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.61
10	7.000	29.30	0.39	61.20	763.40	5.02	11.19	0.00	11.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.61

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 3 Main Canal Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
11	UPR RCH	0.00300	29.30	0.39	61.20	763.40	5.02	11.19	0.00	11.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61

********** 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
11	7.00	6.90	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
12	6.90	6.80	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
13	6.80	6.70	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
14	6.70	6.60	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
15	6.60	6.50	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
16	6.50	6.40	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
17	6.40	6.30	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
18	6.30	6.20	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
19	6.20	6.10	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
20	6.10	6.00	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
TOT						69.17			17928.00	16600.00					
AVG					0.00017		1.08	16.60			17.93				
CUM						135.05									

********** 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
11	6.900	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
12	6.800	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
13	6.700	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
14	6.600	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
15	6.500	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
16	6.400	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
17	6.300	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
18	6.200	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
19	6.100	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
20	6.000	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	1.02	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.38	0.00
AVG 20 DEG C RATE			0.62	0.09	0.00	0.00	0.00	0.00	0.00	0.57			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.20	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
11	6.900	29.30	0.39	61.20	763.40	4.06	8.23	0.00	8.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.91
12	6.800	29.30	0.39	61.20	763.40	4.22	6.69	0.00	6.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
13	6.700	29.30	0.39	61.20	763.40	4.39	5.89	0.00	5.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.66
14	6.600	29.30	0.39	61.20	763.40	4.49	5.47	0.00	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.64
15	6.500	29.30	0.39	61.20	763.40	4.54	5.25	0.00	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.64
16	6.400	29.30	0.39	61.20	763.40	4.56	5.14	0.00	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.64
17	6.300	29.30	0.39	61.20	763.40	4.58	5.08	0.00	5.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.64
18	6.200	29.30	0.39	61.20	763.40	4.58	5.05	0.00	5.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.64
19	6.100	29.30	0.39	61.20	763.40	4.59	5.04	0.00	5.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.64
20	6.000	29.30	0.39	61.20	763.40	4.59	5.03	0.00	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.64

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 4 Main Canal Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
21	UPR RCH	0.00300	29.30	0.39	61.20	763.40	4.59	5.03	0.00	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64

********** 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
21	6.00	5.90	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
22	5.90	5.80	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
23	5.80	5.70	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
24	5.70	5.60	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
25	5.60	5.50	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
26	5.50	5.40	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
27	5.40	5.30	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
28	5.30	5.20	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
29	5.20	5.10	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
30	5.10	5.00	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
TOT						53.28			13810.50	14850.00					
AVG					0.00022		0.93	14.85			13.81				
CUM						188.33									

********** 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
21	5.900	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
22	5.800	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
23	5.700	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
24	5.600	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
25	5.500	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
26	5.400	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
27	5.300	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
28	5.200	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
29	5.100	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
30	5.000	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.34	0.00
AVG 20 DEG C RATE			0.72	0.08	0.00	0.00	0.00	0.00	0.00	0.50			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.18	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
21	5.900	29.30	0.39	61.20	763.40	4.78	5.30	0.00	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.24
22	5.800	29.30	0.40	61.20	763.40	4.73	5.46	0.00	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.45
23	5.700	29.30	0.40	61.20	763.40	4.68	5.55	0.00	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.53
24	5.600	29.30	0.41	61.20	763.40	4.66	5.61	0.00	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.56
25	5.500	29.30	0.41	61.20	763.40	4.64	5.64	0.00	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.57
26	5.400	29.30	0.41	61.20	763.40	4.64	5.66	0.00	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.57
27	5.300	29.30	0.42	61.20	763.40	4.63	5.67	0.00	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.57

28	5.200	29.30	0.42	61.20	763.40	4.63	5.68	0.00	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.57
29	5.100	29.30	0.43	61.20	763.40	4.63	5.68	0.00	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.57
30	5.000	29.30	0.43	61.20	763.40	4.63	5.69	0.00	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.57

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 5 Main Canal Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
31	UPR RCH	0.00300	29.30	0.43	61.20	763.40	4.63	5.69	0.00	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57

********** 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
31	5.00	4.90	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
32	4.90	4.80	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
33	4.80	4.70	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
34	4.70	4.60	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
35	4.60	4.50	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
36	4.50	4.40	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
37	4.40	4.30	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
38	4.30	4.20	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
39	4.20	4.10	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
40	4.10	4.00	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
TOT						38.95			10094.70	13110.00					
AVG					0.00030		0.77	13.11			10.09				
CUM						227.28									

********** 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
31	4.900	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
32	4.800	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
33	4.700	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
34	4.600	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
35	4.500	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
36	4.400	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
37	4.300	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
38	4.200	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
39	4.100	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00
40	4.000	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.30	0.00

AVG 20 DEG C RATE	0.87	0.08	0.00	0.00	0.00	0.00	0.00	0.45		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.16	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
31	4.900	29.30	0.43	61.20	763.40	4.91	6.46	0.00	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.96
32	4.800	29.30	0.43	61.20	763.40	4.88	6.98	0.00	6.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.15
33	4.700	29.30	0.43	61.20	763.40	4.82	7.34	0.00	7.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.23
34	4.600	29.30	0.43	61.20	763.40	4.77	7.58	0.00	7.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.27
35	4.500	29.30	0.43	61.20	763.40	4.75	7.74	0.00	7.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.28
36	4.400	29.30	0.43	61.20	763.40	4.73	7.85	0.00	7.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.29
37	4.300	29.30	0.43	61.20	763.40	4.72	7.92	0.00	7.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.30
38	4.200	29.30	0.43	61.20	763.40	4.71	7.97	0.00	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.30
39	4.100	29.30	0.43	61.20	763.40	4.70	8.01	0.00	8.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.30
40	4.000	29.30	0.43	61.20	763.40	4.70	8.03	0.00	8.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.30

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 6 Main Canal Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
41	UPR RCH	0.00300	29.30	0.43	61.20	763.40	4.70	8.03	0.00	8.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30

********** 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
41	4.00	3.90	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
42	3.90	3.80	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
43	3.80	3.70	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
44	3.70	3.60	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
45	3.60	3.50	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
46	3.50	3.40	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
47	3.40	3.30	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
48	3.30	3.20	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
49	3.20	3.10	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
50	3.10	3.00	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
TOT						58.57			15181.00	16150.00					
AVG					0.00020		0.94	16.15			15.18				
CUM						285.85									

********** 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
41	3.900	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
42	3.800	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
43	3.700	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
44	3.600	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
45	3.500	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
46	3.400	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
47	3.300	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
48	3.200	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
49	3.100	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
50	3.000	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	1.13	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.36	0.00
AVG 20 DEG C RATE			0.71	0.09	0.00	0.00	0.00	0.00	0.00	0.63			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.19	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
41	3.900	29.30	0.44	61.20	763.40	4.18	6.89	0.00	6.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.44
42	3.800	29.30	0.44	61.20	763.40	4.28	6.25	0.00	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.17
43	3.700	29.30	0.45	61.20	763.40	4.37	5.89	0.00	5.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.08
44	3.600	29.30	0.45	61.20	763.40	4.43	5.69	0.00	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.05
45	3.500	29.30	0.46	61.20	763.40	4.45	5.58	0.00	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04
46	3.400	29.30	0.47	61.20	763.40	4.47	5.51	0.00	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.03
47	3.300	29.30	0.47	61.20	763.40	4.47	5.48	0.00	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.03
48	3.200	29.30	0.48	61.20	763.40	4.48	5.46	0.00	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.03
49	3.100	29.30	0.48	61.20	763.40	4.48	5.45	0.00	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04
50	3.000	29.30	0.49	61.20	763.40	4.49	5.45	0.00	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 7 Main Canal Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
51	UPR RCH	0.00300	29.30	0.49	61.20	763.40	4.49	5.45	0.00	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04

********** 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
51	3.00	2.90	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
52	2.90	2.80	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
53	2.80	2.70	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
54	2.70	2.60	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
55	2.60	2.50	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
56	2.50	2.40	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
57	2.40	2.30	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
58	2.30	2.20	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
59	2.20	2.10	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
60	2.10	2.00	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
61	2.00	1.90	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
62	1.90	1.80	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
63	1.80	1.70	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
64	1.70	1.60	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
65	1.60	1.50	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
66	1.50	1.40	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
67	1.40	1.30	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
68	1.30	1.20	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
TOT						149.33			38707.20	34560.00					
AVG					0.00014		1.12	19.20			21.50				
CUM						435.18									

********** 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
51	2.900	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
52	2.800	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
53	2.700	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
54	2.600	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
55	2.500	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
56	2.400	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
57	2.300	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
58	2.200	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
59	2.100	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
60	2.000	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
61	1.900	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
62	1.800	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
63	1.700	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
64	1.600	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
65	1.500	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
66	1.400	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
67	1.300	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
68	1.200	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.89	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.41	0.00
AVG 20 DEG C RATE			0.59	0.09	0.00	0.00	0.00	0.00	0.00	1.05			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
51	2.900	29.30	0.49	61.20	763.40	3.80	4.08	0.00	4.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.29
52	2.800	29.30	0.49	61.20	763.40	3.89	3.44	0.00	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.12
53	2.700	29.30	0.49	61.20	763.40	3.97	3.15	0.00	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.08
54	2.600	29.30	0.49	61.20	763.40	4.01	3.01	0.00	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.07
55	2.500	29.30	0.49	61.20	763.40	4.03	2.95	0.00	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
56	2.400	29.30	0.49	61.20	763.40	4.03	2.92	0.00	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
57	2.300	29.30	0.49	61.20	763.40	4.04	2.91	0.00	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
58	2.200	29.30	0.49	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
59	2.100	29.30	0.49	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
60	2.000	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
61	1.900	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
62	1.800	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
63	1.700	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
64	1.600	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
65	1.500	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
66	1.400	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
67	1.300	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06
68	1.200	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.06

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 10 Main Canal Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
99	UPR RCH	0.00300	29.30	0.48	61.20	763.40	4.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
99	TRIB	0.00300	29.30	0.48	88.90	760.20	4.58	24.06	0.00	24.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.31

********** 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
99	1.20	1.10	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
100	1.10	1.00	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
101	1.00	0.90	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
102	0.90	0.80	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
103	0.80	0.70	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
104	0.70	0.60	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
105	0.60	0.50	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
106	0.50	0.40	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000

107	0.40	0.30	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
108	0.30	0.20	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
109	0.20	0.10	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
110	0.10	0.00	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
TOT						41.73			21631.68	18648.00					
AVG					0.00033		1.16	15.54			18.03				
CUM						476.91									

********** 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
99	1.100	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
100	1.000	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
101	0.900	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
102	0.800	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
103	0.700	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
104	0.600	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
105	0.500	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
106	0.400	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
107	0.300	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
108	0.200	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
109	0.100	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
110	0.000	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
AVG 20 DEG C RATE			0.58	0.10	0.00	0.00	0.00	0.00	0.00	0.04			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
99	1.100	29.30	0.48	75.05	761.80	4.12	12.57	0.00	12.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.20
100	1.000	29.30	0.48	75.05	761.80	4.41	11.97	0.00	11.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.57
101	0.900	29.30	0.48	75.05	761.80	4.66	11.59	0.00	11.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.31
102	0.800	29.30	0.48	75.05	761.80	4.82	11.33	0.00	11.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.20
103	0.700	29.30	0.48	75.05	761.80	4.92	11.17	0.00	11.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.15
104	0.600	29.30	0.48	75.05	761.80	4.97	11.06	0.00	11.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.13
105	0.500	29.30	0.48	75.05	761.80	5.00	10.99	0.00	10.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
106	0.400	29.30	0.48	75.05	761.80	5.02	10.94	0.00	10.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
107	0.300	29.30	0.48	75.05	761.80	5.03	10.91	0.00	10.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
108	0.200	29.30	0.48	75.05	761.80	5.03	10.89	0.00	10.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
109	0.100	29.30	0.48	75.05	761.80	5.04	10.88	0.00	10.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
110	0.000	29.30	0.48	75.05	761.80	5.04	10.87	0.00	10.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12

TRAVEL TIME	=	476.91	DAYS		
MAXIMUM EFFLUENT	=	0.00	PERCENT		
FLOW	=	0.00300	TO	0.00600	m^3/s
DISPERSION	=	0.0000	TO	0.0000	m^2/s
VELOCITY	=	0.00010	TO	0.00033	m/s
DEPTH	=	0.71	TO	1.28	m
WIDTH	=	13.10	TO	22.50	m
BOD DECAY	=	0.12	TO	0.15	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.07	TO	1.89	$g/m^2/d$
NH3 SOURCE	=	0.00	TO	0.00	$g/m^2/d$
REAERATION	=	0.62	TO	1.12	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day
TEMPERATURE	=	29.30	TO	29.30	deg C
DISSOLVED OXYGEN	=	3.80	TO	5.46	mg/L

FINAL REPORT Avondale Gardens — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 8 Avondale Gardens — Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
69	HDWTR	0.00300	29.30	0.39	88.90	760.20	6.89	5.82	0.00	5.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.19

********** 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
69	3.12	3.02	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
70	3.02	2.92	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
71	2.92	2.82	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
72	2.82	2.72	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
73	2.72	2.62	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
74	2.62	2.52	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
75	2.52	2.42	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
76	2.42	2.32	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
77	2.32	2.22	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
78	2.22	2.12	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
TOT						16.22			4204.40	9140.00					
AVG					0.00071		0.46	9.14			4.20				
CUM						16.22									

********** 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
69	3.020	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
70	2.920	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
71	2.820	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
72	2.720	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
73	2.620	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
74	2.520	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
75	2.420	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
76	2.320	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
77	2.220	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
78	2.120	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.88	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.39	0.00
AVG 20 DEG C RATE			1.47	0.04	0.00	0.00	0.00	0.00	0.00	0.49			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
69	3.020	29.30	0.26	88.90	760.20	6.05	9.15	0.00	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04
70	2.920	29.30	0.26	88.90	760.20	5.77	12.19	0.00	12.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.95
71	2.820	29.30	0.26	88.90	760.20	5.63	14.94	0.00	14.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.90
72	2.720	29.30	0.26	88.90	760.20	5.54	17.45	0.00	17.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.86
73	2.620	29.30	0.26	88.90	760.20	5.46	19.73	0.00	19.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.84
74	2.520	29.30	0.26	88.90	760.20	5.39	21.81	0.00	21.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.83
75	2.420	29.30	0.26	88.90	760.20	5.32	23.69	0.00	23.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.82
76	2.320	29.30	0.26	88.90	760.20	5.26	25.41	0.00	25.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.82
77	2.220	29.30	0.26	88.90	760.20	5.20	26.97	0.00	26.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.82
78	2.120	29.30	0.26	88.90	760.20	5.15	28.39	0.00	28.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.81

FINAL REPORT Avondale Gardens LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 9 Avondale Gardens Summer Projection Natural (No Man Made Loads) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
79	UPR RCH	0.00300	29.30	0.26	88.90	760.20	5.15	28.39	0.00	28.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81

********** 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
79	2.12	2.01	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
80	2.01	1.91	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
81	1.91	1.80	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
82	1.80	1.70	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
83	1.70	1.59	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
84	1.59	1.48	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
85	1.48	1.38	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
86	1.38	1.27	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
87	1.27	1.17	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
88	1.17	1.06	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
89	1.06	0.95	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
90	0.95	0.85	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
91	0.85	0.74	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
92	0.74	0.64	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
93	0.64	0.53	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
94	0.53	0.42	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
95	0.42	0.32	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
96	0.32	0.21	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
97	0.21	0.11	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
98	0.11	0.00	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
TOT						79.57			20623.36	32223.99					
AVG					0.00031		0.64	15.20			9.73				
CUM						95.79									

********** 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
79	2.014	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
80	1.908	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
81	1.802	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
82	1.696	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
83	1.590	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
84	1.484	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
85	1.378	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
86	1.272	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
87	1.166	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
88	1.060	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
89	0.954	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
90	0.848	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
91	0.742	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
92	0.636	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
93	0.530	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
94	0.424	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
95	0.318	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
96	0.212	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00

97	0.106	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
98	0.000	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.11	0.00
AVG 20 DEG C RATE			1.04	0.05	0.00	0.00	0.00	0.00	0.00	0.52			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.06	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
79	2.014	29.30	0.27	88.90	760.20	4.64	27.38	0.00	27.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.59
80	1.908	29.30	0.28	88.90	760.20	4.55	26.60	0.00	26.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.12
81	1.802	29.30	0.29	88.90	760.20	4.54	26.00	0.00	26.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.49
82	1.696	29.30	0.30	88.90	760.20	4.54	25.54	0.00	25.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.74
83	1.590	29.30	0.31	88.90	760.20	4.55	25.19	0.00	25.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.92
84	1.484	29.30	0.33	88.90	760.20	4.55	24.92	0.00	24.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.04
85	1.378	29.30	0.34	88.90	760.20	4.56	24.72	0.00	24.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.12
86	1.272	29.30	0.35	88.90	760.20	4.56	24.56	0.00	24.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.18
87	1.166	29.30	0.36	88.90	760.20	4.57	24.44	0.00	24.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.22
88	1.060	29.30	0.37	88.90	760.20	4.57	24.34	0.00	24.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.25
89	0.954	29.30	0.38	88.90	760.20	4.57	24.27	0.00	24.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.26
90	0.848	29.30	0.39	88.90	760.20	4.57	24.22	0.00	24.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.28
91	0.742	29.30	0.40	88.90	760.20	4.58	24.18	0.00	24.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.29
92	0.636	29.30	0.41	88.90	760.20	4.58	24.15	0.00	24.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.29
93	0.530	29.30	0.42	88.90	760.20	4.58	24.12	0.00	24.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.30
94	0.424	29.30	0.44	88.90	760.20	4.58	24.10	0.00	24.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.30
95	0.318	29.30	0.45	88.90	760.20	4.58	24.09	0.00	24.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.30
96	0.212	29.30	0.46	88.90	760.20	4.58	24.08	0.00	24.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.30
97	0.106	29.30	0.47	88.90	760.20	4.58	24.07	0.00	24.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.31
98	0.000	29.30	0.48	88.90	760.20	4.58	24.06	0.00	24.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.31

STREAM SUMMARY
Avondale Gardens

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Summer Projection Natural (No Man Made Loads) Model

TRAVEL TIME	=	95.79	DAYS		
MAXIMUM EFFLUENT	=	0.00	PERCENT		
FLOW	=	0.00300	TO	0.00300	m³/s
DISPERSION	=	0.0000	TO	0.0000	m²/s
VELOCITY	=	0.00031	TO	0.00071	m/s
DEPTH	=	0.46	TO	0.64	m
WIDTH	=	9.14	TO	15.20	m
BOD DECAY	=	0.06	TO	0.08	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.88	TO	0.93	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	1.24	TO	1.74	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day

TEMPERATURE	=	29.30	TO	29.30	deg C
DISSOLVED OXYGEN	=	4.54	TO	6.05	mg/L

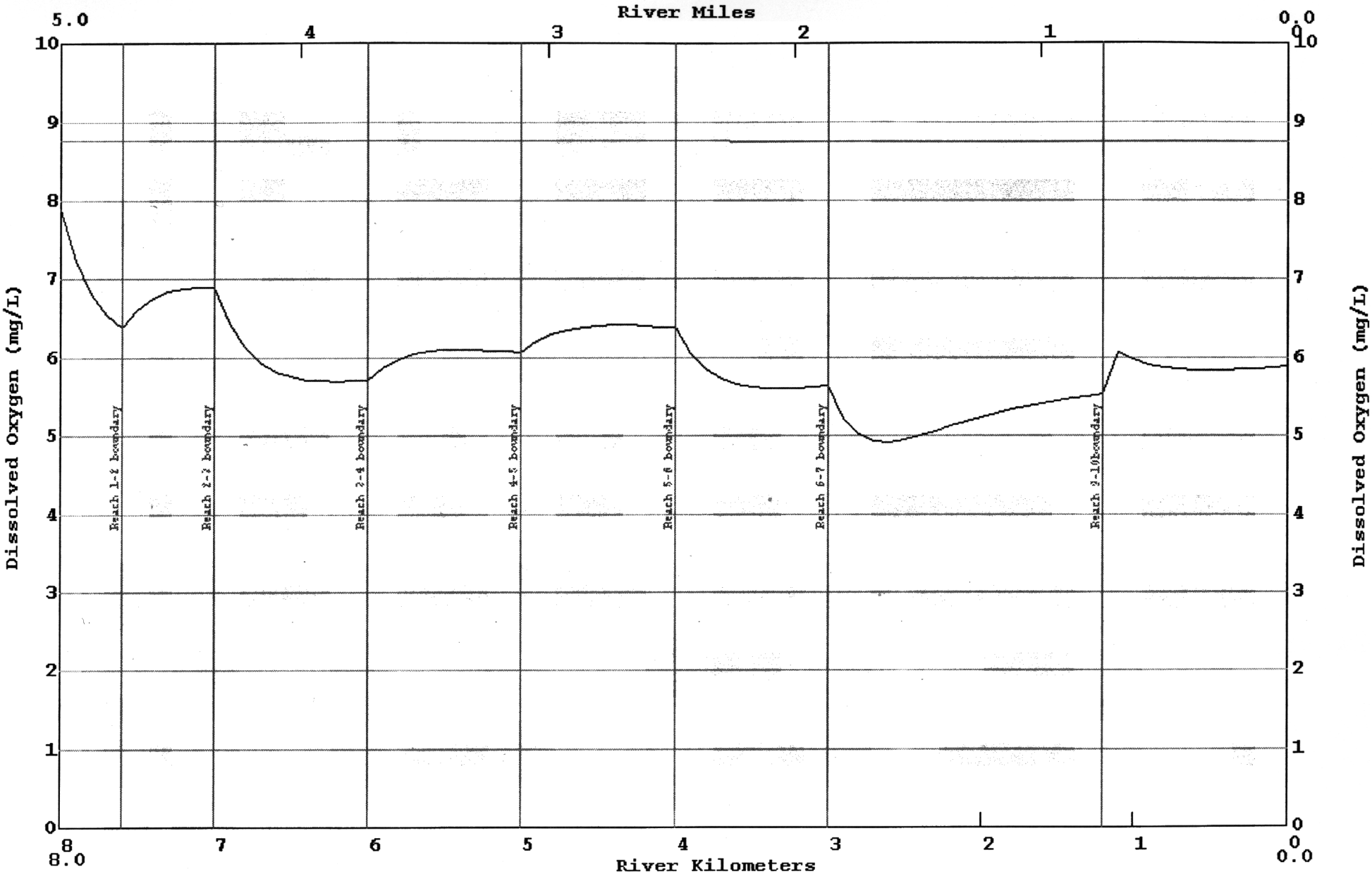
LA-QUAL model for Main Canal TMDL (subsegment 020501)
Summer Projection Natural (No Man Made Loads) Model

INPUT/OUTPUT LOADING SUMMARY

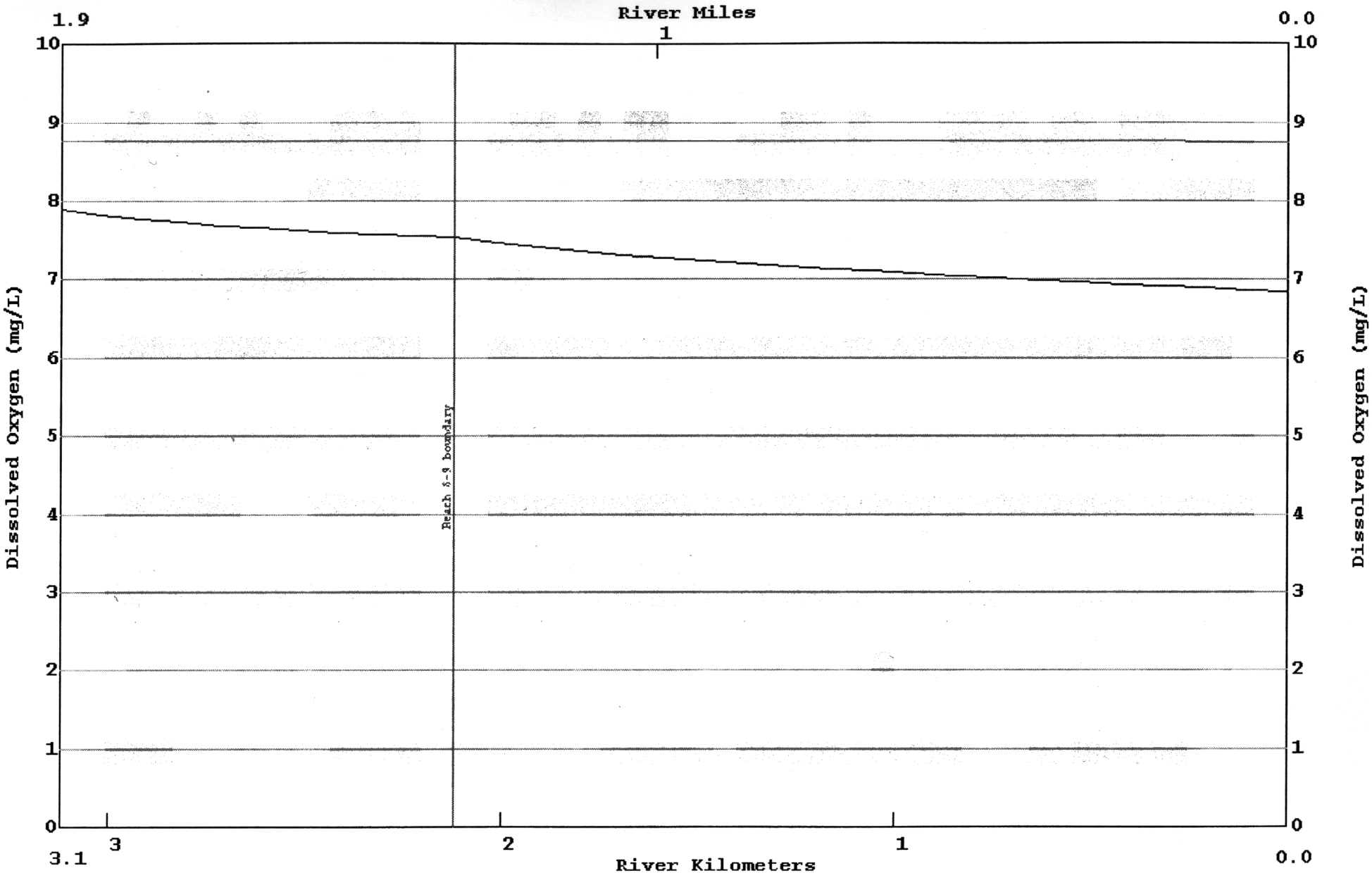
	FLOW m^3/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER INFLOW	0.006	3.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	1.3
INCREMENTAL INFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTFLOW THRU LOWER BNDRY	-0.006	-2.6	-5.6	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
DISPERSION THRU LOWER BNDRY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NON-POINT INPUT		0.0	162.0	0.0	0.0					89.0
NATURAL REAERATION		416.0								
DAM REAERATION		0.0								
BACKGROUND SOD		-167.3								
BOD#1 DECAY		-159.5	-159.5							
BOD#1 SETTLING		0.0	0.0							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0		0.0						
BOD#2 SETTLING		0.0		0.0						
ANAEROBIC BOD#2 DECAY				0.0						
ORG-N DECAY		0.0			0.0	0.0				
ORG-N SETTLING					0.0	0.0				
NH3 DECAY		0.0				0.0	0.0			
BACKGROUND NH3 SOURCE						0.0				
OTHER DENITRIFICATION							0.0			
PHOSPHORUS SOURCE								0.0		
ALGAE PHOTOSYNTHESIS		0.0				0.0	0.0	0.0	0.0	
ALGAE RESPIRATION		0.0				0.0		0.0	0.0	
ALGAE SETTLING		0.0							0.0	
MACRO PHOTOSYNTHESIS		0.0				0.0	0.0	0.0		
NCM DECAY		-90.2								-90.2
NCM SETTLING		0.0								0.0
TOTAL INPUTS	0.006	419.6	165.2	0.0	0.0	0.0	0.0	0.0	0.0	90.3
TOTAL OUTPUTS	-0.006	-419.6	-165.2	0.0	0.0	0.0	0.0	0.0	0.0	-90.3
NET CONVERGENCE ERROR	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

.....EXECUTION COMPLETED

LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\winter\nat\mp_wint_nt.txt
Winter Projection Natural (No Man-Made Load) Model min= 4.92 max= 7.90
1-8



LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\winter\nat\mp_wint_nt.txt
Winter Projection Natural (No Man-Made Load) Model min= 6.85 max= 7.90
G



```
LA-QUAL Version 6.02
Louisiana Department of Environmental Quality

Input file is R:\projects\3110-051\la-qual\main_c\revised\proj\winter\nat\mp_wint_nt.txt
Output produced at 16:32 on 03/30/2004

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

CARD TYPE       CONTROL TITLES

TITLE01         LA-QUAL model for Main Canal TMDL (subsegment 020501)
TITLE02         Winter Projection Natural (No Man-Made Load) Model
CNTROL03   NO   SEQU                        <Warning: legacy control - line ignored>
CNTROL04  YES   METR
CNTROL05  YES   OXYG                        <Warning: legacy control - line ignored>
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMP
MODOPT02   NO   SALI
MODOPT03  YES   CONSERVATIVE MATERIAL  I = Chloride                  IN mg/L      CL
MODOPT04  YES   CONSERVATIVE MATERIAL II = Conductivity              IN umhos     COND
MODOPT05  YES   DISS
MODOPT06  YES   BIOC
MODOPT07   NO   NITR
MODOPT08   NO   PHOS
MODOPT09   NO   CHLO
MODOPT10   NO   MACR
MODOPT11   NO   COLI
MODOPT12  YES   NONCONSERVATIVE MATERIAL = Nitrogenous BOD           IN mg/L      NBOD
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         MAXIMUM ITERATION LIMIT            =       500.00000
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
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

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	MC	Main Canal	8.00	TO	7.60	0.1000	0.40	4	1	4
REACH ID	2	MC	Main Canal	7.60	TO	7.00	0.1000	0.60	6	5	10
REACH ID	3	MC	Main Canal	7.00	TO	6.00	0.1000	1.00	10	11	20
REACH ID	4	MC	Main Canal	6.00	TO	5.00	0.1000	1.00	10	21	30
REACH ID	5	MC	Main Canal	5.00	TO	4.00	0.1000	1.00	10	31	40
REACH ID	6	MC	Main Canal	4.00	TO	3.00	0.1000	1.00	10	41	50
REACH ID	7	MC	Main Canal	3.00	TO	1.20	0.1000	1.80	18	51	68
REACH ID	8	AG	Avondale Gardens	3.12	TO	2.12	0.1000	1.00	10	69	78
Reach ID	9	AG	Avondale Gardens	2.12	TO	0.00	0.1060	2.12	20	79	98
REACH ID	10	MC	Main Canal	1.20	TO	0.00	0.1000	1.20	12	99	110

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	MC	0.000	0.000	22.500	0.000	0.000	1.280	0.00000	0.000
HYDR-1	2	MC	0.000	0.000	13.100	0.000	0.000	0.707	0.00000	0.000
HYDR-1	3	MC	0.000	0.000	16.600	0.000	0.000	1.080	0.00000	0.000
HYDR-1	4	MC	0.000	0.000	14.850	0.000	0.000	0.930	0.00000	0.000
HYDR-1	5	MC	0.000	0.000	13.110	0.000	0.000	0.770	0.00000	0.000
HYDR-1	6	MC	0.000	0.000	16.150	0.000	0.000	0.940	0.00000	0.000
HYDR-1	7	MC	0.000	0.000	19.200	0.000	0.000	1.120	0.00000	0.000
HYDR-1	8	AG	0.000	0.000	9.140	0.000	0.000	0.460	0.00000	0.000
HYDR-1	9	AG	0.000	0.000	15.200	0.000	0.000	0.640	0.00000	0.000
HYDR-1	10	MC	0.000	0.000	15.540	0.000	0.000	1.160	0.00000	0.000

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	2	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	3	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	4	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	5	MC	21.80	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	MC	21.80	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	MC	21.80	0.49	1.12	0.00	0.00	0.00	0.00	0.00
INITIAL	8	AG	21.80	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	9	AG	21.80	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	10	MC	21.80	0.48	4.54	0.00	0.00	0.00	0.00	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 BOD DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	MC	15 LOUISIANA	0.000	0.000	0.000	0.100	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	MC	15 LOUISIANA	0.000	0.000	0.000	0.130	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	MC	15 LOUISIANA	0.000	0.000	0.000	0.570	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	MC	15 LOUISIANA	0.000	0.000	0.000	0.500	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	MC	15 LOUISIANA	0.000	0.000	0.000	0.450	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	MC	15 LOUISIANA	0.000	0.000	0.000	0.630	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	MC	15 LOUISIANA	0.000	0.000	0.000	1.050	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	AG	15 LOUISIANA	0.000	0.000	0.000	0.490	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	AG	15 LOUISIANA	0.000	0.000	0.000	0.520	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	MC	15 LOUISIANA	0.000	0.000	0.000	0.040	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	ORG-N DECA	ORG-N SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE

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
COEF-4	1	MC	0.000	0.220	0.000	0.000
COEF-4	2	MC	0.000	0.220	0.000	0.000
COEF-4	3	MC	0.000	0.200	0.000	0.000
COEF-4	4	MC	0.000	0.180	0.000	0.000
COEF-4	5	MC	0.000	0.160	0.000	0.000
COEF-4	6	MC	0.000	0.190	0.000	0.000
COEF-4	7	MC	0.000	0.220	0.000	0.000
COEF-4	8	AG	0.000	0.210	0.000	0.000
COEF-4	9	AG	0.000	0.060	0.000	0.000
COEF-4	10	MC	0.000	0.210	0.000	0.000

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

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3-N	NO3-N	BOD#2

ENDATA17

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

CARD TYPE	REACH	ID	PHOS	CHL A	COLI	NCM

ENDATA18

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

CARD TYPE	REACH	ID	BOD#1	ORG-N	COLI	NCM	DO	BOD#2
NONPOINT	1	MC	9.00	0.00	0.00	8.00	0.00	0.00
NONPOINT	2	MC	9.00	0.00	0.00	6.00	0.00	0.00
NONPOINT	3	MC	12.00	0.00	0.00	11.00	0.00	0.00
NONPOINT	4	MC	10.00	0.00	0.00	12.00	0.00	0.00
NONPOINT	5	MC	10.00	0.00	0.00	10.00	0.00	0.00
NONPOINT	6	MC	11.00	0.00	0.00	11.00	0.00	0.00
NONPOINT	7	MC	16.00	0.00	0.00	17.00	0.00	0.00
NONPOINT	8	AG	11.00	0.00	0.00	3.00	0.00	0.00
NONPOINT	9	AG	38.00	0.00	0.00	10.00	0.00	0.00
NONPOINT	10	MC	36.00	0.00	0.00	1.00	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     umhos

HDWTR-1           1     Main Canal              0   0.02800    0.989   21.80     0.51    61.200   763.400
HDWTR-1          69     Avondale Gardens        0   0.02800    0.989   21.80     0.39    88.900   760.200
ENDATA20

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

CARD TYPE     ELEMENT   NAME                        DO     BOD#1     ORG-N     NH3-N     NO3-N     BOD#2
                                                    mg/L      mg/L      mg/L      mg/L      mg/L      mg/L

HDWTR-2           1     Main Canal                7.90      6.36      0.00      0.00      0.00      0.00
HDWTR-2          69     Avondale Gardens          7.90      5.82      0.00      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     Main Canal                0.00      0.00      0.00      2.64
HDWTR-3          69     Avondale Gardens          0.00      0.00      0.00      2.19
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

JUNCTION          99      68       1.20    Avondale Gardens
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     umhos

ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                          %
CARD TYPE     ELEMENT   NAME                        DO       BOD      RMVL     ORG-N     NH3-N    NITRIF     NO3-N     BOD#2
                                                    mg/L      mg/L                mg/L      mg/L                mg/L      mg/L

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

ENDATA26
```

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

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 =  2
NUMBER OF REACHES IN PLOT 1 =   8
PLOT RCH  1  2  3  4  5  6  7 10
NUMBER OF REACHES IN PLOT 2 =   2
PLOT RCH  8  9
ENDATA30

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


OVERLAY 1 MAC.OVL                       :MC1-8
OVERLAY 2 AVG.OVL                       :AVG
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  71 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12


CONDENSED CAPSULE SUMMARY FOR Main Canal

                                                                  REAER BOD1 BOD1 BOD2 BOD2  NH3
    DIST     FLOW   TEMP SALN    DO  EBOD1 EBOD2 ORGN  NH3  CHLA   RATE  DECA SETT DECA SETT DECA  SOD
      km     m³/s  deg C  ppt   mg/L  mg/L  mg/L mg/L µg/L  1/da   1/da  1/da 1/da 1/da 1/da 1/da   g/m²/d

   HDWTR   0.02800 21.80 0.51   7.90  6.36  0.00 0.00 0.00  0.00
    7.90   0.02800 21.80 0.39   7.24  6.53  0.00 0.00 0.00  0.00   0.55  0.10 0.00 0.00 0.00 0.00  0.11
    7.80   0.02800 21.80 0.39   6.82  6.68  0.00 0.00 0.00  0.00   0.55  0.10 0.00 0.00 0.00 0.00  0.11
    7.70   0.02800 21.80 0.39   6.56  6.82  0.00 0.00 0.00  0.00   0.55  0.10 0.00 0.00 0.00 0.00  0.11
```

7.60	0.02800	21.80	0.39	6.38	6.94	0.00	0.00	0.00	0.00	0.55	0.10	0.00	0.00	0.00	0.00	0.11
7.50	0.02800	21.80	0.39	6.61	7.29	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.40	0.02800	21.80	0.39	6.75	7.62	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.30	0.02800	21.80	0.39	6.84	7.95	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.20	0.02800	21.80	0.39	6.89	8.26	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.10	0.02800	21.80	0.39	6.91	8.56	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.00	0.02800	21.80	0.39	6.91	8.85	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
6.90	0.02800	21.80	0.39	6.43	8.73	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.80	0.02800	21.80	0.39	6.13	8.62	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.70	0.02800	21.80	0.39	5.94	8.52	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.60	0.02800	21.80	0.39	5.83	8.43	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.50	0.02800	21.80	0.39	5.76	8.34	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.40	0.02800	21.80	0.39	5.72	8.26	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.30	0.02800	21.80	0.39	5.71	8.18	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.20	0.02800	21.80	0.39	5.70	8.11	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.10	0.02800	21.80	0.39	5.71	8.04	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
6.00	0.02800	21.80	0.39	5.71	7.98	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.64
5.90	0.02800	21.80	0.39	5.88	7.98	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.80	0.02800	21.80	0.40	5.98	7.98	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.70	0.02800	21.80	0.40	6.04	7.99	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.60	0.02800	21.80	0.41	6.08	7.99	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.50	0.02800	21.80	0.41	6.09	7.99	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.40	0.02800	21.80	0.41	6.10	7.99	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.30	0.02800	21.80	0.42	6.10	7.99	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.20	0.02800	21.80	0.42	6.09	8.00	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.10	0.02800	21.80	0.43	6.08	8.00	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
5.00	0.02800	21.80	0.43	6.07	8.00	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.56
4.90	0.02800	21.80	0.43	6.21	8.12	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.80	0.02800	21.80	0.43	6.30	8.23	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.70	0.02800	21.80	0.43	6.36	8.34	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.60	0.02800	21.80	0.43	6.39	8.45	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.50	0.02800	21.80	0.43	6.41	8.55	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.40	0.02800	21.80	0.43	6.42	8.65	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.30	0.02800	21.80	0.43	6.41	8.75	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.20	0.02800	21.80	0.43	6.41	8.84	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.10	0.02800	21.80	0.43	6.39	8.93	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
4.00	0.02800	21.80	0.43	6.38	9.02	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.50
3.90	0.02800	21.80	0.44	6.06	8.94	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.71
3.80	0.02800	21.80	0.44	5.85	8.87	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.71
3.70	0.02800	21.80	0.45	5.73	8.80	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.71
3.60	0.02800	21.80	0.45	5.66	8.74	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.71
3.50	0.02800	21.80	0.46	5.62	8.68	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.71
3.40	0.02800	21.80	0.47	5.61	8.62	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.71
3.30	0.02800	21.80	0.47	5.60	8.57	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.71
3.20	0.02800	21.80	0.48	5.61	8.52	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.70
3.10	0.02800	21.80	0.48	5.62	8.47	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.70
3.00	0.02800	21.80	0.49	5.64	8.43	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.70
2.90	0.02800	21.80	0.49	5.22	8.08	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.17
2.80	0.02800	21.80	0.49	5.01	7.75	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.17
2.70	0.02800	21.80	0.49	4.93	7.45	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.17
2.60	0.02800	21.80	0.49	4.92	7.17	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
2.50	0.02800	21.80	0.49	4.95	6.92	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
2.40	0.02800	21.80	0.49	5.00	6.69	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
2.30	0.02800	21.80	0.49	5.06	6.47	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
2.20	0.02800	21.80	0.49	5.12	6.28	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
2.10	0.02800	21.80	0.49	5.18	6.10	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18

2.00	0.02800	21.80	0.48	5.24	5.93	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.90	0.02800	21.80	0.48	5.29	5.78	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.80	0.02800	21.80	0.48	5.34	5.64	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.70	0.02800	21.80	0.48	5.38	5.51	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.60	0.02800	21.80	0.48	5.42	5.40	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.50	0.02800	21.80	0.48	5.45	5.29	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.40	0.02800	21.80	0.48	5.48	5.19	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.30	0.02800	21.80	0.48	5.50	5.10	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.20	0.02800	21.80	0.48	5.53	5.02	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.18
1.10	0.05600	21.80	0.48	6.07	11.96	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
1.00	0.05600	21.80	0.48	5.98	12.09	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.90	0.05600	21.80	0.48	5.92	12.22	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.80	0.05600	21.80	0.48	5.88	12.34	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.70	0.05600	21.80	0.48	5.85	12.46	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.60	0.05600	21.80	0.48	5.84	12.57	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.50	0.05600	21.80	0.48	5.84	12.67	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.40	0.05600	21.80	0.48	5.84	12.78	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.30	0.05600	21.80	0.48	5.85	12.88	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.20	0.05600	21.80	0.48	5.86	12.97	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.10	0.05600	21.80	0.48	5.88	13.06	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.00	0.05600	21.80	0.48	5.89	13.15	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04

CONDENSED CAPSULE SUMMARY FOR Avondale Gardens

DIST km	FLOW m^3/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORGN mg/L	NH3 µg/L	CHLA 1/da	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	NH3 DECA 1/da	SOD $g/m^2/d$
HDWTR	0.02800	21.80	0.39	7.90	5.82	0.00	0.00	0.00	0.00							
3.02	0.02800	21.80	0.26	7.83	6.23	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.92	0.02800	21.80	0.26	7.77	6.63	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.82	0.02800	21.80	0.26	7.73	7.03	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.72	0.02800	21.80	0.26	7.69	7.43	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.62	0.02800	21.80	0.26	7.66	7.83	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.52	0.02800	21.80	0.26	7.63	8.22	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.42	0.02800	21.80	0.26	7.60	8.61	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.32	0.02800	21.80	0.26	7.58	9.00	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.22	0.02800	21.80	0.26	7.56	9.38	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.12	0.02800	21.80	0.26	7.54	9.76	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.55
2.01	0.02800	21.80	0.27	7.47	10.31	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.91	0.02800	21.80	0.28	7.41	10.84	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.80	0.02800	21.80	0.29	7.36	11.37	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.70	0.02800	21.80	0.30	7.31	11.88	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.59	0.02800	21.80	0.31	7.27	12.37	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.48	0.02800	21.80	0.33	7.24	12.86	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.38	0.02800	21.80	0.34	7.20	13.34	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.27	0.02800	21.80	0.35	7.17	13.80	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.17	0.02800	21.80	0.36	7.14	14.26	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
1.06	0.02800	21.80	0.37	7.11	14.71	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.95	0.02800	21.80	0.38	7.08	15.14	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.85	0.02800	21.80	0.39	7.05	15.57	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.74	0.02800	21.80	0.40	7.02	15.98	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.64	0.02800	21.80	0.41	7.00	16.39	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.53	0.02800	21.80	0.42	6.97	16.78	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.42	0.02800	21.80	0.44	6.94	17.17	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58

0.32	0.02800	21.80	0.45	6.92	17.55	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.21	0.02800	21.80	0.46	6.90	17.92	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.11	0.02800	21.80	0.47	6.87	18.28	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58
0.00	0.02800	21.80	0.48	6.85	18.64	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.58

FINAL REPORT Main Canal — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 1 Main Canal — Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
1	HDWTR	0.02800	21.80	0.51	61.20	763.40	7.90	6.36	0.00	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64

********** 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	8.00	7.90	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
2	7.90	7.80	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
3	7.80	7.70	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
4	7.70	7.60	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
TOT						4.76			11520.00	9000.00					
AVG					0.00097		1.28	22.50			28.80				
CUM						4.76									

********** 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	7.900	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
2	7.800	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
3	7.700	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
4	7.600	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
AVG 20 DEG C RATE			0.53	0.09	0.00	0.00	0.00	0.00	0.00	0.10			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
1	7.900	21.80	0.39	61.20	763.40	7.24	6.53	0.00	6.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.68
2	7.800	21.80	0.39	61.20	763.40	6.82	6.68	0.00	6.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.70
3	7.700	21.80	0.39	61.20	763.40	6.56	6.82	0.00	6.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.72
4	7.600	21.80	0.39	61.20	763.40	6.38	6.94	0.00	6.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.74

FINAL REPORT Main Canal — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 2 Main Canal — Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
5	UPR RCH	0.02800	21.80	0.39	61.20	763.40	6.38	6.94	0.00	6.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.74

********** 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
5	7.60	7.50	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
6	7.50	7.40	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
7	7.40	7.30	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
8	7.30	7.20	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
9	7.20	7.10	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
10	7.10	7.00	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
TOT						2.30			5557.02	7860.00					
AVG					0.00302		0.71	13.10			9.26				
CUM						7.06									

********** 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
5	7.500	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
6	7.400	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
7	7.300	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
8	7.200	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
9	7.100	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
10	7.000	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
AVG 20 DEG C RATE			1.00	0.09	0.00	0.00	0.00	0.00	0.00	0.13			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
5	7.500	21.80	0.39	61.20	763.40	6.61	7.29	0.00	7.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.88
6	7.400	21.80	0.39	61.20	763.40	6.75	7.62	0.00	7.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
7	7.300	21.80	0.39	61.20	763.40	6.84	7.95	0.00	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.12
8	7.200	21.80	0.39	61.20	763.40	6.89	8.26	0.00	8.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.23
9	7.100	21.80	0.39	61.20	763.40	6.91	8.56	0.00	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.33
10	7.000	21.80	0.39	61.20	763.40	6.91	8.85	0.00	8.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.41

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 3 Main Canal Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
11	UPR RCH	0.02800	21.80	0.39	61.20	763.40	6.91	8.85	0.00	8.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.41

********** 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
11	7.00	6.90	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
12	6.90	6.80	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
13	6.80	6.70	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
14	6.70	6.60	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
15	6.60	6.50	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
16	6.50	6.40	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
17	6.40	6.30	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
18	6.30	6.20	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
19	6.20	6.10	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
20	6.10	6.00	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
TOT						7.41			17928.00	16600.00					
AVG					0.00156		1.08	16.60			17.93				
CUM						14.47									

********** 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
11	6.900	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
12	6.800	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
13	6.700	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
14	6.600	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
15	6.500	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
16	6.400	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
17	6.300	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
18	6.200	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
19	6.100	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
20	6.000	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.23	0.00
AVG 20 DEG C RATE			0.64	0.09	0.00	0.00	0.00	0.00	0.00	0.57			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.20	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
11	6.900	21.80	0.39	61.20	763.40	6.43	8.73	0.00	8.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.31
12	6.800	21.80	0.39	61.20	763.40	6.13	8.62	0.00	8.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.23
13	6.700	21.80	0.39	61.20	763.40	5.94	8.52	0.00	8.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.16
14	6.600	21.80	0.39	61.20	763.40	5.83	8.43	0.00	8.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.09
15	6.500	21.80	0.39	61.20	763.40	5.76	8.34	0.00	8.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.04
16	6.400	21.80	0.39	61.20	763.40	5.72	8.26	0.00	8.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.99
17	6.300	21.80	0.39	61.20	763.40	5.71	8.18	0.00	8.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.95
18	6.200	21.80	0.39	61.20	763.40	5.70	8.11	0.00	8.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.92
19	6.100	21.80	0.39	61.20	763.40	5.71	8.04	0.00	8.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.89
20	6.000	21.80	0.39	61.20	763.40	5.71	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.86

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 4 Main Canal Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
21	UPR RCH	0.02800	21.80	0.39	61.20	763.40	5.71	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.86

********** 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
21	6.00	5.90	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
22	5.90	5.80	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
23	5.80	5.70	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
24	5.70	5.60	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
25	5.60	5.50	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
26	5.50	5.40	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
27	5.40	5.30	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
28	5.30	5.20	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
29	5.20	5.10	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
30	5.10	5.00	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
TOT						5.71			13810.50	14850.00					
AVG					0.00203		0.93	14.85			13.81				
CUM						20.18									

********** 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
21	5.900	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
22	5.800	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
23	5.700	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
24	5.600	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
25	5.500	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
26	5.400	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
27	5.300	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
28	5.200	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
29	5.100	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
30	5.000	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.00
AVG 20 DEG C RATE			0.75	0.08	0.00	0.00	0.00	0.00	0.00	0.50			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.18	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
21	5.900	21.80	0.39	61.20	763.40	5.88	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
22	5.800	21.80	0.40	61.20	763.40	5.98	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.14
23	5.700	21.80	0.40	61.20	763.40	6.04	7.99	0.00	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.26
24	5.600	21.80	0.41	61.20	763.40	6.08	7.99	0.00	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.37
25	5.500	21.80	0.41	61.20	763.40	6.09	7.99	0.00	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.46
26	5.400	21.80	0.41	61.20	763.40	6.10	7.99	0.00	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.54
27	5.300	21.80	0.42	61.20	763.40	6.10	7.99	0.00	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.62

28	5.200	21.80	0.42	61.20	763.40	6.09	8.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.69
29	5.100	21.80	0.43	61.20	763.40	6.08	8.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.75
30	5.000	21.80	0.43	61.20	763.40	6.07	8.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.80

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 5 Main Canal Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
31	UPR RCH	0.02800	21.80	0.43	61.20	763.40	6.07	8.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80

********** 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
31	5.00	4.90	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
32	4.90	4.80	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
33	4.80	4.70	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
34	4.70	4.60	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
35	4.60	4.50	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
36	4.50	4.40	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
37	4.40	4.30	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
38	4.30	4.20	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
39	4.20	4.10	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
40	4.10	4.00	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
TOT						4.17			10094.70	13110.00					
AVG					0.00277		0.77	13.11			10.09				
CUM						24.35									

********** 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
31	4.900	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
32	4.800	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
33	4.700	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
34	4.600	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
35	4.500	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
36	4.400	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
37	4.300	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
38	4.200	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
39	4.100	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00
40	4.000	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.18	0.00

AVG 20 DEG C RATE	0.91	0.08	0.00	0.00	0.00	0.00	0.00	0.45		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.16	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
31	4.900	21.80	0.43	61.20	763.40	6.21	8.12	0.00	8.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.92
32	4.800	21.80	0.43	61.20	763.40	6.30	8.23	0.00	8.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.03
33	4.700	21.80	0.43	61.20	763.40	6.36	8.34	0.00	8.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.13
34	4.600	21.80	0.43	61.20	763.40	6.39	8.45	0.00	8.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.23
35	4.500	21.80	0.43	61.20	763.40	6.41	8.55	0.00	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.32
36	4.400	21.80	0.43	61.20	763.40	6.42	8.65	0.00	8.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.40
37	4.300	21.80	0.43	61.20	763.40	6.41	8.75	0.00	8.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.47
38	4.200	21.80	0.43	61.20	763.40	6.41	8.84	0.00	8.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.54
39	4.100	21.80	0.43	61.20	763.40	6.39	8.93	0.00	8.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.61
40	4.000	21.80	0.43	61.20	763.40	6.38	9.02	0.00	9.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.67

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 6 Main Canal Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
41	UPR RCH	0.02800	21.80	0.43	61.20	763.40	6.38	9.02	0.00	9.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.67

********** 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
41	4.00	3.90	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
42	3.90	3.80	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
43	3.80	3.70	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
44	3.70	3.60	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
45	3.60	3.50	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
46	3.50	3.40	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
47	3.40	3.30	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
48	3.30	3.20	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
49	3.20	3.10	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
50	3.10	3.00	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
TOT						6.28			15181.00	16150.00					
AVG					0.00184		0.94	16.15			15.18				
CUM						30.63									

********** 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
41	3.900	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
42	3.800	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
43	3.700	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
44	3.600	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
45	3.500	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
46	3.400	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
47	3.300	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
48	3.200	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
49	3.100	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
50	3.000	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.71	0.71	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.21	0.00
AVG 20 DEG C RATE			0.73	0.09	0.00	0.00	0.00	0.00	0.00	0.63			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.19	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
41	3.900	21.80	0.44	61.20	763.40	6.06	8.94	0.00	8.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.52
42	3.800	21.80	0.44	61.20	763.40	5.85	8.87	0.00	8.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.38
43	3.700	21.80	0.45	61.20	763.40	5.73	8.80	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.26
44	3.600	21.80	0.45	61.20	763.40	5.66	8.74	0.00	8.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.16
45	3.500	21.80	0.46	61.20	763.40	5.62	8.68	0.00	8.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.06
46	3.400	21.80	0.47	61.20	763.40	5.61	8.62	0.00	8.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.98
47	3.300	21.80	0.47	61.20	763.40	5.60	8.57	0.00	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.91
48	3.200	21.80	0.48	61.20	763.40	5.61	8.52	0.00	8.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.85
49	3.100	21.80	0.48	61.20	763.40	5.62	8.47	0.00	8.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.79
50	3.000	21.80	0.49	61.20	763.40	5.64	8.43	0.00	8.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.75

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 7 Main Canal Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
51	UPR RCH	0.02800	21.80	0.49	61.20	763.40	5.64	8.43	0.00	8.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.75

********** 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
51	3.00	2.90	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
52	2.90	2.80	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
53	2.80	2.70	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
54	2.70	2.60	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
55	2.60	2.50	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
56	2.50	2.40	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
57	2.40	2.30	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
58	2.30	2.20	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
59	2.20	2.10	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
60	2.10	2.00	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
61	2.00	1.90	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
62	1.90	1.80	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
63	1.80	1.70	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
64	1.70	1.60	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
65	1.60	1.50	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
66	1.50	1.40	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
67	1.40	1.30	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
68	1.30	1.20	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
TOT						16.00			38707.20	34560.00					
AVG					0.00130		1.12	19.20			21.50				
CUM						46.63									

********** 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
51	2.900	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
52	2.800	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
53	2.700	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
54	2.600	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
55	2.500	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
56	2.400	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
57	2.300	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
58	2.200	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
59	2.100	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
60	2.000	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
61	1.900	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
62	1.800	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
63	1.700	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
64	1.600	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
65	1.500	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
66	1.400	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
67	1.300	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
68	1.200	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.18	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
AVG 20 DEG C RATE			0.61	0.09	0.00	0.00	0.00	0.00	0.00	1.05			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
51	2.900	21.80	0.49	61.20	763.40	5.22	8.08	0.00	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.39
52	2.800	21.80	0.49	61.20	763.40	5.01	7.75	0.00	7.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.10
53	2.700	21.80	0.49	61.20	763.40	4.93	7.45	0.00	7.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.86
54	2.600	21.80	0.49	61.20	763.40	4.92	7.17	0.00	7.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.66
55	2.500	21.80	0.49	61.20	763.40	4.95	6.92	0.00	6.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.50
56	2.400	21.80	0.49	61.20	763.40	5.00	6.69	0.00	6.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.37
57	2.300	21.80	0.49	61.20	763.40	5.06	6.47	0.00	6.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.26
58	2.200	21.80	0.49	61.20	763.40	5.12	6.28	0.00	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.17
59	2.100	21.80	0.49	61.20	763.40	5.18	6.10	0.00	6.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.10
60	2.000	21.80	0.48	61.20	763.40	5.24	5.93	0.00	5.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04
61	1.900	21.80	0.48	61.20	763.40	5.29	5.78	0.00	5.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.99
62	1.800	21.80	0.48	61.20	763.40	5.34	5.64	0.00	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.95
63	1.700	21.80	0.48	61.20	763.40	5.38	5.51	0.00	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.92
64	1.600	21.80	0.48	61.20	763.40	5.42	5.40	0.00	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.89
65	1.500	21.80	0.48	61.20	763.40	5.45	5.29	0.00	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.87
66	1.400	21.80	0.48	61.20	763.40	5.48	5.19	0.00	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.85
67	1.300	21.80	0.48	61.20	763.40	5.50	5.10	0.00	5.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.83
68	1.200	21.80	0.48	61.20	763.40	5.53	5.02	0.00	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.82

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 10 Main Canal Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
99	UPR RCH	0.02800	21.80	0.48	61.20	763.40	5.53	5.02	0.00	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82
99	TRIB	0.02800	21.80	0.48	88.90	760.20	6.85	18.64	0.00	18.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.50

********** 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
99	1.20	1.10	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
100	1.10	1.00	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
101	1.00	0.90	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
102	0.90	0.80	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
103	0.80	0.70	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
104	0.70	0.60	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
105	0.60	0.50	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
106	0.50	0.40	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003

107	0.40	0.30	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
108	0.30	0.20	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
109	0.20	0.10	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
110	0.10	0.00	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
TOT						4.47			21631.68	18648.00					
AVG					0.00311		1.16	15.54			18.03				
CUM						51.10									

********** 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
99	1.100	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
100	1.000	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
101	0.900	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
102	0.800	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
103	0.700	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
104	0.600	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
105	0.500	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
106	0.400	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
107	0.300	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
108	0.200	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
109	0.100	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
110	0.000	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
AVG 20 DEG C RATE			0.61	0.10	0.00	0.00	0.00	0.00	0.00	0.04			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
99	1.100	21.80	0.48	75.05	761.80	6.07	11.96	0.00	11.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.92
100	1.000	21.80	0.48	75.05	761.80	5.98	12.09	0.00	12.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.70
101	0.900	21.80	0.48	75.05	761.80	5.92	12.22	0.00	12.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.50
102	0.800	21.80	0.48	75.05	761.80	5.88	12.34	0.00	12.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.31
103	0.700	21.80	0.48	75.05	761.80	5.85	12.46	0.00	12.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.14
104	0.600	21.80	0.48	75.05	761.80	5.84	12.57	0.00	12.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.98
105	0.500	21.80	0.48	75.05	761.80	5.84	12.67	0.00	12.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.83
106	0.400	21.80	0.48	75.05	761.80	5.84	12.78	0.00	12.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.70
107	0.300	21.80	0.48	75.05	761.80	5.85	12.88	0.00	12.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.58
108	0.200	21.80	0.48	75.05	761.80	5.86	12.97	0.00	12.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.47
109	0.100	21.80	0.48	75.05	761.80	5.88	13.06	0.00	13.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.36
110	0.000	21.80	0.48	75.05	761.80	5.89	13.15	0.00	13.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.27

TRAVEL TIME	=	51.10	DAYS		
MAXIMUM EFFLUENT	=	0.00	PERCENT		
FLOW	=	0.02800	TO	0.05600	m^3/s
DISPERSION	=	0.0000	TO	0.0000	m^2/s
VELOCITY	=	0.00097	TO	0.00311	m/s
DEPTH	=	0.71	TO	1.28	m
WIDTH	=	13.10	TO	22.50	m
BOD DECAY	=	0.09	TO	0.11	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.04	TO	1.18	$g/m^2/d$
NH3 SOURCE	=	0.00	TO	0.00	$g/m^2/d$
REAERATION	=	0.55	TO	1.04	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day
TEMPERATURE	=	21.80	TO	21.80	deg C
DISSOLVED OXYGEN	=	4.92	TO	7.24	mg/L

FINAL REPORT Avondale Gardens — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 8 Avondale Gardens — Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
69	HDWTR	0.02800	21.80	0.39	88.90	760.20	7.90	5.82	0.00	5.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.19

********** 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
69	3.12	3.02	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
70	3.02	2.92	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
71	2.92	2.82	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
72	2.82	2.72	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
73	2.72	2.62	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
74	2.62	2.52	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
75	2.52	2.42	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
76	2.42	2.32	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
77	2.32	2.22	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
78	2.22	2.12	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
TOT						1.74			4204.40	9140.00					
AVG					0.00666		0.46	9.14			4.20				
CUM						1.74									

********** 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
69	3.020	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
70	2.920	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
71	2.820	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
72	2.720	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
73	2.620	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
74	2.520	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
75	2.420	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
76	2.320	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
77	2.220	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
78	2.120	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.24	0.00
AVG 20 DEG C RATE			1.65	0.04	0.00	0.00	0.00	0.00	0.00	0.49			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
69	3.020	21.80	0.26	88.90	760.20	7.83	6.23	0.00	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.22
70	2.920	21.80	0.26	88.90	760.20	7.77	6.63	0.00	6.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.25
71	2.820	21.80	0.26	88.90	760.20	7.73	7.03	0.00	7.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.28
72	2.720	21.80	0.26	88.90	760.20	7.69	7.43	0.00	7.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.31
73	2.620	21.80	0.26	88.90	760.20	7.66	7.83	0.00	7.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.34
74	2.520	21.80	0.26	88.90	760.20	7.63	8.22	0.00	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.37
75	2.420	21.80	0.26	88.90	760.20	7.60	8.61	0.00	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.39
76	2.320	21.80	0.26	88.90	760.20	7.58	9.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.42
77	2.220	21.80	0.26	88.90	760.20	7.56	9.38	0.00	9.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.44
78	2.120	21.80	0.26	88.90	760.20	7.54	9.76	0.00	9.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.46

FINAL REPORT Avondale Gardens LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 9 Avondale Gardens Winter Projection Natural (No Man-Made Load) Model

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
79	UPR RCH	0.02800	21.80	0.26	88.90	760.20	7.54	9.76	0.00	9.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.46

********** 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
79	2.12	2.01	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
80	2.01	1.91	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
81	1.91	1.80	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
82	1.80	1.70	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
83	1.70	1.59	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
84	1.59	1.48	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
85	1.48	1.38	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
86	1.38	1.27	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
87	1.27	1.17	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
88	1.17	1.06	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
89	1.06	0.95	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
90	0.95	0.85	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
91	0.85	0.74	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
92	0.74	0.64	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
93	0.64	0.53	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
94	0.53	0.42	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
95	0.42	0.32	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
96	0.32	0.21	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
97	0.21	0.11	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
98	0.11	0.00	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
TOT						8.52			20623.36	32223.99					
AVG					0.00288		0.64	15.20			9.73				
CUM						10.26									

********** 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
79	2.014	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
80	1.908	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
81	1.802	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
82	1.696	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
83	1.590	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
84	1.484	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
85	1.378	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
86	1.272	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
87	1.166	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
88	1.060	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
89	0.954	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
90	0.848	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
91	0.742	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
92	0.636	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
93	0.530	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
94	0.424	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
95	0.318	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
96	0.212	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00

97	0.106	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
98	0.000	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.58	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.07	0.00
AVG 20 DEG C RATE			1.10	0.05	0.00	0.00	0.00	0.00	0.00	0.52			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.06	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
79	2.014	21.80	0.27	88.90	760.20	7.47	10.31	0.00	10.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.59
80	1.908	21.80	0.28	88.90	760.20	7.41	10.84	0.00	10.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.72
81	1.802	21.80	0.29	88.90	760.20	7.36	11.37	0.00	11.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.85
82	1.696	21.80	0.30	88.90	760.20	7.31	11.88	0.00	11.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.97
83	1.590	21.80	0.31	88.90	760.20	7.27	12.37	0.00	12.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.08
84	1.484	21.80	0.33	88.90	760.20	7.24	12.86	0.00	12.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.20
85	1.378	21.80	0.34	88.90	760.20	7.20	13.34	0.00	13.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.31
86	1.272	21.80	0.35	88.90	760.20	7.17	13.80	0.00	13.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.42
87	1.166	21.80	0.36	88.90	760.20	7.14	14.26	0.00	14.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.52
88	1.060	21.80	0.37	88.90	760.20	7.11	14.71	0.00	14.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.62
89	0.954	21.80	0.38	88.90	760.20	7.08	15.14	0.00	15.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.72
90	0.848	21.80	0.39	88.90	760.20	7.05	15.57	0.00	15.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.82
91	0.742	21.80	0.40	88.90	760.20	7.02	15.98	0.00	15.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.91
92	0.636	21.80	0.41	88.90	760.20	7.00	16.39	0.00	16.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.00
93	0.530	21.80	0.42	88.90	760.20	6.97	16.78	0.00	16.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.09
94	0.424	21.80	0.44	88.90	760.20	6.94	17.17	0.00	17.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.18
95	0.318	21.80	0.45	88.90	760.20	6.92	17.55	0.00	17.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.26
96	0.212	21.80	0.46	88.90	760.20	6.90	17.92	0.00	17.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.34
97	0.106	21.80	0.47	88.90	760.20	6.87	18.28	0.00	18.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.42
98	0.000	21.80	0.48	88.90	760.20	6.85	18.64	0.00	18.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.50

STREAM SUMMARY
Avondale Gardens

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Winter Projection Natural (No Man-Made Load) Model

TRAVEL TIME = 10.26 DAYS

MAXIMUM EFFLUENT = 0.00 PERCENT

FLOW	=	0.02800	TO	0.02800	m³/s
DISPERSION	=	0.0000	TO	0.0000	m²/s
VELOCITY	=	0.00288	TO	0.00666	m/s
DEPTH	=	0.46	TO	0.64	m
WIDTH	=	9.14	TO	15.20	m
BOD DECAY	=	0.04	TO	0.05	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.55	TO	0.58	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	1.14	TO	1.71	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day

TEMPERATURE	=	21.80	TO	21.80	deg C
DISSOLVED OXYGEN	=	6.85	TO	7.83	mg/L

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Winter Projection Natural (No Man-Made Load) Model

INPUT/OUTPUT LOADING SUMMARY

	FLOW m^3/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER INFLOW	0.056	38.2	29.5	0.0	0.0	0.0	0.0	0.0	0.0	11.7
INCREMENTAL INFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTFLOW THRU LOWER BNDRY	-0.056	-28.5	-63.6	0.0	0.0	0.0	0.0	0.0	0.0	-6.1
DISPERSION THRU LOWER BNDRY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NON-POINT INPUT		0.0	162.0	0.0	0.0					89.0
NATURAL REAERATION		317.0								
DAM REAERATION		0.0								
BACKGROUND SOD		-104.3								
BOD#1 DECAY		-127.8	-127.8							
BOD#1 SETTLING		0.0	0.0							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0		0.0						
BOD#2 SETTLING		0.0		0.0						
ANAEROBIC BOD#2 DECAY				0.0						
ORG-N DECAY		0.0			0.0	0.0				
ORG-N SETTLING					0.0	0.0				
NH3 DECAY		0.0				0.0	0.0			
BACKGROUND NH3 SOURCE						0.0				
OTHER DENITRIFICATION							0.0			
PHOSPHORUS SOURCE								0.0		
ALGAE PHOTOSYNTHESIS		0.0				0.0	0.0	0.0	0.0	
ALGAE RESPIRATION		0.0				0.0		0.0	0.0	
ALGAE SETTLING		0.0							0.0	
MACRO PHOTOSYNTHESIS		0.0				0.0	0.0	0.0		
NCM DECAY		-94.5								-94.5
NCM SETTLING		0.0								0.0
TOTAL INPUTS	0.056	355.2	191.5	0.0	0.0	0.0	0.0	0.0	0.0	100.7
TOTAL OUTPUTS	-0.056	-355.2	-191.5	0.0	0.0	0.0	0.0	0.0	0.0	-100.7
NET CONVERGENCE ERROR	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

.....EXECUTION COMPLETED

APPENDIX O

Projection NPS Loads and TMDL Calculations

Calibration Model Non-Point Load Equivalent Calculations:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

REACH NUMBER & DESCRIPTION	Calibration Model Reach Length (km)	Calibration Model Average Reach Width (meters)	Calibration Model UCBOD Nonpoint loading (kg/day)	Calibration Model UNBOD Nonpoint loading (kg/day)	Calibration Model UCBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model UNBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model SOD (gm O_2/m^2/day)	Calibration Model TOTAL Benthic Load (gm O_2/m^2/day)
	A	**B**	**C**	**D**	**E = C / (A x B)**	**F = D / (A x B)**	**G**	**H = E + F + G**
Reach 1: Main Canal	0.40	22.50	36	33	4.000	3.667	0.40	**8.07**
Reach 2: Main Canal	0.60	13.10	27	17	3.435	2.163	0.40	**6.00**
Reach 3: Main Canal	1.00	16.60	15	14	0.904	0.843	0.70	**2.45**
Reach 4: Main Canal	1.00	14.85	15	18	1.010	1.212	0.75	**2.97**
Reach 5: Main Canal	1.00	13.11	17	17	1.297	1.297	0.75	**3.34**
Reach 6: Main Canal	1.00	16.15	32	30	1.981	1.858	1.75	**5.59**
Reach 7: Main Canal	1.80	19.20	66	68	1.910	1.968	4.25	**8.13**
Reach 8: Avondale Gardens Canal	1.00	9.14	17	4	1.860	0.438	0.75	**3.05**
Reach 9: Avondale Gardens Canal	2.12	15.20	55	14	1.707	0.434	0.75	**2.89**
Reach 10: Main Canal	1.20	15.54	80	2	4.290	0.107	0.10	**4.50**

Summer TMDL Summary:

Main Canal

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	268		67
Headwater / Tributary loads		3	0
Benthic loads		284	0
Incremental Loads		0	0
SUB-TOTAL	**268**	**287**	**67**
TMDL = WLA + LA + MOS		***622 kg/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day) (1)	LA (lbs/day) (1)	MOS Load (lbs/day) (1)
Point Source loads	591		148
Headwater / Tributary loads		7	0
Benthic loads		626	0
Incremental Loads		0	0
SUB-TOTAL	**591**	**633**	**148**
TMDL = WLA + LA + MOS		***1,372 lbs/day***	

Notes:

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

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	268		67
Natural Nonpoint Loads		287	
Manmade Nonpoint Loads		0	0
SUB-TOTAL	**268**	**287**	**67**
TMDL = WLA + LA + MOS		***622 kg/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day)	LA (lbs/day)	MOS Load (lbs/day)
Point Source loads	591		148
Natural Nonpoint Loads		633	
Manmade Nonpoint Loads		0	0
SUB-TOTAL	**591**	**633**	**148**
TMDL = WLA + LA + MOS		***1,372 lbs/day***	

FILE: R:\PROJECTS\3110-051\LA-QUAL\MAIN_C\REVISED\TMDL LOAD CALC FOR MAIN CANAL.XLS

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

Main Canal 3.21 6.335

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

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Background UCBOD conc. (mg/l)	Background UNBOD conc. (mg/l)	Background % Reduction	Background UCBOD Load (kg/day)	Background UNBOD Load (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**F**	**G**	**H1**	**H = (1-H1) (86.4)(A)(F)**	**I = (1-H1) (86.4)(A)(G)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Main Canal	0.0028	13.46	5.58	3.26	1.35	6.36	2.64	32%	1.05	0.43	100%	1.05	0.43	1.05	0.43	4.33	1.79	**0.00**	**1.48**
Avondale Gardens Canal	0.0028	5.82	2.19	1.41	0.53	5.82	2.19	32%	0.96	0.36	100%	0.96	0.36	0.96	0.36	3.96	1.49	**0.00**	**1.32**
SUB-TOTAL TMDL LOADING				**5**	**2**				**2**	**1**		**2**	**1**	**2**	**1**			**0**	**3**

FILE: R:\PROJECTS\3110-051\LA-QUAL\MAIN_C\REVISED\TMDL LOAD CALC FOR MAIN CANAL.XLS

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) =	**20%**

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

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values												Projection Model Equivalents				Projected Model Loads				Margin of Safety Loads					
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	TCBL adjusted for % reduction (Reduced TCBL)	Reduced TCBL adjusted for MOS	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Total Projection Benthic Load **(LA+MOS)**	MOS Total Benthic Load @ 20°C	MOS SOD @ 20°C	Non-Point UCBOD MOS Loads	Non-Point UNBOD MOS Loads	Adjusted SOD MOS @ Proj. temp	Adjusted Total MOS @ Proj. temp
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	**B,** (note 1)	**C,** (note 1)	**D,** (note 1)	**E,** (note 1)	**F1**	**F2**	**F = F1*(1-F2)**	**G**	**I**	**H**	**J,** (note 2)	**K,** (note 3)	**L = (K)(A / D)**	**M = (K)(B / D)**	**N = (K)(C / D)**	**O = (E)(G)(L)**	**P = (E)(G)(M)**	**Q,** (note 4)	**O + P + Q**	**R = (K-J)(E)(G)**	**S = (R)(C/D)**	**T = (R)(A/D)**	**U = (R)(B/D)**	**V,** (note 5)	**T + U + V**
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	32%	1.36	22.50	29.30	100.0%	1.36	1.36	0.674	0.618	0.07	6	6	1	12.72	0	0	0	0	0	0
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	32%	1.36	13.10	29.30	100.0%	1.36	1.36	0.779	0.490	0.09	6	4	1	11.26	0	0	0	0	0	0
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	32%	1.36	16.60	29.30	100.0%	1.36	1.36	0.502	0.469	0.39	8	8	12	27.72	0	0	0	0	0	0
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	32%	1.36	14.85	29.30	100.0%	1.36	1.36	0.462	0.555	0.34	7	8	9	24.25	0	0	0	0	0	0
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	32%	1.36	13.11	29.30	100.0%	1.36	1.36	0.527	0.527	0.31	7	7	7	21.01	0	0	0	0	0	0
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	32%	1.36	16.15	29.30	100.0%	1.36	1.36	0.482	0.452	0.43	8	7	12	27.44	0	0	0	0	0	0
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	32%	1.36	19.20	29.30	100.0%	1.36	1.36	0.320	0.329	0.71	11	11	44	66.57	0	0	0	0	0	0
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	32%	1.36	9.14	29.30	100.0%	1.36	1.36	0.830	0.195	0.33	8	2	5	14.87	0	0	0	0	0	0
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	32%	1.36	15.20	29.30	100.0%	1.36	1.36	0.803	0.204	0.35	26	7	20	52.88	0	0	0	0	0	0
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	32%	1.36	15.54	29.30	100.0%	1.36	1.36	1.297	0.032	0.03	24	1	1	25.81	0	0	0	0	0	0
Sub-Total												13.60					111	60	114	**285**	0		0	0	0	**0**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x $1.065^{(I-20)}$

Note 5, **V** = **S** x $1.065^{(I-20)}$

Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(I-20)}$

EXPLICIT MARGINS:

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

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL.XLS

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

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values											Man-made Model equivalents				Man-made Model loads				Background Model loads			
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	Manmade portion of TCBL	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	**B,** (note 1)	**C,** (note 1)	**D,** (note 1)	**E,** (note 1)	**F1**	**F2**	**F = F1*(1-F2)**	**G**	**I**	**H**	**W = K - F**	**X = (W)(A / D)**	**Y = (W)(B / D)**	**Z = (W)(C / D)**	**AA = (E)(G)(X)**	**AB = (E)(G)(Y)**	**AC,** (note 6)	**AA + AB + AC**	**AD = O - AA**	**AE = P - AB**	**AF = Q - AC**	**AD + AE + AF**
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	32%	1.36	22.50	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	6	6	1	12.72
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	32%	1.36	13.10	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	6	4	1	11.26
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	32%	1.36	16.60	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	8	8	12	27.72
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	32%	1.36	14.85	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	7	8	9	24.25
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	32%	1.36	13.11	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	7	7	7	21.01
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	32%	1.36	16.15	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	8	7	12	27.44
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	32%	1.36	19.20	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	11	11	44	66.57
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	32%	1.36	9.14	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	8	2	5	14.87
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	32%	1.36	15.20	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	26	7	20	52.88
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	32%	1.36	15.54	29.30	100.0%	0.00	0.000	0.000	0.00	0	0	0	0.00	24	1	1	25.81
Sub-Total																0	0	0	**0**	111	60	114	**285**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x $1.065^{(I-20)}$

Note 5, **V** = **S** x $1.065^{(I-20)}$

Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(I-20)}$

EXPLICIT MARGINS:

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

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL.XLS

Summer TMDL Calculations for Point Source loads:

Main Canal

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			UCBOD				UNBOD				Sub-total of Point Source Loads		
					$CBOD_5$ (mg/l)	NH_3N (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 (kg/day)
			A	A1 = A/(1-D)	B	C	D	E = 2.3 x B	F = (86.4)(A1)(E)	G = (1-D) x F	H = (D)(F)	I = 4.3 x B	J = (86.4)(A1)(I)	K = (1-D) x J	L = (D)(J)	F + J	G + K	H + L
SOUTHERN RECOVERY MGMT INC, outfall 1	Main Canal	NO	0.0044	0.0055	30.0	15.0	20%	69.0	33	26	7	64.5	31	25	6	**63**	**51**	**13**
RIVER BIRCH INC	Main Canal	NO	0.0100	0.0125	30.0	15.0	20%	69.0	75	60	15	64.5	70	56	14	**144**	**115**	**29**
BROWNING-FERRIS IND (BFI)	Main Canal	NO	0.0044	0.0055	30.0	15.0	20%	69.0	33	26	7	64.5	31	25	6	**63**	**51**	**13**
JEFFERSON PH DEPT OF PUBLIC WORKS	Main Canal	NO	0.0044	0.0055	30.0	15.0	20%	69.0	33	26	7	64.5	31	25	6	**63**	**51**	**13**
SUB-TOTAL Loads									**173**	**138**	**35**		**162**	**129**	**32**	**334**	**268**	**67**

(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]

For point sources with no flow given a design discharge flow rate of 0.1 MGD (0.0044 cms) was assumed. The dischage flow rate of 0.23 MGD River Birch landfill equals a flow rate of 0.010 cms.

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL.XLS

Calibration Model Non-Point Load Equivalent Calculations:

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

REACH NUMBER & DESCRIPTION	Calibration Model Reach Length (km)	Calibration Model Average Reach Width (meters)	Calibration Model UCBOD Nonpoint loading (kg/day)	Calibration Model UNBOD Nonpoint loading (kg/day)	Calibration Model UCBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model UNBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model SOD (gm O_2/m^2/day)	Calibration Model TOTAL Benthic Load (gm O_2/m^2/day)
	A	**B**	**C**	**D**	**E = C / (A x B)**	**F = D / (A x B)**	**G**	**H = E + F + G**
Reach 1: Main Canal	0.40	22.50	36	33	4.000	3.667	0.40	**8.07**
Reach 2: Main Canal	0.60	13.10	27	17	3.435	2.163	0.40	**6.00**
Reach 3: Main Canal	1.00	16.60	15	14	0.904	0.843	0.70	**2.45**
Reach 4: Main Canal	1.00	14.85	15	18	1.010	1.212	0.75	**2.97**
Reach 5: Main Canal	1.00	13.11	17	17	1.297	1.297	0.75	**3.34**
Reach 6: Main Canal	1.00	16.15	32	30	1.981	1.858	1.75	**5.59**
Reach 7: Main Canal	1.80	19.20	66	68	1.910	1.968	4.25	**8.13**
Reach 8: Avondale Gardens Canal	1.00	9.14	17	4	1.860	0.438	0.75	**3.05**
Reach 9: Avondale Gardens Canal	2.12	15.20	55	14	1.707	0.434	0.75	**2.89**
Reach 10: Main Canal	1.20	15.54	80	2	4.290	0.107	0.10	**4.50**

Winter TMDL Summary:

Main Canal

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	268		67
Headwater / Tributatary loads		40	0
Benthic loads		349	0
Incremental Loads		0	0
SUB-TOTAL	**268**	**389**	**67**
TMDL = WLA + LA + MOS		***724 kg/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day) (1)	LA (lbs/day) (1)	MOS Load (lbs/day) (1)
Point Source loads	591		148
Headwater / Tributatary loads		88	0
Benthic loads		770	0
Incremental Loads		0	0
SUB-TOTAL	**591**	**858**	**148**
TMDL = WLA + LA + MOS		***1,597 lbs/day***	

Notes:

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

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	268		67
Natural Nonpoint Loads		389	
Manmade Nonpoint Loads		0	0
SUB-TOTAL	**268**	**389**	**67**
TMDL = WLA + LA + MOS		***724 kg/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day)	LA (lbs/day)	MOS Load (lbs/day)
Point Source loads	591		148
Natural Nonpoint Loads		857	
Manmade Nonpoint Loads		0	0
SUB-TOTAL	**591**	**857**	**148**
TMDL = WLA + LA + MOS		***1,596 lbs/day***	

FILE: R:\PROJECTS\3110-051\LA-QUAL\MAIN_C\REVISED\TMDL LOAD CALC FOR MAIN CANAL.XLS

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

Main Canal

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

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Background UCBOD conc. (mg/l)	Background UNBOD conc. (mg/l)	Background % Reduction	Background UCBOD Load (kg/day)	Background UNBOD Load (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**F**	**G**	**H1**	**H = (1-H1) (86.4)(A)(F)**	**I = (1-H1) (86.4)(A)(G)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Main Canal	0.028	13.46	5.58	32.56	13.50	6.36	2.64	2%	15.08	6.25	100%	15.08	6.25	15.08	6.25	6.24	2.58	**0.00**	**21.34**
Avondale Gardens Canal	0.028	5.82	2.19	14.08	5.30	5.82	2.19	2%	13.80	5.19	100%	13.80	5.19	13.80	5.19	5.70	2.15	**0.00**	**18.99**
SUB-TOTAL TMDL LOADING				**47**	**19**				**29**	**11**		**29**	**11**	**29**	**11**			**0**	**40**

FILE: R:\PROJECTS\3110-051\LA-QUAL\MAIN_C\REVISED\TMDL LOAD CALC FOR MAIN CANAL.XLS

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) =	**20%**

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

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values												Projection Model Equivalents				Projected Model Loads				Margin of Safety Loads				
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	TCBL adjusted for % reduction (Reduced TCBL)	Reduced TCBL adjusted for MOS	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Total Projection Benthic Load (LA+MOS)	MOS Total Benthic Load @ 20°C	MOS SOD @ 20°C	Non-Point UCBOD MOS Loads	Non-Point UNBOD MOS Loads	Adjusted SOD MOS @ Proj. temp
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	B, (note 1)	C, (note 1)	D, (note 1)	E, (note 1)	F1	F2	F = F1*(1-F2)	G	I	H	J, (note 2)	K, (note 3)	L = (K)(A / D)	M = (K)(B / D)	N = (K)(C / D)	O = (E)(G)(L)	P = (E)(G)(M)	Q, (note 4)	O + P + Q	R = (K-J)(E)(G)	S = (R)(C/D)	T = (R)(A/D)	U = (R)(B/D)	V, (note 5)
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	2%	1.96	22.50	21.80	100.0%	1.96	1.96	0.972	0.891	0.10	9	8	1	17.74	0	0	0	0	0
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	2%	1.96	13.10	21.80	100.0%	1.96	1.96	1.123	0.707	0.13	9	6	1	15.53	0	0	0	0	0
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	2%	1.96	16.60	21.80	100.0%	1.96	1.96	0.724	0.676	0.56	12	11	10	33.65	0	0	0	0	0
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	2%	1.96	14.85	21.80	100.0%	1.96	1.96	0.666	0.799	0.49	10	12	8	29.99	0	0	0	0	0
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	2%	1.96	13.11	21.80	100.0%	1.96	1.96	0.760	0.760	0.44	10	10	6	26.39	0	0	0	0	0
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	2%	1.96	16.15	21.80	100.0%	1.96	1.96	0.695	0.651	0.61	11	11	11	32.84	0	0	0	0	0
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	2%	1.96	19.20	21.80	100.0%	1.96	1.96	0.461	0.475	1.02	16	16	40	71.99	0	0	0	0	0
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	2%	1.96	9.14	21.80	100.0%	1.96	1.96	1.196	0.281	0.48	11	3	5	18.44	0	0	0	0	0
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	2%	1.96	15.20	21.80	100.0%	1.96	1.96	1.157	0.295	0.51	37	9	18	65.13	0	0	0	0	0
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	2%	1.96	15.54	21.80	100.0%	1.96	1.96	1.870	0.047	0.04	35	1	1	36.65	0	0	0	0	0
Sub-Total												19.60					160	86	102	**348**	0		0	0	0

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x $1.065^{(T-20)}$

Note 5, **V** = **S** x $1.065^{(T-20)}$

Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(T-20)}$

EXPLICIT MARGINS:

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

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL.XLS

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

Modeled stream or water body:	Main Canal

Shaded cells are input values for calculations.

Values to be used in the projection models.

	Calibration Model Values												Man-made Model equivalents				Man-made Model loads				Background Model loads			
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Back-ground percentage reduction	Back-ground Benthic Load adjusted for % reduction	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	Adjusted Total MOS @ Proj. temp	Manmade portion of TCBL	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	%	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	(kg/day)	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	B, (note 1)	C, (note 1)	D, (note 1)	E, (note 1)	F1	F2	F = F1*(1-F2)	G	I	H	T + U + V	W = K - F	X = (W)(A / D)	Y = (W)(B / D)	Z = (W)(C / D)	AA = (E)(G)(X)	AB = (E)(G)(Y)	AC, (note 6)	AA + AB + AC	AD = O - AA	AE = P - AB	AF = Q - AC	AD + AE + AF
Reach 1: Main Canal	4.000	3.667	0.40	8.067	0.40	2.00	2%	1.96	22.50	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	9	8	1	17.74
Reach 2: Main Canal	3.435	2.163	0.40	5.998	0.60	2.00	2%	1.96	13.10	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	9	6	1	15.53
Reach 3: Main Canal	0.904	0.843	0.70	2.447	1.00	2.00	2%	1.96	16.60	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	12	11	10	33.65
Reach 4: Main Canal	1.010	1.212	0.75	2.972	1.00	2.00	2%	1.96	14.85	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	10	12	8	29.99
Reach 5: Main Canal	1.297	1.297	0.75	3.343	1.00	2.00	2%	1.96	13.11	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	10	10	6	26.39
Reach 6: Main Canal	1.981	1.858	1.75	5.589	1.00	2.00	2%	1.96	16.15	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	11	11	11	32.84
Reach 7: Main Canal	1.910	1.968	4.25	8.127	1.80	2.00	2%	1.96	19.20	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	16	16	40	71.99
Reach 8: Avondale Gardens Canal	1.860	0.438	0.75	3.048	1.00	2.00	2%	1.96	9.14	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	11	3	5	18.44
Reach 9: Avondale Gardens Canal	1.707	0.434	0.75	2.891	2.12	2.00	2%	1.96	15.20	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	37	9	18	65.13
Reach 10: Main Canal	4.290	0.107	0.10	4.497	1.20	2.00	2%	1.96	15.54	21.80	100.0%	0	0.00	0.000	0.000	0.00	0	0	0	0.00	35	1	1	36.65
Sub-Total												**0**					0	0	0	**0**	160	86	102	**348**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.

Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]

Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]

Note 4, **Q** = **E** x **G** x **N** x 1.065 $^{(T-20)}$

Note 5, **V** = **S** x 1.065 $^{(T-20)}$

Note 6, **AC** = **E** x **G** x **Z** x 1.065 $^{(T-20)}$

EXPLICIT MARGINS:

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

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL.XLS

Winter TMDL Calculations for Point Source loads:

Main Canal

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			UCBOD				UNBOD				Sub-total of Point Source Loads		
					$CBOD_5$ (mg/l)	NH_3N (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 (kg/day)
			A	A1 = A/(1-D)	B	C	D	E = 2.3 x B	F = (86.4)(A1)(E)	G = (1-D) x F	H = (D)(F)	I = 4.3 x B	J = (86.4)(A1)(I)	K = (1-D) x J	L = (D)(J)	F + J	G + K	H + L
SOUTHERN RECOVERY MGMT INC, outfall 1	Main Canal	NO	0.0044	0.0055	30.0	15.0	20%	69.0	33	26	7	64.5	31	25	6	**63**	**51**	**13**
RIVER BIRCH INC	Main Canal	NO	0.0100	0.0125	30.0	15.0	20%	69.0	75	60	15	64.5	70	56	14	**144**	**115**	**29**
BROWNING-FERRIS IND (BFI)	Main Canal	NO	0.0044	0.0055	30.0	15.0	20%	69.0	33	26	7	64.5	31	25	6	**63**	**51**	**13**
JEFFERSON PH DEPT OF PUBLIC WORKS	Main Canal	NO	0.0044	0.0055	30.0	15.0	20%	69.0	33	26	7	64.5	31	25	6	**63**	**51**	**13**
SUB-TOTAL Loads									**173**	**138**	**35**		**162**	**129**	**32**	**334**	**268**	**67**

(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]

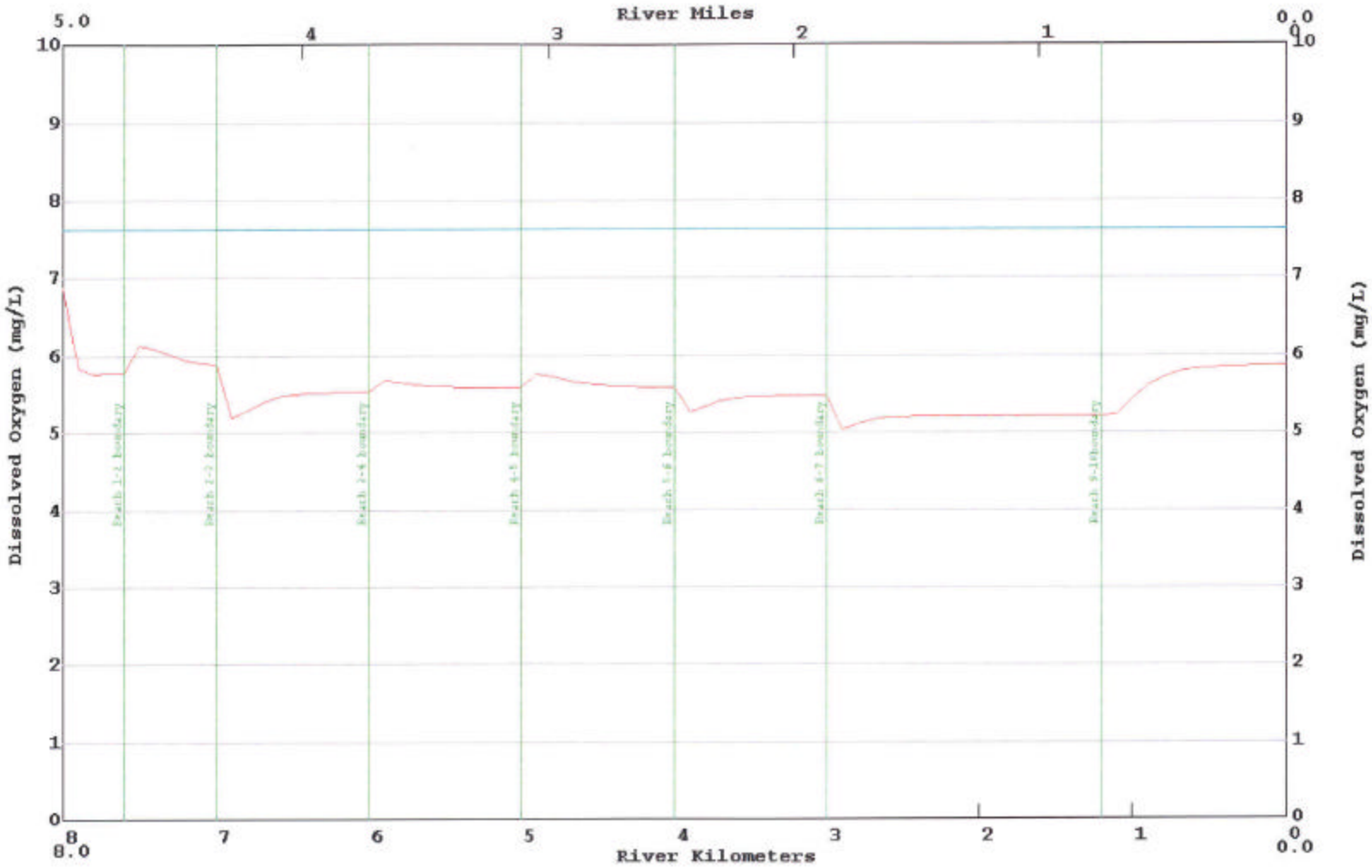
For point sources with no flow given a design discharge flow rate of 0.1 MGD (0.0044 cms) was assumed. The dischage flow rate of 0.23 MGD River Birch landfill equals a flow rate of 0.010 cms.

FILE: R:\TRANSFER\RRB\MAIN FILES\TEMP\TMDL LOAD CALC FOR MAIN CANAL.XLS

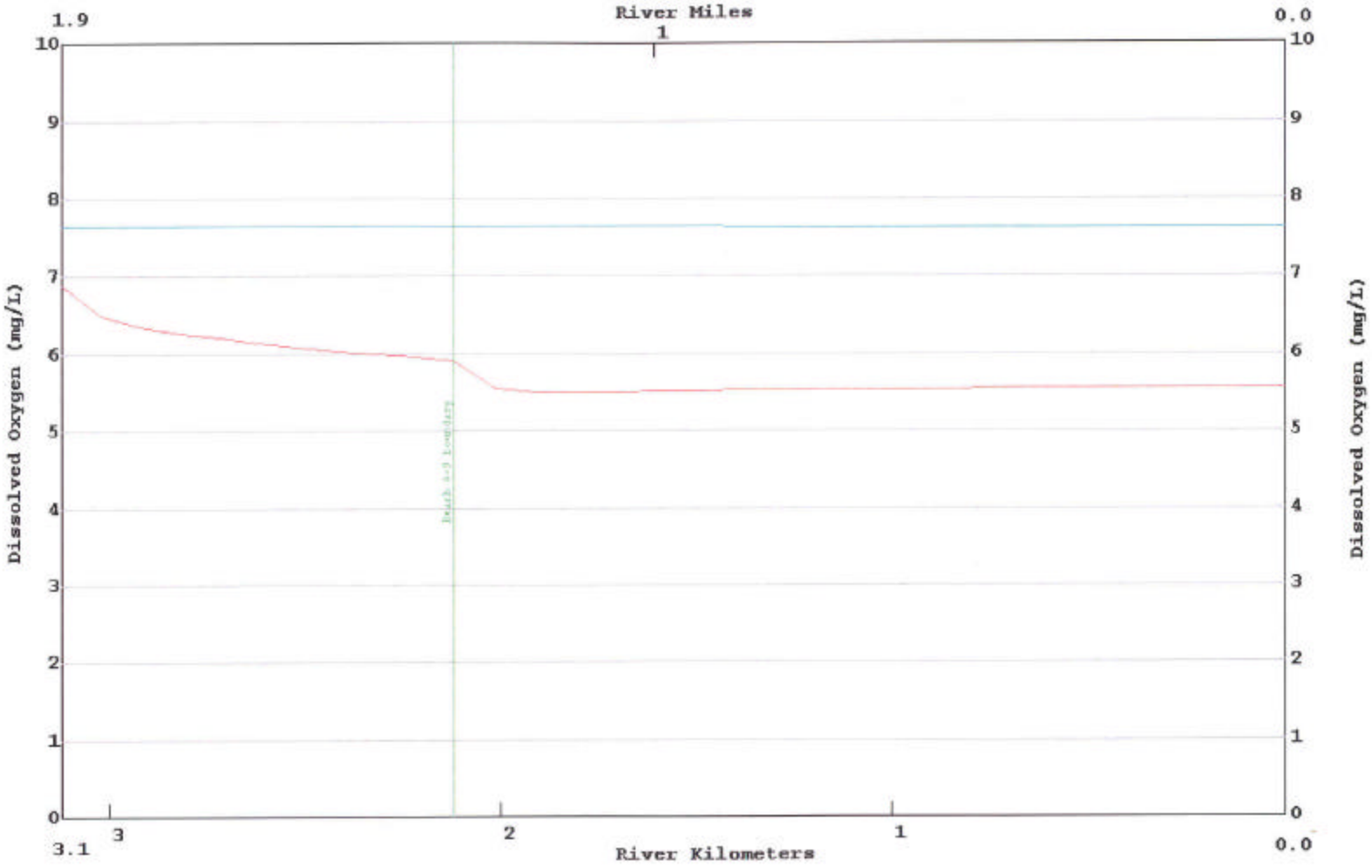
APPENDIX P

Model Output for Projections

LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\summer\mproj_sum.txt
Summer Projection Meeting DO standard min= 5.04 max= 6.89
1-8



LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\summer\mproj_sum.txt
Summer Projection Meeting DO standard min= 5.50 max= 6.89
G



```
LA-QUAL Version 6.02
Louisiana Department of Environmental Quality

Input file is R:\projects\3110-051\la-qual\main_c\new hdwtr\proj\summer\mproj_sum.txt
Output produced at 12:35 on 03/30/2004

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

CARD TYPE       CONTROL TITLES

TITLE01         LA-QUAL model for Main Canal TMDL (subsegment 020501)
TITLE02         Summer Projection Meeting DO standard
CNTROL03   NO   SEQU                        <Warning: legacy control - line ignored>
CNTROL04  YES   METR
CNTROL05  YES   OXYG                        <Warning: legacy control - line ignored>
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMP
MODOPT02   NO   SALI
MODOPT03  YES   CONSERVATIVE MATERIAL  I = Chloride                  IN mg/L      CL
MODOPT04  YES   CONSERVATIVE MATERIAL II = Conductivity              IN umhos     COND
MODOPT05  YES   DISS
MODOPT06  YES   BIOC
MODOPT07   NO   NITR
MODOPT08   NO   PHOS
MODOPT09   NO   CHLO
MODOPT10   NO   MACR
MODOPT11   NO   COLI
MODOPT12  YES   NONCONSERVATIVE MATERIAL = Nitrogenous BOD           IN mg/L      NBOD
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         MAXIMUM ITERATION LIMIT            =       500.00000
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
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

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	MC	Main Canal	8.00	TO	7.60	0.1000	0.40	4	1	4
REACH ID	2	MC	Main Canal	7.60	TO	7.00	0.1000	0.60	6	5	10
REACH ID	3	MC	Main Canal	7.00	TO	6.00	0.1000	1.00	10	11	20
REACH ID	4	MC	Main Canal	6.00	TO	5.00	0.1000	1.00	10	21	30
REACH ID	5	MC	Main Canal	5.00	TO	4.00	0.1000	1.00	10	31	40
REACH ID	6	MC	Main Canal	4.00	TO	3.00	0.1000	1.00	10	41	50
REACH ID	7	MC	Main Canal	3.00	TO	1.20	0.1000	1.80	18	51	68
REACH ID	8	AG	Avondale Gardens	3.12	TO	2.12	0.1000	1.00	10	69	78
Reach ID	9	AG	Avondale Gardens	2.12	TO	0.00	0.1060	2.12	20	79	98
REACH ID	10	MC	Main Canal	1.20	TO	0.00	0.1000	1.20	12	99	110

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	MC	0.000	0.000	22.500	0.000	0.000	1.280	0.00000	0.000
HYDR-1	2	MC	0.000	0.000	13.100	0.000	0.000	0.707	0.00000	0.000
HYDR-1	3	MC	0.000	0.000	16.600	0.000	0.000	1.080	0.00000	0.000
HYDR-1	4	MC	0.000	0.000	14.850	0.000	0.000	0.930	0.00000	0.000
HYDR-1	5	MC	0.000	0.000	13.110	0.000	0.000	0.770	0.00000	0.000
HYDR-1	6	MC	0.000	0.000	16.150	0.000	0.000	0.940	0.00000	0.000
HYDR-1	7	MC	0.000	0.000	19.200	0.000	0.000	1.120	0.00000	0.000
HYDR-1	8	AG	0.000	0.000	9.140	0.000	0.000	0.460	0.00000	0.000
HYDR-1	9	AG	0.000	0.000	15.200	0.000	0.000	0.640	0.00000	0.000
HYDR-1	10	MC	0.000	0.000	15.540	0.000	0.000	1.160	0.00000	0.000

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	2	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	3	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	4	MC	29.30	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	5	MC	29.30	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	MC	29.30	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	MC	29.30	0.49	1.12	0.00	0.00	0.00	0.00	0.00
INITIAL	8	AG	29.30	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	9	AG	29.30	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	10	MC	29.30	0.48	4.54	0.00	0.00	0.00	0.00	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 BOD DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	MC	15 LOUISIANA	0.000	0.000	0.000	0.070	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	MC	15 LOUISIANA	0.000	0.000	0.000	0.090	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	MC	15 LOUISIANA	0.000	0.000	0.000	0.390	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	MC	15 LOUISIANA	0.000	0.000	0.000	0.340	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	MC	15 LOUISIANA	0.000	0.000	0.000	0.310	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	MC	15 LOUISIANA	0.000	0.000	0.000	0.430	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	MC	15 LOUISIANA	0.000	0.000	0.000	0.710	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	AG	15 LOUISIANA	0.000	0.000	0.000	0.330	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	AG	15 LOUISIANA	0.000	0.000	0.000	0.350	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	MC	15 LOUISIANA	0.000	0.000	0.000	0.030	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	ORG-N DECA	ORG-N SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE

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
COEF-4	1	MC	0.000	0.220	0.000	0.000
COEF-4	2	MC	0.000	0.220	0.000	0.000
COEF-4	3	MC	0.000	0.200	0.000	0.000
COEF-4	4	MC	0.000	0.180	0.000	0.000
COEF-4	5	MC	0.000	0.160	0.000	0.000
COEF-4	6	MC	0.000	0.190	0.000	0.000
COEF-4	7	MC	0.000	0.220	0.000	0.000
COEF-4	8	AG	0.000	0.210	0.000	0.000
COEF-4	9	AG	0.000	0.060	0.000	0.000
COEF-4	10	MC	0.000	0.210	0.000	0.000

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

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3-N	NO3-N	BOD#2

ENDATA17

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

CARD TYPE	REACH	ID	PHOS	CHL A	COLI	NCM

ENDATA18

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

CARD TYPE	REACH	ID	BOD#1	ORG-N	COLI	NCM	DO	BOD#2
NONPOINT	1	MC	6.00	0.00	0.00	6.00	0.00	0.00
NONPOINT	2	MC	6.00	0.00	0.00	4.00	0.00	0.00
NONPOINT	3	MC	8.00	0.00	0.00	8.00	0.00	0.00
NONPOINT	4	MC	7.00	0.00	0.00	8.00	0.00	0.00
NONPOINT	5	MC	7.00	0.00	0.00	7.00	0.00	0.00
NONPOINT	6	MC	8.00	0.00	0.00	7.00	0.00	0.00
NONPOINT	7	MC	11.00	0.00	0.00	11.00	0.00	0.00
NONPOINT	8	AG	8.00	0.00	0.00	2.00	0.00	0.00
NONPOINT	9	AG	26.00	0.00	0.00	7.00	0.00	0.00
NONPOINT	10	MC	24.00	0.00	0.00	1.00	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     umhos

HDWTR-1           1     Main Canal              0   0.00300    0.106   29.30     0.51    61.200   763.400
HDWTR-1          69     Avondale Gardens        0   0.00300    0.106   29.30     0.39    88.900   760.200
ENDATA20

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

CARD TYPE     ELEMENT   NAME                        DO     BOD#1     ORG-N     NH3-N     NO3-N     BOD#2
                                                    mg/L      mg/L      mg/L      mg/L      mg/L      mg/L

HDWTR-2           1     Main Canal                 6.89      4.33      0.00      0.00      0.00      0.00
HDWTR-2          69     Avondale Gardens           6.89      3.96      0.00      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     Main Canal                 0.00      0.00      0.00      1.79
HDWTR-3          69     Avondale Gardens           0.00      0.00      0.00      1.49
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

JUNCTION          99      68       1.20    Avondale Gardens
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     umhos

ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                          %
CARD TYPE     ELEMENT   NAME                        DO       BOD      RMVL     ORG-N     NH3-N    NITRIF     NO3-N     BOD#2
                                                    mg/L      mg/L                mg/L      mg/L                mg/L      mg/L

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

ENDATA26
```

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

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 =  2
NUMBER OF REACHES IN PLOT 1 =   8
PLOT RCH  1  2  3  4  5  6  7 10
NUMBER OF REACHES IN PLOT 2 =   2
PLOT RCH  8  9
ENDATA30

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


OVERLAY 1 MAC.OVL                       :MC1-8
OVERLAY 2 AVG.OVL                       :AVG
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  73 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12


CONDENSED CAPSULE SUMMARY FOR Main Canal

                                                                  REAER BOD1 BOD1 BOD2 BOD2  NH3
    DIST     FLOW   TEMP SALN    DO  EBOD1 EBOD2 ORGN  NH3  CHLA   RATE  DECA SETT DECA SETT DECA  SOD
      km     m³/s  deg C  ppt   mg/L  mg/L  mg/L mg/L µg/L  1/da   1/da  1/da 1/da 1/da 1/da 1/da   g/m²/d

   HDWTR   0.00300 29.30 0.51   6.89  4.33  0.00 0.00 0.00  0.00
    7.90   0.00300 29.30 0.39   5.83  3.99  0.00 0.00 0.00  0.00   0.62  0.14 0.00 0.00 0.00 0.00  0.13
    7.80   0.00300 29.30 0.39   5.77  3.86  0.00 0.00 0.00  0.00   0.62  0.14 0.00 0.00 0.00 0.00  0.13
    7.70   0.00300 29.30 0.39   5.78  3.81  0.00 0.00 0.00  0.00   0.62  0.14 0.00 0.00 0.00 0.00  0.13
```

7.60	0.00300	29.30	0.39	5.78	3.79	0.00	0.00	0.00	0.00	0.62	0.14	0.00	0.00	0.00	0.00	0.13
7.50	0.00300	29.30	0.39	6.14	5.12	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.16
7.40	0.00300	29.30	0.39	6.09	6.01	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.16
7.30	0.00300	29.30	0.39	6.01	6.61	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.16
7.20	0.00300	29.30	0.39	5.95	7.01	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.16
7.10	0.00300	29.30	0.39	5.91	7.28	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.16
7.00	0.00300	29.30	0.39	5.88	7.46	0.00	0.00	0.00	0.00	1.12	0.14	0.00	0.00	0.00	0.00	0.16
6.90	0.00300	29.30	0.39	5.20	5.49	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.80	0.00300	29.30	0.39	5.29	4.46	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.70	0.00300	29.30	0.39	5.40	3.93	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.60	0.00300	29.30	0.39	5.46	3.65	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.50	0.00300	29.30	0.39	5.50	3.50	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.40	0.00300	29.30	0.39	5.51	3.43	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.30	0.00300	29.30	0.39	5.52	3.39	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.20	0.00300	29.30	0.39	5.53	3.37	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.10	0.00300	29.30	0.39	5.53	3.36	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
6.00	0.00300	29.30	0.39	5.53	3.35	0.00	0.00	0.00	0.00	0.73	0.13	0.00	0.00	0.00	0.00	0.70
5.90	0.00300	29.30	0.39	5.69	3.61	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.80	0.00300	29.30	0.40	5.66	3.76	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.70	0.00300	29.30	0.40	5.63	3.85	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.60	0.00300	29.30	0.41	5.61	3.90	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.50	0.00300	29.30	0.41	5.60	3.94	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.40	0.00300	29.30	0.41	5.59	3.96	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.30	0.00300	29.30	0.42	5.59	3.97	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.20	0.00300	29.30	0.42	5.59	3.97	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.10	0.00300	29.30	0.43	5.59	3.98	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
5.00	0.00300	29.30	0.43	5.59	3.98	0.00	0.00	0.00	0.00	0.85	0.13	0.00	0.00	0.00	0.00	0.61
4.90	0.00300	29.30	0.43	5.76	4.52	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.80	0.00300	29.30	0.43	5.72	4.89	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.70	0.00300	29.30	0.43	5.68	5.14	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.60	0.00300	29.30	0.43	5.64	5.30	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.50	0.00300	29.30	0.43	5.62	5.42	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.40	0.00300	29.30	0.43	5.61	5.49	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.30	0.00300	29.30	0.43	5.60	5.55	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.20	0.00300	29.30	0.43	5.60	5.58	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.10	0.00300	29.30	0.43	5.59	5.60	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
4.00	0.00300	29.30	0.43	5.59	5.62	0.00	0.00	0.00	0.00	1.03	0.12	0.00	0.00	0.00	0.00	0.56
3.90	0.00300	29.30	0.44	5.26	4.89	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.80	0.00300	29.30	0.44	5.34	4.48	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.70	0.00300	29.30	0.45	5.41	4.25	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.60	0.00300	29.30	0.45	5.45	4.12	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.50	0.00300	29.30	0.46	5.46	4.04	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.40	0.00300	29.30	0.47	5.47	4.00	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.30	0.00300	29.30	0.47	5.48	3.98	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.20	0.00300	29.30	0.48	5.48	3.97	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.10	0.00300	29.30	0.48	5.49	3.97	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
3.00	0.00300	29.30	0.49	5.49	3.97	0.00	0.00	0.00	0.00	0.84	0.13	0.00	0.00	0.00	0.00	0.77
2.90	0.00300	29.30	0.49	5.04	2.90	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.27
2.80	0.00300	29.30	0.49	5.10	2.41	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.27
2.70	0.00300	29.30	0.49	5.16	2.19	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.27
2.60	0.00300	29.30	0.49	5.19	2.08	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.27
2.50	0.00300	29.30	0.49	5.20	2.03	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
2.40	0.00300	29.30	0.49	5.21	2.01	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
2.30	0.00300	29.30	0.49	5.21	2.00	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
2.20	0.00300	29.30	0.49	5.21	2.00	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
2.10	0.00300	29.30	0.49	5.21	2.00	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28

2.00	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.90	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.80	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.70	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.60	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.50	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.40	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.30	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.20	0.00300	29.30	0.48	5.21	1.99	0.00	0.00	0.00	0.00	0.71	0.14	0.00	0.00	0.00	0.00	1.28
1.10	0.00600	29.30	0.48	5.23	8.54	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
1.00	0.00600	29.30	0.48	5.43	8.09	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.90	0.00600	29.30	0.48	5.60	7.79	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.80	0.00600	29.30	0.48	5.72	7.60	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.70	0.00600	29.30	0.48	5.78	7.47	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.60	0.00600	29.30	0.48	5.82	7.39	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.50	0.00600	29.30	0.48	5.84	7.34	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.40	0.00600	29.30	0.48	5.85	7.30	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.30	0.00600	29.30	0.48	5.86	7.28	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.20	0.00600	29.30	0.48	5.87	7.27	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.10	0.00600	29.30	0.48	5.87	7.26	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05
0.00	0.00600	29.30	0.48	5.87	7.25	0.00	0.00	0.00	0.00	0.68	0.15	0.00	0.00	0.00	0.00	0.05

CONDENSED CAPSULE SUMMARY FOR Avondale Gardens

DIST km	FLOW m^3/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORGN mg/L	NH3 µg/L	CHLA 1/da	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	NH3 DECA 1/da	SOD $g/m^2/d$
HDWTR	0.00300	29.30	0.39	6.89	3.96	0.00	0.00	0.00	0.00							
3.02	0.00300	29.30	0.26	6.50	6.41	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.92	0.00300	29.30	0.26	6.35	8.64	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.82	0.00300	29.30	0.26	6.27	10.66	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.72	0.00300	29.30	0.26	6.20	12.51	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.62	0.00300	29.30	0.26	6.14	14.18	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.52	0.00300	29.30	0.26	6.09	15.71	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.42	0.00300	29.30	0.26	6.04	17.09	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.32	0.00300	29.30	0.26	6.00	18.35	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.22	0.00300	29.30	0.26	5.95	19.50	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.12	0.00300	29.30	0.26	5.92	20.54	0.00	0.00	0.00	0.00	1.74	0.06	0.00	0.00	0.00	0.00	0.59
2.01	0.00300	29.30	0.27	5.55	19.59	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.91	0.00300	29.30	0.28	5.50	18.85	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.80	0.00300	29.30	0.29	5.50	18.29	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.70	0.00300	29.30	0.30	5.51	17.86	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.59	0.00300	29.30	0.31	5.51	17.53	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.48	0.00300	29.30	0.33	5.52	17.28	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.38	0.00300	29.30	0.34	5.53	17.08	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.27	0.00300	29.30	0.35	5.53	16.94	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.17	0.00300	29.30	0.36	5.54	16.82	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
1.06	0.00300	29.30	0.37	5.54	16.74	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.95	0.00300	29.30	0.38	5.54	16.67	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.85	0.00300	29.30	0.39	5.54	16.62	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.74	0.00300	29.30	0.40	5.55	16.58	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.64	0.00300	29.30	0.41	5.55	16.55	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.53	0.00300	29.30	0.42	5.55	16.52	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.42	0.00300	29.30	0.44	5.55	16.51	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63

0.32	0.00300	29.30	0.45	5.55	16.49	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.21	0.00300	29.30	0.46	5.55	16.48	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.11	0.00300	29.30	0.47	5.55	16.48	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63
0.00	0.00300	29.30	0.48	5.55	16.47	0.00	0.00	0.00	0.00	1.24	0.08	0.00	0.00	0.00	0.00	0.63

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 1 Main Canal Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
1	HDWTR	0.00300	29.30	0.51	61.20	763.40	6.89	4.33	0.00	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79

********** 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	8.00	7.90	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
2	7.90	7.80	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
3	7.80	7.70	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
4	7.70	7.60	0.00300	0.0	0.00010	11.11	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.000
TOT						44.44			11520.00	9000.00					
AVG					0.00010		1.28	22.50			28.80				
CUM						44.44									

********** 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
1	7.900	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
2	7.800	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
3	7.700	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
4	7.600	7.63	0.62	0.14	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
AVG 20 DEG C RATE			0.52	0.09	0.00	0.00	0.00	0.00	0.00	0.07			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
1	7.900	29.30	0.39	61.20	763.40	5.83	3.99	0.00	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.36
2	7.800	29.30	0.39	61.20	763.40	5.77	3.86	0.00	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.28
3	7.700	29.30	0.39	61.20	763.40	5.78	3.81	0.00	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.26
4	7.600	29.30	0.39	61.20	763.40	5.78	3.79	0.00	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.26

FINAL REPORT Main Canal — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 2 Main Canal — Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
5	UPR RCH	0.00300	29.30	0.39	61.20	763.40	5.78	3.79	0.00	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.26

********** 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
5	7.60	7.50	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
6	7.50	7.40	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
7	7.40	7.30	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
8	7.30	7.20	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
9	7.20	7.10	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
10	7.10	7.00	0.00300	0.0	0.00032	3.57	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.000
TOT						21.44			5557.02	7860.00					
AVG					0.00032		0.71	13.10			9.26				
CUM						65.88									

********** 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
5	7.500	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
6	7.400	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
7	7.300	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
8	7.200	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
9	7.100	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
10	7.000	7.63	1.12	0.14	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
AVG 20 DEG C RATE			0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.09			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
5	7.500	29.30	0.39	61.20	763.40	6.14	5.12	0.00	5.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.55
6	7.400	29.30	0.39	61.20	763.40	6.09	6.01	0.00	6.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.67
7	7.300	29.30	0.39	61.20	763.40	6.01	6.61	0.00	6.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
8	7.200	29.30	0.39	61.20	763.40	5.95	7.01	0.00	7.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.73
9	7.100	29.30	0.39	61.20	763.40	5.91	7.28	0.00	7.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.74
10	7.000	29.30	0.39	61.20	763.40	5.88	7.46	0.00	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.74

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 3 Main Canal Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
11	UPR RCH	0.00300	29.30	0.39	61.20	763.40	5.88	7.46	0.00	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74

********** 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
11	7.00	6.90	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
12	6.90	6.80	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
13	6.80	6.70	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
14	6.70	6.60	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
15	6.60	6.50	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
16	6.50	6.40	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
17	6.40	6.30	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
18	6.30	6.20	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
19	6.20	6.10	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
20	6.10	6.00	0.00300	0.0	0.00017	6.92	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.000
TOT						69.17			17928.00	16600.00					
AVG					0.00017		1.08	16.60			17.93				
CUM						135.05									

********** 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
11	6.900	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
12	6.800	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
13	6.700	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
14	6.600	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
15	6.500	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
16	6.400	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
17	6.300	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
18	6.200	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
19	6.100	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
20	6.000	7.63	0.73	0.13	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00
AVG 20 DEG C RATE			0.62	0.09	0.00	0.00	0.00	0.00	0.00	0.39			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.20	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
11	6.900	29.30	0.39	61.20	763.40	5.20	5.49	0.00	5.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.34
12	6.800	29.30	0.39	61.20	763.40	5.29	4.46	0.00	4.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.23
13	6.700	29.30	0.39	61.20	763.40	5.40	3.93	0.00	3.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.20
14	6.600	29.30	0.39	61.20	763.40	5.46	3.65	0.00	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19
15	6.500	29.30	0.39	61.20	763.40	5.50	3.50	0.00	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19
16	6.400	29.30	0.39	61.20	763.40	5.51	3.43	0.00	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19
17	6.300	29.30	0.39	61.20	763.40	5.52	3.39	0.00	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19
18	6.200	29.30	0.39	61.20	763.40	5.53	3.37	0.00	3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19
19	6.100	29.30	0.39	61.20	763.40	5.53	3.36	0.00	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19
20	6.000	29.30	0.39	61.20	763.40	5.53	3.35	0.00	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 4 Main Canal Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
21	UPR RCH	0.00300	29.30	0.39	61.20	763.40	5.53	3.35	0.00	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19

********** 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
21	6.00	5.90	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
22	5.90	5.80	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
23	5.80	5.70	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
24	5.70	5.60	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
25	5.60	5.50	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
26	5.50	5.40	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
27	5.40	5.30	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
28	5.30	5.20	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
29	5.20	5.10	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
30	5.10	5.00	0.00300	0.0	0.00022	5.33	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.000
TOT						53.28			13810.50	14850.00					
AVG					0.00022		0.93	14.85			13.81				
CUM						188.33									

********** 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
21	5.900	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
22	5.800	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
23	5.700	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
24	5.600	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
25	5.500	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
26	5.400	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
27	5.300	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
28	5.200	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
29	5.100	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
30	5.000	7.63	0.85	0.13	0.00	0.00	0.00	0.00	0.00	0.61	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00
AVG 20 DEG C RATE			0.72	0.08	0.00	0.00	0.00	0.00	0.00	0.34			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.18	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
21	5.900	29.30	0.39	61.20	763.40	5.69	3.61	0.00	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.53
22	5.800	29.30	0.40	61.20	763.40	5.66	3.76	0.00	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.65
23	5.700	29.30	0.40	61.20	763.40	5.63	3.85	0.00	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.69
24	5.600	29.30	0.41	61.20	763.40	5.61	3.90	0.00	3.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
25	5.500	29.30	0.41	61.20	763.40	5.60	3.94	0.00	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
26	5.400	29.30	0.41	61.20	763.40	5.59	3.96	0.00	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
27	5.300	29.30	0.42	61.20	763.40	5.59	3.97	0.00	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71

28	5.200	29.30	0.42	61.20	763.40	5.59	3.97	0.00	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.72
29	5.100	29.30	0.43	61.20	763.40	5.59	3.98	0.00	3.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.72
30	5.000	29.30	0.43	61.20	763.40	5.59	3.98	0.00	3.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.72

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 5 Main Canal Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
31	UPR RCH	0.00300	29.30	0.43	61.20	763.40	5.59	3.98	0.00	3.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72

********** 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
31	5.00	4.90	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
32	4.90	4.80	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
33	4.80	4.70	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
34	4.70	4.60	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
35	4.60	4.50	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
36	4.50	4.40	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
37	4.40	4.30	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
38	4.30	4.20	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
39	4.20	4.10	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
40	4.10	4.00	0.00300	0.0	0.00030	3.89	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.000
TOT						38.95			10094.70	13110.00					
AVG					0.00030		0.77	13.11			10.09				
CUM						227.28									

********** 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
31	4.900	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
32	4.800	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
33	4.700	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
34	4.600	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
35	4.500	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
36	4.400	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
37	4.300	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
38	4.200	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
39	4.100	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
40	4.000	7.63	1.03	0.12	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00

AVG 20 DEG C RATE	0.87	0.08	0.00	0.00	0.00	0.00	0.00	0.31			0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.16	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
31	4.900	29.30	0.43	61.20	763.40	5.76	4.52	0.00	4.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04
32	4.800	29.30	0.43	61.20	763.40	5.72	4.89	0.00	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.18
33	4.700	29.30	0.43	61.20	763.40	5.68	5.14	0.00	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.25
34	4.600	29.30	0.43	61.20	763.40	5.64	5.30	0.00	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.28
35	4.500	29.30	0.43	61.20	763.40	5.62	5.42	0.00	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.30
36	4.400	29.30	0.43	61.20	763.40	5.61	5.49	0.00	5.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.30
37	4.300	29.30	0.43	61.20	763.40	5.60	5.55	0.00	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.31
38	4.200	29.30	0.43	61.20	763.40	5.60	5.58	0.00	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.31
39	4.100	29.30	0.43	61.20	763.40	5.59	5.60	0.00	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.31
40	4.000	29.30	0.43	61.20	763.40	5.59	5.62	0.00	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.31

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 6 Main Canal Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
41	UPR RCH	0.00300	29.30	0.43	61.20	763.40	5.59	5.62	0.00	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.31

********** 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
41	4.00	3.90	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
42	3.90	3.80	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
43	3.80	3.70	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
44	3.70	3.60	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
45	3.60	3.50	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
46	3.50	3.40	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
47	3.40	3.30	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
48	3.30	3.20	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
49	3.20	3.10	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
50	3.10	3.00	0.00300	0.0	0.00020	5.86	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.000
TOT						58.57			15181.00	16150.00					
AVG					0.00020		0.94	16.15			15.18				
CUM						285.85									

********** 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
41	3.900	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
42	3.800	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
43	3.700	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
44	3.600	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
45	3.500	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
46	3.400	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
47	3.300	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
48	3.200	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
49	3.100	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00
50	3.000	7.63	0.84	0.13	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00
AVG 20 DEG C RATE			0.71	0.09	0.00	0.00	0.00	0.00	0.00	0.43			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.19	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
41	3.900	29.30	0.44	61.20	763.40	5.26	4.89	0.00	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.62
42	3.800	29.30	0.44	61.20	763.40	5.34	4.48	0.00	4.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.40
43	3.700	29.30	0.45	61.20	763.40	5.41	4.25	0.00	4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.33
44	3.600	29.30	0.45	61.20	763.40	5.45	4.12	0.00	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.30
45	3.500	29.30	0.46	61.20	763.40	5.46	4.04	0.00	4.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.30
46	3.400	29.30	0.47	61.20	763.40	5.47	4.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.29
47	3.300	29.30	0.47	61.20	763.40	5.48	3.98	0.00	3.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.29
48	3.200	29.30	0.48	61.20	763.40	5.48	3.97	0.00	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.30
49	3.100	29.30	0.48	61.20	763.40	5.49	3.97	0.00	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.30
50	3.000	29.30	0.49	61.20	763.40	5.49	3.97	0.00	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.30

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 7 Main Canal Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
51	UPR RCH	0.00300	29.30	0.49	61.20	763.40	5.49	3.97	0.00	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30

********** 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
51	3.00	2.90	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
52	2.90	2.80	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
53	2.80	2.70	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
54	2.70	2.60	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
55	2.60	2.50	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
56	2.50	2.40	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
57	2.40	2.30	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
58	2.30	2.20	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
59	2.20	2.10	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
60	2.10	2.00	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
61	2.00	1.90	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
62	1.90	1.80	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
63	1.80	1.70	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
64	1.70	1.60	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
65	1.60	1.50	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
66	1.50	1.40	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
67	1.40	1.30	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
68	1.30	1.20	0.00300	0.0	0.00014	8.30	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.000
TOT						149.33			38707.20	34560.00					
AVG					0.00014		1.12	19.20			21.50				
CUM						435.18									

********** 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
51	2.900	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
52	2.800	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
53	2.700	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
54	2.600	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
55	2.500	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
56	2.400	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
57	2.300	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
58	2.200	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
59	2.100	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
60	2.000	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
61	1.900	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
62	1.800	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
63	1.700	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
64	1.600	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
65	1.500	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
66	1.400	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
67	1.300	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
68	1.200	7.63	0.71	0.14	0.00	0.00	0.00	0.00	0.00	1.28	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00
AVG 20 DEG C RATE			0.59	0.09	0.00	0.00	0.00	0.00	0.00	0.71			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
51	2.900	29.30	0.49	61.20	763.40	5.04	2.90	0.00	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.83
52	2.800	29.30	0.49	61.20	763.40	5.10	2.41	0.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.72
53	2.700	29.30	0.49	61.20	763.40	5.16	2.19	0.00	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.70
54	2.600	29.30	0.49	61.20	763.40	5.19	2.08	0.00	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
55	2.500	29.30	0.49	61.20	763.40	5.20	2.03	0.00	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
56	2.400	29.30	0.49	61.20	763.40	5.21	2.01	0.00	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
57	2.300	29.30	0.49	61.20	763.40	5.21	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
58	2.200	29.30	0.49	61.20	763.40	5.21	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
59	2.100	29.30	0.49	61.20	763.40	5.21	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
60	2.000	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
61	1.900	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
62	1.800	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
63	1.700	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
64	1.600	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
65	1.500	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
66	1.400	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
67	1.300	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69
68	1.200	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.69

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 10 Main Canal Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
99	UPR RCH	0.00300	29.30	0.48	61.20	763.40	5.21	1.99	0.00	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
99	TRIB	0.00300	29.30	0.48	88.90	760.20	5.55	16.47	0.00	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.01

********** 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
99	1.20	1.10	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
100	1.10	1.00	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
101	1.00	0.90	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
102	0.90	0.80	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
103	0.80	0.70	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
104	0.70	0.60	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
105	0.60	0.50	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
106	0.50	0.40	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000

107	0.40	0.30	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
108	0.30	0.20	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
109	0.20	0.10	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
110	0.10	0.00	0.00600	0.0	0.00033	3.48	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.000
TOT						41.73			21631.68	18648.00					
AVG					0.00033		1.16	15.54			18.03				
CUM						476.91									

********** 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
99	1.100	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
100	1.000	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
101	0.900	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
102	0.800	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
103	0.700	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
104	0.600	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
105	0.500	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
106	0.400	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
107	0.300	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
108	0.200	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
109	0.100	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
110	0.000	7.63	0.68	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
AVG 20 DEG C RATE			0.58	0.10	0.00	0.00	0.00	0.00	0.00	0.03			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
99	1.100	29.30	0.48	75.05	761.80	5.23	8.54	0.00	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.85
100	1.000	29.30	0.48	75.05	761.80	5.43	8.09	0.00	8.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.43
101	0.900	29.30	0.48	75.05	761.80	5.60	7.79	0.00	7.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.25
102	0.800	29.30	0.48	75.05	761.80	5.72	7.60	0.00	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.17
103	0.700	29.30	0.48	75.05	761.80	5.78	7.47	0.00	7.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.14
104	0.600	29.30	0.48	75.05	761.80	5.82	7.39	0.00	7.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.13
105	0.500	29.30	0.48	75.05	761.80	5.84	7.34	0.00	7.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
106	0.400	29.30	0.48	75.05	761.80	5.85	7.30	0.00	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
107	0.300	29.30	0.48	75.05	761.80	5.86	7.28	0.00	7.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
108	0.200	29.30	0.48	75.05	761.80	5.87	7.27	0.00	7.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
109	0.100	29.30	0.48	75.05	761.80	5.87	7.26	0.00	7.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12
110	0.000	29.30	0.48	75.05	761.80	5.87	7.25	0.00	7.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	0.12

```
TRAVEL TIME       =         476.91 DAYS

MAXIMUM EFFLUENT  =           0.00 PERCENT

FLOW              =   0.00300 TO    0.00600   m³/s
DISPERSION        =   0.0000  TO    0.0000    m²/s
VELOCITY          =   0.00010 TO    0.00033   m/s
DEPTH             =   0.71    TO    1.28      m
WIDTH             =  13.10    TO   22.50      m

BOD DECAY         =    0.12   TO    0.15      per day
NH3 DECAY         =    0.00   TO    0.00      per day
SOD               =    0.05   TO    1.28      g/m²/d
NH3 SOURCE        =    0.00   TO    0.00      g/m²/d
REAERATION        =    0.62   TO    1.12      per day
BOD SETTLING      =    0.00   TO    0.00      per day
ORG-N DECAY       =    0.00   TO    0.00      per day
ORG-N SETTLING    =    0.00   TO    0.00      per day

TEMPERATURE       =   29.30   TO   29.30      deg C
DISSOLVED OXYGEN  =    5.04   TO    6.14      mg/L
```

FINAL REPORT Avondale Gardens — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 8 Avondale Gardens — Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
69	HDWTR	0.00300	29.30	0.39	88.90	760.20	6.89	3.96	0.00	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49

********** 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
69	3.12	3.02	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
70	3.02	2.92	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
71	2.92	2.82	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
72	2.82	2.72	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
73	2.72	2.62	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
74	2.62	2.52	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
75	2.52	2.42	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
76	2.42	2.32	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
77	2.32	2.22	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
78	2.22	2.12	0.00300	0.0	0.00071	1.62	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.001
TOT						16.22			4204.40	9140.00					
AVG					0.00071		0.46	9.14			4.20				
CUM						16.22									

********** 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
69	3.020	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
70	2.920	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
71	2.820	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
72	2.720	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
73	2.620	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
74	2.520	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
75	2.420	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
76	2.320	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
77	2.220	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
78	2.120	7.64	1.74	0.06	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00
AVG 20 DEG C RATE			1.47	0.04	0.00	0.00	0.00	0.00	0.00	0.33			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
69	3.020	29.30	0.26	88.90	760.20	6.50	6.41	0.00	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.38
70	2.920	29.30	0.26	88.90	760.20	6.35	8.64	0.00	8.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.31
71	2.820	29.30	0.26	88.90	760.20	6.27	10.66	0.00	10.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.27
72	2.720	29.30	0.26	88.90	760.20	6.20	12.51	0.00	12.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.25
73	2.620	29.30	0.26	88.90	760.20	6.14	14.18	0.00	14.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.23
74	2.520	29.30	0.26	88.90	760.20	6.09	15.71	0.00	15.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.22
75	2.420	29.30	0.26	88.90	760.20	6.04	17.09	0.00	17.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.22
76	2.320	29.30	0.26	88.90	760.20	6.00	18.35	0.00	18.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.21
77	2.220	29.30	0.26	88.90	760.20	5.95	19.50	0.00	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.21
78	2.120	29.30	0.26	88.90	760.20	5.92	20.54	0.00	20.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.21

FINAL REPORT Avondale Gardens LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 9 Avondale Gardens Summer Projection Meeting DO standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
79	UPR RCH	0.00300	29.30	0.26	88.90	760.20	5.92	20.54	0.00	20.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21

********** 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
79	2.12	2.01	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
80	2.01	1.91	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
81	1.91	1.80	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
82	1.80	1.70	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
83	1.70	1.59	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
84	1.59	1.48	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
85	1.48	1.38	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
86	1.38	1.27	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
87	1.27	1.17	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
88	1.17	1.06	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
89	1.06	0.95	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
90	0.95	0.85	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
91	0.85	0.74	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
92	0.74	0.64	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
93	0.64	0.53	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
94	0.53	0.42	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
95	0.42	0.32	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
96	0.32	0.21	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
97	0.21	0.11	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
98	0.11	0.00	0.00300	0.0	0.00031	3.98	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.000
TOT						79.57			20623.36	32223.99					
AVG					0.00031		0.64	15.20			9.73				
CUM						95.79									

********** 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
79	2.014	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
80	1.908	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
81	1.802	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
82	1.696	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
83	1.590	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
84	1.484	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
85	1.378	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
86	1.272	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
87	1.166	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
88	1.060	7.64	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
89	0.954	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
90	0.848	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
91	0.742	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
92	0.636	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
93	0.530	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
94	0.424	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
95	0.318	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
96	0.212	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00

97	0.106	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
98	0.000	7.63	1.24	0.08	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
AVG 20 DEG C RATE			1.04	0.05	0.00	0.00	0.00	0.00	0.00	0.35			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.06	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
79	2.014	29.30	0.27	88.90	760.20	5.55	19.59	0.00	19.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.77
80	1.908	29.30	0.28	88.90	760.20	5.50	18.85	0.00	18.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.15
81	1.802	29.30	0.29	88.90	760.20	5.50	18.29	0.00	18.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.42
82	1.696	29.30	0.30	88.90	760.20	5.51	17.86	0.00	17.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.60
83	1.590	29.30	0.31	88.90	760.20	5.51	17.53	0.00	17.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.73
84	1.484	29.30	0.33	88.90	760.20	5.52	17.28	0.00	17.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.82
85	1.378	29.30	0.34	88.90	760.20	5.53	17.08	0.00	17.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.88
86	1.272	29.30	0.35	88.90	760.20	5.53	16.94	0.00	16.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.92
87	1.166	29.30	0.36	88.90	760.20	5.54	16.82	0.00	16.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.95
88	1.060	29.30	0.37	88.90	760.20	5.54	16.74	0.00	16.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.97
89	0.954	29.30	0.38	88.90	760.20	5.54	16.67	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.98
90	0.848	29.30	0.39	88.90	760.20	5.54	16.62	0.00	16.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.99
91	0.742	29.30	0.40	88.90	760.20	5.55	16.58	0.00	16.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.00
92	0.636	29.30	0.41	88.90	760.20	5.55	16.55	0.00	16.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
93	0.530	29.30	0.42	88.90	760.20	5.55	16.52	0.00	16.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
94	0.424	29.30	0.44	88.90	760.20	5.55	16.51	0.00	16.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
95	0.318	29.30	0.45	88.90	760.20	5.55	16.49	0.00	16.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
96	0.212	29.30	0.46	88.90	760.20	5.55	16.48	0.00	16.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
97	0.106	29.30	0.47	88.90	760.20	5.55	16.48	0.00	16.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
98	0.000	29.30	0.48	88.90	760.20	5.55	16.47	0.00	16.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01

STREAM SUMMARY
Avondale Gardens

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Summer Projection Meeting DO standard

TRAVEL TIME	=	95.79	DAYS		
MAXIMUM EFFLUENT	=	0.00	PERCENT		
FLOW	=	0.00300	TO	0.00300	m³/s
DISPERSION	=	0.0000	TO	0.0000	m²/s
VELOCITY	=	0.00031	TO	0.00071	m/s
DEPTH	=	0.46	TO	0.64	m
WIDTH	=	9.14	TO	15.20	m
BOD DECAY	=	0.06	TO	0.08	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.59	TO	0.63	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	1.24	TO	1.74	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day

TEMPERATURE	=	29.30	TO	29.30	deg C
DISSOLVED OXYGEN	=	5.50	TO	6.50	mg/L

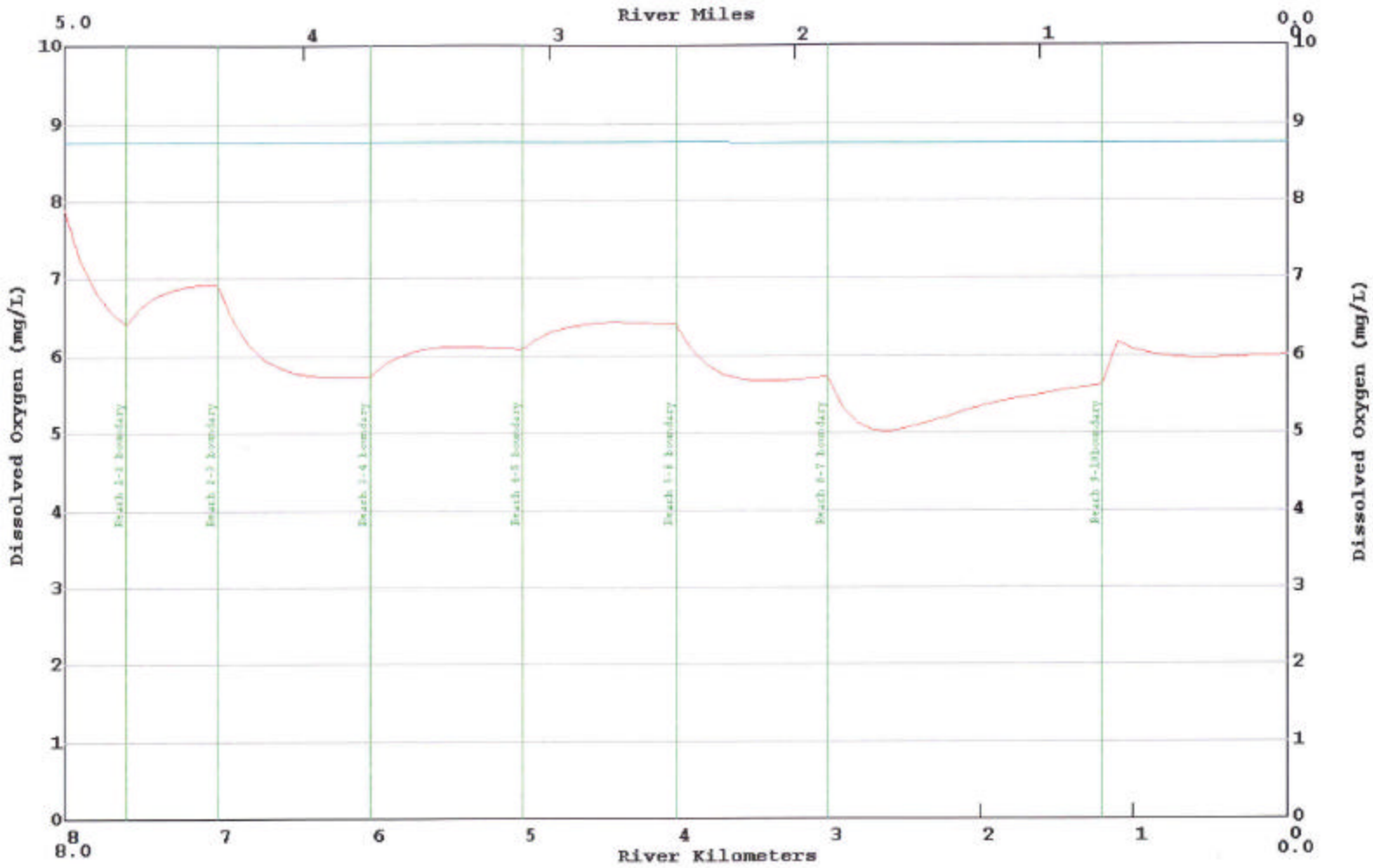
LA-QUAL model for Main Canal TMDL (subsegment 020501)
Summer Projection Meeting DO standard

INPUT/OUTPUT LOADING SUMMARY

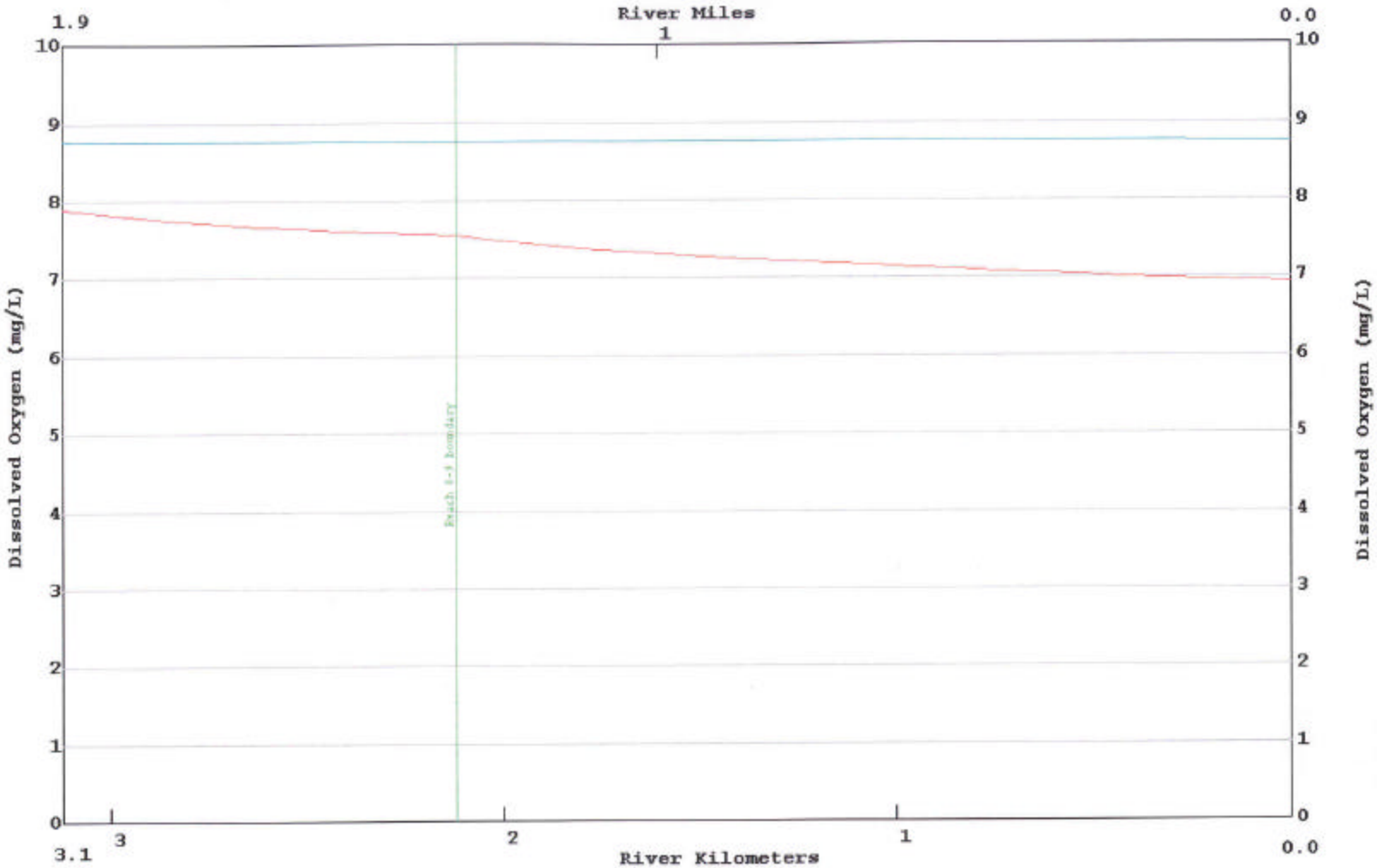
	FLOW m^3/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER INFLOW	0.006	3.6	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9
INCREMENTAL INFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTFLOW THRU LOWER BNDRY	-0.006	-3.0	-3.8	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
DISPERSION THRU LOWER BNDRY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NON-POINT INPUT		0.0	111.0	0.0	0.0					61.0
NATURAL REAERATION		284.2								
DAM REAERATION		0.0								
BACKGROUND SOD		-113.6								
BOD#1 DECAY		-109.4	-109.4							
BOD#1 SETTLING		0.0	0.0							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0		0.0						
BOD#2 SETTLING		0.0		0.0						
ANAEROBIC BOD#2 DECAY				0.0						
ORG-N DECAY		0.0			0.0	0.0				
ORG-N SETTLING					0.0	0.0				
NH3 DECAY		0.0				0.0	0.0			
BACKGROUND NH3 SOURCE						0.0				
OTHER DENITRIFICATION							0.0			
PHOSPHORUS SOURCE								0.0		
ALGAE PHOTOSYNTHESIS		0.0				0.0	0.0	0.0	0.0	
ALGAE RESPIRATION		0.0				0.0		0.0	0.0	
ALGAE SETTLING		0.0							0.0	
MACRO PHOTOSYNTHESIS		0.0				0.0	0.0	0.0		
NCM DECAY		-61.8								-61.8
NCM SETTLING		0.0								0.0
TOTAL INPUTS	0.006	287.8	113.1	0.0	0.0	0.0	0.0	0.0	0.0	61.9
TOTAL OUTPUTS	-0.006	-287.9	-113.1	0.0	0.0	0.0	0.0	0.0	0.0	-61.9
NET CONVERGENCE ERROR	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

.....EXECUTION COMPLETED

LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\winter\mproj_wint.txt
Winter Projection Meeting DO Standard min= 5.03 max= 7.90
1-8



LA-QUAL Version 6.02 File R:\projects\3110-051\la-qual\main_c\revised\proj\winter\mproj_wint.txt
Winter Projection Meeting DO Standard min= 6.93 max= 7.90
G



```
LA-QUAL Version 6.02
Louisiana Department of Environmental Quality

Input file is R:\projects\3110-051\la-qual\main_c\new hdwtr\proj\winter\mproj_wint.txt
Output produced at 12:34 on 03/30/2004

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

CARD TYPE       CONTROL TITLES

TITLE01         LA-QUAL model for Main Canal TMDL (subsegment 020501)
TITLE02         Winter Projection Meeting DO Standard
CNTROL03   NO   SEQU                        <Warning: legacy control - line ignored>
CNTROL04  YES   METR
CNTROL05  YES   OXYG                        <Warning: legacy control - line ignored>
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMP
MODOPT02   NO   SALI
MODOPT03  YES   CONSERVATIVE MATERIAL  I = Chloride                  IN mg/L      CL
MODOPT04  YES   CONSERVATIVE MATERIAL II = Conductivity              IN umhos     COND
MODOPT05  YES   DISS
MODOPT06  YES   BIOC
MODOPT07   NO   NITR
MODOPT08   NO   PHOS
MODOPT09   NO   CHLO
MODOPT10   NO   MACR
MODOPT11   NO   COLI
MODOPT12  YES   NONCONSERVATIVE MATERIAL = Nitrogenous BOD           IN mg/L      NBOD
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         MAXIMUM ITERATION LIMIT            =       500.00000
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
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

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	MC	Main Canal	8.00	TO	7.60	0.1000	0.40	4	1	4
REACH ID	2	MC	Main Canal	7.60	TO	7.00	0.1000	0.60	6	5	10
REACH ID	3	MC	Main Canal	7.00	TO	6.00	0.1000	1.00	10	11	20
REACH ID	4	MC	Main Canal	6.00	TO	5.00	0.1000	1.00	10	21	30
REACH ID	5	MC	Main Canal	5.00	TO	4.00	0.1000	1.00	10	31	40
REACH ID	6	MC	Main Canal	4.00	TO	3.00	0.1000	1.00	10	41	50
REACH ID	7	MC	Main Canal	3.00	TO	1.20	0.1000	1.80	18	51	68
REACH ID	8	AG	Avondale Gardens	3.12	TO	2.12	0.1000	1.00	10	69	78
Reach ID	9	AG	Avondale Gardens	2.12	TO	0.00	0.1060	2.12	20	79	98
REACH ID	10	MC	Main Canal	1.20	TO	0.00	0.1000	1.20	12	99	110

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	MC	0.000	0.000	22.500	0.000	0.000	1.280	0.00000	0.000
HYDR-1	2	MC	0.000	0.000	13.100	0.000	0.000	0.707	0.00000	0.000
HYDR-1	3	MC	0.000	0.000	16.600	0.000	0.000	1.080	0.00000	0.000
HYDR-1	4	MC	0.000	0.000	14.850	0.000	0.000	0.930	0.00000	0.000
HYDR-1	5	MC	0.000	0.000	13.110	0.000	0.000	0.770	0.00000	0.000
HYDR-1	6	MC	0.000	0.000	16.150	0.000	0.000	0.940	0.00000	0.000
HYDR-1	7	MC	0.000	0.000	19.200	0.000	0.000	1.120	0.00000	0.000
HYDR-1	8	AG	0.000	0.000	9.140	0.000	0.000	0.460	0.00000	0.000
HYDR-1	9	AG	0.000	0.000	15.200	0.000	0.000	0.640	0.00000	0.000
HYDR-1	10	MC	0.000	0.000	15.540	0.000	0.000	1.160	0.00000	0.000

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	2	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	3	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	4	MC	21.80	0.39	2.53	0.00	0.00	0.00	0.00	0.00
INITIAL	5	MC	21.80	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	MC	21.80	0.43	4.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	MC	21.80	0.49	1.12	0.00	0.00	0.00	0.00	0.00
INITIAL	8	AG	21.80	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	9	AG	21.80	0.26	5.19	0.00	0.00	0.00	0.00	0.00
INITIAL	10	MC	21.80	0.48	4.54	0.00	0.00	0.00	0.00	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 BOD DECAY per day	BOD2 DECAY per day	BOD2 SETT m/d	BOD2 CONV TO SOD	ANAER BOD2 DECAY per day
COEF-1	1	MC	15 LOUISIANA	0.000	0.000	0.000	0.100	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	2	MC	15 LOUISIANA	0.000	0.000	0.000	0.130	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	3	MC	15 LOUISIANA	0.000	0.000	0.000	0.560	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	4	MC	15 LOUISIANA	0.000	0.000	0.000	0.490	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	5	MC	15 LOUISIANA	0.000	0.000	0.000	0.440	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	6	MC	15 LOUISIANA	0.000	0.000	0.000	0.610	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	7	MC	15 LOUISIANA	0.000	0.000	0.000	1.020	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	8	AG	15 LOUISIANA	0.000	0.000	0.000	0.480	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	9	AG	15 LOUISIANA	0.000	0.000	0.000	0.510	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COEF-1	10	MC	15 LOUISIANA	0.000	0.000	0.000	0.040	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000

ENDATA12

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

CARD TYPE	REACH	ID	ORG-N DECA	ORG-N SETT	ORGN CONV TO NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE

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
COEF-4	1	MC	0.000	0.220	0.000	0.000
COEF-4	2	MC	0.000	0.220	0.000	0.000
COEF-4	3	MC	0.000	0.200	0.000	0.000
COEF-4	4	MC	0.000	0.180	0.000	0.000
COEF-4	5	MC	0.000	0.160	0.000	0.000
COEF-4	6	MC	0.000	0.190	0.000	0.000
COEF-4	7	MC	0.000	0.220	0.000	0.000
COEF-4	8	AG	0.000	0.210	0.000	0.000
COEF-4	9	AG	0.000	0.060	0.000	0.000
COEF-4	10	MC	0.000	0.210	0.000	0.000

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

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3-N	NO3-N	BOD#2

ENDATA17

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

CARD TYPE	REACH	ID	PHOS	CHL A	COLI	NCM

ENDATA18

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

CARD TYPE	REACH	ID	BOD#1	ORG-N	COLI	NCM	DO	BOD#2
NONPOINT	1	MC	9.00	0.00	0.00	8.00	0.00	0.00
NONPOINT	2	MC	9.00	0.00	0.00	6.00	0.00	0.00
NONPOINT	3	MC	12.00	0.00	0.00	11.00	0.00	0.00
NONPOINT	4	MC	10.00	0.00	0.00	12.00	0.00	0.00
NONPOINT	5	MC	10.00	0.00	0.00	10.00	0.00	0.00
NONPOINT	6	MC	11.00	0.00	0.00	10.00	0.00	0.00
NONPOINT	7	MC	16.00	0.00	0.00	16.00	0.00	0.00
NONPOINT	8	AG	11.00	0.00	0.00	3.00	0.00	0.00
NONPOINT	9	AG	35.00	0.00	0.00	9.00	0.00	0.00
NONPOINT	10	MC	35.00	0.00	0.00	1.00	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     umhos

HDWTR-1           1     Main Canal              0   0.02800    0.989   21.80     0.51    61.200   763.400
HDWTR-1          69     Avondale Gardens        0   0.02800    0.989   21.80     0.39    88.900   760.200
ENDATA20

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

CARD TYPE     ELEMENT   NAME                        DO     BOD#1     ORG-N     NH3-N     NO3-N     BOD#2
                                                    mg/L      mg/L      mg/L      mg/L      mg/L      mg/L

HDWTR-2           1     Main Canal                7.90      6.24      0.00      0.00      0.00      0.00
HDWTR-2          69     Avondale Gardens          7.90      5.70      0.00      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     Main Canal                0.00      0.00      0.00      2.58
HDWTR-3          69     Avondale Gardens          0.00      0.00      0.00      2.15
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
             ELEMENT  ELEMENT     KILOM

JUNCTION          99      68       1.20    Avondale Gardens
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     umhos

ENDATA24

$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                                          % BOD                          %
CARD TYPE     ELEMENT   NAME                        DO       BOD      RMVL     ORG-N     NH3-N    NITRIF     NO3-N     BOD#2
                                                    mg/L      mg/L                mg/L      mg/L                mg/L      mg/L

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

ENDATA26
```

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

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 =  2
NUMBER OF REACHES IN PLOT 1 =   8
PLOT RCH  1  2  3  4  5  6  7 10
NUMBER OF REACHES IN PLOT 2 =   2
PLOT RCH  8  9
ENDATA30

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


OVERLAY 1 MAC.OVL                       :MC1-8
OVERLAY 2 AVG.OVL                       :AVG
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  71 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12


CONDENSED CAPSULE SUMMARY FOR Main Canal

                                                                  REAER BOD1 BOD1 BOD2 BOD2  NH3
    DIST     FLOW   TEMP SALN    DO  EBOD1 EBOD2 ORGN  NH3  CHLA   RATE  DECA SETT DECA SETT DECA  SOD
      km     m³/s  deg C  ppt   mg/L  mg/L  mg/L mg/L µg/L  1/da   1/da  1/da 1/da 1/da 1/da 1/da   g/m²/d

   HDWTR   0.02800 21.80 0.51   7.90  6.24  0.00 0.00 0.00  0.00
    7.90   0.02800 21.80 0.39   7.25  6.42  0.00 0.00 0.00  0.00   0.55  0.10 0.00 0.00 0.00 0.00  0.11
    7.80   0.02800 21.80 0.39   6.84  6.59  0.00 0.00 0.00  0.00   0.55  0.10 0.00 0.00 0.00 0.00  0.11
    7.70   0.02800 21.80 0.39   6.58  6.73  0.00 0.00 0.00  0.00   0.55  0.10 0.00 0.00 0.00 0.00  0.11
```

7.60	0.02800	21.80	0.39	6.41	6.86	0.00	0.00	0.00	0.00	0.55	0.10	0.00	0.00	0.00	0.00	0.11
7.50	0.02800	21.80	0.39	6.63	7.21	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.40	0.02800	21.80	0.39	6.77	7.55	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.30	0.02800	21.80	0.39	6.86	7.88	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.20	0.02800	21.80	0.39	6.90	8.19	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.10	0.02800	21.80	0.39	6.92	8.49	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
7.00	0.02800	21.80	0.39	6.92	8.78	0.00	0.00	0.00	0.00	1.04	0.10	0.00	0.00	0.00	0.00	0.15
6.90	0.02800	21.80	0.39	6.45	8.67	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.80	0.02800	21.80	0.39	6.15	8.57	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.70	0.02800	21.80	0.39	5.96	8.47	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.60	0.02800	21.80	0.39	5.85	8.38	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.50	0.02800	21.80	0.39	5.78	8.30	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.40	0.02800	21.80	0.39	5.75	8.22	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.30	0.02800	21.80	0.39	5.73	8.14	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.20	0.02800	21.80	0.39	5.72	8.07	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.10	0.02800	21.80	0.39	5.73	8.01	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
6.00	0.02800	21.80	0.39	5.74	7.95	0.00	0.00	0.00	0.00	0.66	0.09	0.00	0.00	0.00	0.00	0.63
5.90	0.02800	21.80	0.39	5.90	7.95	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.80	0.02800	21.80	0.40	6.00	7.96	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.70	0.02800	21.80	0.40	6.06	7.96	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.60	0.02800	21.80	0.41	6.10	7.96	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.50	0.02800	21.80	0.41	6.11	7.97	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.40	0.02800	21.80	0.41	6.12	7.97	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.30	0.02800	21.80	0.42	6.11	7.97	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.20	0.02800	21.80	0.42	6.11	7.98	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.10	0.02800	21.80	0.43	6.10	7.98	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
5.00	0.02800	21.80	0.43	6.08	7.98	0.00	0.00	0.00	0.00	0.77	0.09	0.00	0.00	0.00	0.00	0.55
4.90	0.02800	21.80	0.43	6.23	8.10	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.80	0.02800	21.80	0.43	6.32	8.22	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.70	0.02800	21.80	0.43	6.38	8.33	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.60	0.02800	21.80	0.43	6.41	8.43	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.50	0.02800	21.80	0.43	6.43	8.54	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.40	0.02800	21.80	0.43	6.43	8.64	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.30	0.02800	21.80	0.43	6.43	8.74	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.20	0.02800	21.80	0.43	6.42	8.83	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.10	0.02800	21.80	0.43	6.41	8.92	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
4.00	0.02800	21.80	0.43	6.40	9.01	0.00	0.00	0.00	0.00	0.95	0.09	0.00	0.00	0.00	0.00	0.49
3.90	0.02800	21.80	0.44	6.08	8.93	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.80	0.02800	21.80	0.44	5.89	8.86	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.70	0.02800	21.80	0.45	5.77	8.79	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.60	0.02800	21.80	0.45	5.71	8.73	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.50	0.02800	21.80	0.46	5.68	8.67	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.40	0.02800	21.80	0.47	5.67	8.61	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.30	0.02800	21.80	0.47	5.67	8.56	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.20	0.02800	21.80	0.48	5.69	8.51	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.10	0.02800	21.80	0.48	5.71	8.47	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
3.00	0.02800	21.80	0.49	5.73	8.42	0.00	0.00	0.00	0.00	0.76	0.09	0.00	0.00	0.00	0.00	0.68
2.90	0.02800	21.80	0.49	5.32	8.07	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.80	0.02800	21.80	0.49	5.12	7.74	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.70	0.02800	21.80	0.49	5.04	7.44	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.60	0.02800	21.80	0.49	5.03	7.17	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.50	0.02800	21.80	0.49	5.05	6.92	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.40	0.02800	21.80	0.49	5.10	6.68	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.30	0.02800	21.80	0.49	5.16	6.47	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.20	0.02800	21.80	0.49	5.22	6.27	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
2.10	0.02800	21.80	0.49	5.28	6.09	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14

2.00	0.02800	21.80	0.48	5.34	5.93	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.90	0.02800	21.80	0.48	5.39	5.78	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.80	0.02800	21.80	0.48	5.43	5.64	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.70	0.02800	21.80	0.48	5.47	5.51	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.60	0.02800	21.80	0.48	5.51	5.39	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.50	0.02800	21.80	0.48	5.54	5.29	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.40	0.02800	21.80	0.48	5.57	5.19	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.30	0.02800	21.80	0.48	5.60	5.10	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.20	0.02800	21.80	0.48	5.62	5.02	0.00	0.00	0.00	0.00	0.63	0.10	0.00	0.00	0.00	0.00	1.14
1.10	0.05600	21.80	0.48	6.17	11.44	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
1.00	0.05600	21.80	0.48	6.09	11.57	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.90	0.05600	21.80	0.48	6.04	11.70	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.80	0.05600	21.80	0.48	6.00	11.83	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.70	0.05600	21.80	0.48	5.98	11.95	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.60	0.05600	21.80	0.48	5.97	12.06	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.50	0.05600	21.80	0.48	5.97	12.17	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.40	0.05600	21.80	0.48	5.97	12.28	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.30	0.05600	21.80	0.48	5.98	12.38	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.20	0.05600	21.80	0.48	5.99	12.48	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.10	0.05600	21.80	0.48	6.00	12.57	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04
0.00	0.05600	21.80	0.48	6.01	12.66	0.00	0.00	0.00	0.00	0.63	0.11	0.00	0.00	0.00	0.00	0.04

CONDENSED CAPSULE SUMMARY FOR Avondale Gardens

DIST km	FLOW m^3/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORGN mg/L	NH3 µg/L	CHLA 1/da	REAER RATE 1/da	BOD1 DECA 1/da	BOD1 SETT 1/da	BOD2 DECA 1/da	BOD2 SETT 1/da	NH3 DECA 1/da	SOD $g/m^2/d$
HDWTR	0.02800	21.80	0.39	7.90	5.70	0.00	0.00	0.00	0.00							
3.02	0.02800	21.80	0.26	7.84	6.11	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.92	0.02800	21.80	0.26	7.78	6.51	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.82	0.02800	21.80	0.26	7.74	6.92	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.72	0.02800	21.80	0.26	7.70	7.32	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.62	0.02800	21.80	0.26	7.67	7.71	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.52	0.02800	21.80	0.26	7.64	8.11	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.42	0.02800	21.80	0.26	7.62	8.50	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.32	0.02800	21.80	0.26	7.60	8.88	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.22	0.02800	21.80	0.26	7.58	9.27	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.12	0.02800	21.80	0.26	7.56	9.65	0.00	0.00	0.00	0.00	1.71	0.04	0.00	0.00	0.00	0.00	0.54
2.01	0.02800	21.80	0.27	7.49	10.14	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.91	0.02800	21.80	0.28	7.43	10.62	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.80	0.02800	21.80	0.29	7.39	11.08	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.70	0.02800	21.80	0.30	7.34	11.54	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.59	0.02800	21.80	0.31	7.31	11.99	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.48	0.02800	21.80	0.33	7.27	12.42	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.38	0.02800	21.80	0.34	7.24	12.85	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.27	0.02800	21.80	0.35	7.21	13.26	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.17	0.02800	21.80	0.36	7.19	13.67	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
1.06	0.02800	21.80	0.37	7.16	14.07	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.95	0.02800	21.80	0.38	7.13	14.46	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.85	0.02800	21.80	0.39	7.11	14.84	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.74	0.02800	21.80	0.40	7.08	15.21	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.64	0.02800	21.80	0.41	7.06	15.57	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.53	0.02800	21.80	0.42	7.04	15.93	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.42	0.02800	21.80	0.44	7.01	16.27	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57

0.32	0.02800	21.80	0.45	6.99	16.61	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.21	0.02800	21.80	0.46	6.97	16.94	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.11	0.02800	21.80	0.47	6.95	17.27	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57
0.00	0.02800	21.80	0.48	6.93	17.58	0.00	0.00	0.00	0.00	1.14	0.05	0.00	0.00	0.00	0.00	0.57

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 1 Main Canal Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
1	HDWTR	0.02800	21.80	0.51	61.20	763.40	7.90	6.24	0.00	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58

********** 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	8.00	7.90	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
2	7.90	7.80	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
3	7.80	7.70	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
4	7.70	7.60	0.02800	0.0	0.00097	1.19	1.28	22.50	2880.00	2250.00	28.80	0.00	0.000	0.000	0.001
TOT						4.76			11520.00	9000.00					
AVG					0.00097		1.28	22.50			28.80				
CUM						4.76									

********** 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	7.900	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
2	7.800	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
3	7.700	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
4	7.600	8.76	0.55	0.10	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
AVG 20 DEG C RATE			0.53	0.09	0.00	0.00	0.00	0.00	0.00	0.10			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
1	7.900	21.80	0.39	61.20	763.40	7.25	6.42	0.00	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.63
2	7.800	21.80	0.39	61.20	763.40	6.84	6.59	0.00	6.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.67
3	7.700	21.80	0.39	61.20	763.40	6.58	6.73	0.00	6.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.70
4	7.600	21.80	0.39	61.20	763.40	6.41	6.86	0.00	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.72

FINAL REPORT Main Canal — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 2 Main Canal — Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
5	UPR RCH	0.02800	21.80	0.39	61.20	763.40	6.41	6.86	0.00	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.72

********** 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
5	7.60	7.50	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
6	7.50	7.40	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
7	7.40	7.30	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
8	7.30	7.20	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
9	7.20	7.10	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
10	7.10	7.00	0.02800	0.0	0.00302	0.38	0.71	13.10	926.17	1310.00	9.26	0.00	0.000	0.000	0.003
TOT						2.30			5557.02	7860.00					
AVG					0.00302		0.71	13.10			9.26				
CUM						7.06									

********** 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
5	7.500	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
6	7.400	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
7	7.300	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
8	7.200	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
9	7.100	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
10	7.000	8.76	1.04	0.10	0.00	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
AVG 20 DEG C RATE			1.00	0.09	0.00	0.00	0.00	0.00	0.00	0.13			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
5	7.500	21.80	0.39	61.20	763.40	6.63	7.21	0.00	7.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.86
6	7.400	21.80	0.39	61.20	763.40	6.77	7.55	0.00	7.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.99
7	7.300	21.80	0.39	61.20	763.40	6.86	7.88	0.00	7.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.11
8	7.200	21.80	0.39	61.20	763.40	6.90	8.19	0.00	8.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.21
9	7.100	21.80	0.39	61.20	763.40	6.92	8.49	0.00	8.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.31
10	7.000	21.80	0.39	61.20	763.40	6.92	8.78	0.00	8.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.40

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 3 Main Canal Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
11	UPR RCH	0.02800	21.80	0.39	61.20	763.40	6.92	8.78	0.00	8.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40

********** 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
11	7.00	6.90	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
12	6.90	6.80	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
13	6.80	6.70	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
14	6.70	6.60	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
15	6.60	6.50	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
16	6.50	6.40	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
17	6.40	6.30	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
18	6.30	6.20	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
19	6.20	6.10	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
20	6.10	6.00	0.02800	0.0	0.00156	0.74	1.08	16.60	1792.80	1660.00	17.93	0.00	0.000	0.000	0.002
TOT						7.41			17928.00	16600.00					
AVG					0.00156		1.08	16.60			17.93				
CUM						14.47									

********** 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
11	6.900	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
12	6.800	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
13	6.700	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
14	6.600	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
15	6.500	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
16	6.400	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
17	6.300	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
18	6.200	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
19	6.100	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
20	6.000	8.76	0.66	0.09	0.00	0.00	0.00	0.00	0.00	0.63	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00
AVG 20 DEG C RATE			0.64	0.09	0.00	0.00	0.00	0.00	0.00	0.56			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.20	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
11	6.900	21.80	0.39	61.20	763.40	6.45	8.67	0.00	8.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.30
12	6.800	21.80	0.39	61.20	763.40	6.15	8.57	0.00	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.22
13	6.700	21.80	0.39	61.20	763.40	5.96	8.47	0.00	8.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.15
14	6.600	21.80	0.39	61.20	763.40	5.85	8.38	0.00	8.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.09
15	6.500	21.80	0.39	61.20	763.40	5.78	8.30	0.00	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.03
16	6.400	21.80	0.39	61.20	763.40	5.75	8.22	0.00	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.99
17	6.300	21.80	0.39	61.20	763.40	5.73	8.14	0.00	8.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.95
18	6.200	21.80	0.39	61.20	763.40	5.72	8.07	0.00	8.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.91
19	6.100	21.80	0.39	61.20	763.40	5.73	8.01	0.00	8.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.89
20	6.000	21.80	0.39	61.20	763.40	5.74	7.95	0.00	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.86

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 4 Main Canal Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
21	UPR RCH	0.02800	21.80	0.39	61.20	763.40	5.74	7.95	0.00	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.86

********** 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
21	6.00	5.90	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
22	5.90	5.80	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
23	5.80	5.70	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
24	5.70	5.60	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
25	5.60	5.50	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
26	5.50	5.40	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
27	5.40	5.30	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
28	5.30	5.20	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
29	5.20	5.10	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
30	5.10	5.00	0.02800	0.0	0.00203	0.57	0.93	14.85	1381.05	1485.00	13.81	0.00	0.000	0.000	0.002
TOT						5.71			13810.50	14850.00					
AVG					0.00203		0.93	14.85			13.81				
CUM						20.18									

********** 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
21	5.900	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
22	5.800	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
23	5.700	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
24	5.600	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
25	5.500	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
26	5.400	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
27	5.300	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
28	5.200	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
29	5.100	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
30	5.000	8.76	0.77	0.09	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
AVG 20 DEG C RATE			0.75	0.08	0.00	0.00	0.00	0.00	0.00	0.49			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.18	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
21	5.900	21.80	0.39	61.20	763.40	5.90	7.95	0.00	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.01
22	5.800	21.80	0.40	61.20	763.40	6.00	7.96	0.00	7.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.14
23	5.700	21.80	0.40	61.20	763.40	6.06	7.96	0.00	7.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.26
24	5.600	21.80	0.41	61.20	763.40	6.10	7.96	0.00	7.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.36
25	5.500	21.80	0.41	61.20	763.40	6.11	7.97	0.00	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.46
26	5.400	21.80	0.41	61.20	763.40	6.12	7.97	0.00	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.54
27	5.300	21.80	0.42	61.20	763.40	6.11	7.97	0.00	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.62

28	5.200	21.80	0.42	61.20	763.40	6.11	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.69
29	5.100	21.80	0.43	61.20	763.40	6.10	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.75
30	5.000	21.80	0.43	61.20	763.40	6.08	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.80

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 5 Main Canal Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
31	UPR RCH	0.02800	21.80	0.43	61.20	763.40	6.08	7.98	0.00	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.80

********** 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
31	5.00	4.90	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
32	4.90	4.80	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
33	4.80	4.70	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
34	4.70	4.60	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
35	4.60	4.50	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
36	4.50	4.40	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
37	4.40	4.30	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
38	4.30	4.20	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
39	4.20	4.10	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
40	4.10	4.00	0.02800	0.0	0.00277	0.42	0.77	13.11	1009.47	1311.00	10.09	0.00	0.000	0.000	0.003
TOT						4.17			10094.70	13110.00					
AVG					0.00277		0.77	13.11			10.09				
CUM						24.35									

********** 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
31	4.900	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
32	4.800	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
33	4.700	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
34	4.600	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
35	4.500	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
36	4.400	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
37	4.300	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
38	4.200	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
39	4.100	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
40	4.000	8.76	0.95	0.09	0.00	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00

AVG 20 DEG C RATE	0.91	0.08	0.00	0.00	0.00	0.00	0.00	0.44		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.16	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
31	4.900	21.80	0.43	61.20	763.40	6.23	8.10	0.00	8.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.92
32	4.800	21.80	0.43	61.20	763.40	6.32	8.22	0.00	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.03
33	4.700	21.80	0.43	61.20	763.40	6.38	8.33	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.13
34	4.600	21.80	0.43	61.20	763.40	6.41	8.43	0.00	8.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.23
35	4.500	21.80	0.43	61.20	763.40	6.43	8.54	0.00	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.31
36	4.400	21.80	0.43	61.20	763.40	6.43	8.64	0.00	8.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.40
37	4.300	21.80	0.43	61.20	763.40	6.43	8.74	0.00	8.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.47
38	4.200	21.80	0.43	61.20	763.40	6.42	8.83	0.00	8.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.54
39	4.100	21.80	0.43	61.20	763.40	6.41	8.92	0.00	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.61
40	4.000	21.80	0.43	61.20	763.40	6.40	9.01	0.00	9.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.67

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 6 Main Canal Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
41	UPR RCH	0.02800	21.80	0.43	61.20	763.40	6.40	9.01	0.00	9.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.67

********** 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
41	4.00	3.90	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
42	3.90	3.80	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
43	3.80	3.70	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
44	3.70	3.60	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
45	3.60	3.50	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
46	3.50	3.40	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
47	3.40	3.30	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
48	3.30	3.20	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
49	3.20	3.10	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
50	3.10	3.00	0.02800	0.0	0.00184	0.63	0.94	16.15	1518.10	1615.00	15.18	0.00	0.000	0.000	0.002
TOT						6.28			15181.00	16150.00					
AVG					0.00184		0.94	16.15			15.18				
CUM						30.63									

********** 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
41	3.900	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
42	3.800	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
43	3.700	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
44	3.600	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
45	3.500	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
46	3.400	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
47	3.300	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
48	3.200	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
49	3.100	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
50	3.000	8.75	0.76	0.09	0.00	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
AVG 20 DEG C RATE			0.73	0.09	0.00	0.00	0.00	0.00	0.00	0.61			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.19	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
41	3.900	21.80	0.44	61.20	763.40	6.08	8.93	0.00	8.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.48
42	3.800	21.80	0.44	61.20	763.40	5.89	8.86	0.00	8.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.31
43	3.700	21.80	0.45	61.20	763.40	5.77	8.79	0.00	8.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.17
44	3.600	21.80	0.45	61.20	763.40	5.71	8.73	0.00	8.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.04
45	3.500	21.80	0.46	61.20	763.40	5.68	8.67	0.00	8.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.92
46	3.400	21.80	0.47	61.20	763.40	5.67	8.61	0.00	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.82
47	3.300	21.80	0.47	61.20	763.40	5.67	8.56	0.00	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.73
48	3.200	21.80	0.48	61.20	763.40	5.69	8.51	0.00	8.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.65
49	3.100	21.80	0.48	61.20	763.40	5.71	8.47	0.00	8.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.59
50	3.000	21.80	0.49	61.20	763.40	5.73	8.42	0.00	8.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.53

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 7 Main Canal Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
51	UPR RCH	0.02800	21.80	0.49	61.20	763.40	5.73	8.42	0.00	8.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.53

********** 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
51	3.00	2.90	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
52	2.90	2.80	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
53	2.80	2.70	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
54	2.70	2.60	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
55	2.60	2.50	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
56	2.50	2.40	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
57	2.40	2.30	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
58	2.30	2.20	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
59	2.20	2.10	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
60	2.10	2.00	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
61	2.00	1.90	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
62	1.90	1.80	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
63	1.80	1.70	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
64	1.70	1.60	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
65	1.60	1.50	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
66	1.50	1.40	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
67	1.40	1.30	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
68	1.30	1.20	0.02800	0.0	0.00130	0.89	1.12	19.20	2150.40	1920.00	21.50	0.00	0.000	0.000	0.001
TOT						16.00			38707.20	34560.00					
AVG					0.00130		1.12	19.20			21.50				
CUM						46.63									

********** 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
51	2.900	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
52	2.800	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
53	2.700	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
54	2.600	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
55	2.500	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
56	2.400	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
57	2.300	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
58	2.200	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
59	2.100	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
60	2.000	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
61	1.900	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
62	1.800	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
63	1.700	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
64	1.600	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
65	1.500	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
66	1.400	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
67	1.300	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
68	1.200	8.75	0.63	0.10	0.00	0.00	0.00	0.00	0.00	1.14	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
AVG 20 DEG C RATE			0.61	0.09	0.00	0.00	0.00	0.00	0.00	1.02			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.22	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
51	2.900	21.80	0.49	61.20	763.40	5.32	8.07	0.00	8.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.19
52	2.800	21.80	0.49	61.20	763.40	5.12	7.74	0.00	7.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.92
53	2.700	21.80	0.49	61.20	763.40	5.04	7.44	0.00	7.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.69
54	2.600	21.80	0.49	61.20	763.40	5.03	7.17	0.00	7.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.51
55	2.500	21.80	0.49	61.20	763.40	5.05	6.92	0.00	6.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.35
56	2.400	21.80	0.49	61.20	763.40	5.10	6.68	0.00	6.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.23
57	2.300	21.80	0.49	61.20	763.40	5.16	6.47	0.00	6.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.13
58	2.200	21.80	0.49	61.20	763.40	5.22	6.27	0.00	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.04
59	2.100	21.80	0.49	61.20	763.40	5.28	6.09	0.00	6.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.97
60	2.000	21.80	0.48	61.20	763.40	5.34	5.93	0.00	5.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.92
61	1.900	21.80	0.48	61.20	763.40	5.39	5.78	0.00	5.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.87
62	1.800	21.80	0.48	61.20	763.40	5.43	5.64	0.00	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.83
63	1.700	21.80	0.48	61.20	763.40	5.47	5.51	0.00	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.80
64	1.600	21.80	0.48	61.20	763.40	5.51	5.39	0.00	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.78
65	1.500	21.80	0.48	61.20	763.40	5.54	5.29	0.00	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.76
66	1.400	21.80	0.48	61.20	763.40	5.57	5.19	0.00	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.74
67	1.300	21.80	0.48	61.20	763.40	5.60	5.10	0.00	5.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.73
68	1.200	21.80	0.48	61.20	763.40	5.62	5.02	0.00	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71

FINAL REPORT Main Canal LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 10 Main Canal Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
99	UPR RCH	0.02800	21.80	0.48	61.20	763.40	5.62	5.02	0.00	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71
99	TRIB	0.02800	21.80	0.48	88.90	760.20	6.93	17.58	0.00	17.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.17

********** 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
99	1.20	1.10	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
100	1.10	1.00	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
101	1.00	0.90	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
102	0.90	0.80	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
103	0.80	0.70	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
104	0.70	0.60	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
105	0.60	0.50	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
106	0.50	0.40	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003

107	0.40	0.30	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
108	0.30	0.20	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
109	0.20	0.10	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
110	0.10	0.00	0.05600	0.0	0.00311	0.37	1.16	15.54	1802.64	1554.00	18.03	0.00	0.000	0.000	0.003
TOT						4.47			21631.68	18648.00					
AVG					0.00311		1.16	15.54			18.03				
CUM						51.10									

********** 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
99	1.100	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
100	1.000	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
101	0.900	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
102	0.800	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
103	0.700	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
104	0.600	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
105	0.500	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
106	0.400	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
107	0.300	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
108	0.200	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
109	0.100	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
110	0.000	8.75	0.63	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
AVG 20 DEG C RATE			0.61	0.10	0.00	0.00	0.00	0.00	0.00	0.04			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
99	1.100	21.80	0.48	75.05	761.80	6.17	11.44	0.00	11.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.72
100	1.000	21.80	0.48	75.05	761.80	6.09	11.57	0.00	11.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.52
101	0.900	21.80	0.48	75.05	761.80	6.04	11.70	0.00	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.33
102	0.800	21.80	0.48	75.05	761.80	6.00	11.83	0.00	11.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.15
103	0.700	21.80	0.48	75.05	761.80	5.98	11.95	0.00	11.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.00
104	0.600	21.80	0.48	75.05	761.80	5.97	12.06	0.00	12.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.85
105	0.500	21.80	0.48	75.05	761.80	5.97	12.17	0.00	12.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.71
106	0.400	21.80	0.48	75.05	761.80	5.97	12.28	0.00	12.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.59
107	0.300	21.80	0.48	75.05	761.80	5.98	12.38	0.00	12.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.48
108	0.200	21.80	0.48	75.05	761.80	5.99	12.48	0.00	12.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.37
109	0.100	21.80	0.48	75.05	761.80	6.00	12.57	0.00	12.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.28
110	0.000	21.80	0.48	75.05	761.80	6.01	12.66	0.00	12.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	1.19

TRAVEL TIME	=	51.10	DAYS		
MAXIMUM EFFLUENT	=	0.00	PERCENT		
FLOW	=	0.02800	TO	0.05600	m^3/s
DISPERSION	=	0.0000	TO	0.0000	m^2/s
VELOCITY	=	0.00097	TO	0.00311	m/s
DEPTH	=	0.71	TO	1.28	m
WIDTH	=	13.10	TO	22.50	m
BOD DECAY	=	0.09	TO	0.11	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.04	TO	1.14	$g/m^2/d$
NH3 SOURCE	=	0.00	TO	0.00	$g/m^2/d$
REAERATION	=	0.55	TO	1.04	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day
TEMPERATURE	=	21.80	TO	21.80	deg C
DISSOLVED OXYGEN	=	5.03	TO	7.25	mg/L

FINAL REPORT Avondale Gardens — LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 8 Avondale Gardens — Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
69	HDWTR	0.02800	21.80	0.39	88.90	760.20	7.90	5.70	0.00	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.15

********** 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
69	3.12	3.02	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
70	3.02	2.92	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
71	2.92	2.82	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
72	2.82	2.72	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
73	2.72	2.62	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
74	2.62	2.52	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
75	2.52	2.42	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
76	2.42	2.32	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
77	2.32	2.22	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
78	2.22	2.12	0.02800	0.0	0.00666	0.17	0.46	9.14	420.44	914.00	4.20	0.00	0.000	0.000	0.007
TOT						1.74			4204.40	9140.00					
AVG					0.00666		0.46	9.14			4.20				
CUM						1.74									

********** 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
69	3.020	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
70	2.920	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
71	2.820	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
72	2.720	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
73	2.620	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
74	2.520	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
75	2.420	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
76	2.320	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
77	2.220	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
78	2.120	8.76	1.71	0.04	0.00	0.00	0.00	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
AVG 20 DEG C RATE			1.65	0.04	0.00	0.00	0.00	0.00	0.00	0.48			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.21	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
69	3.020	21.80	0.26	88.90	760.20	7.84	6.11	0.00	6.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.18
70	2.920	21.80	0.26	88.90	760.20	7.78	6.51	0.00	6.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.22
71	2.820	21.80	0.26	88.90	760.20	7.74	6.92	0.00	6.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.25
72	2.720	21.80	0.26	88.90	760.20	7.70	7.32	0.00	7.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.28
73	2.620	21.80	0.26	88.90	760.20	7.67	7.71	0.00	7.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.31
74	2.520	21.80	0.26	88.90	760.20	7.64	8.11	0.00	8.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.33
75	2.420	21.80	0.26	88.90	760.20	7.62	8.50	0.00	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.36
76	2.320	21.80	0.26	88.90	760.20	7.60	8.88	0.00	8.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.39
77	2.220	21.80	0.26	88.90	760.20	7.58	9.27	0.00	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.41
78	2.120	21.80	0.26	88.90	760.20	7.56	9.65	0.00	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.44

FINAL REPORT Avondale Gardens LA-QUAL model for Main Canal TMDL (subsegment 020501)
REACH NO. 9 Avondale Gardens Winter Projection Meeting DO Standard

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

ELEM NO.	TYPE	FLOW	TEMP deg C	SALN ppt	CL mg/L	COND umhos	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	NBOD mg/L
79	UPR RCH	0.02800	21.80	0.26	88.90	760.20	7.56	9.65	0.00	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44

********** 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
79	2.12	2.01	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
80	2.01	1.91	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
81	1.91	1.80	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
82	1.80	1.70	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
83	1.70	1.59	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
84	1.59	1.48	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
85	1.48	1.38	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
86	1.38	1.27	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
87	1.27	1.17	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
88	1.17	1.06	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
89	1.06	0.95	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
90	0.95	0.85	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
91	0.85	0.74	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
92	0.74	0.64	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
93	0.64	0.53	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
94	0.53	0.42	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
95	0.42	0.32	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
96	0.32	0.21	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
97	0.21	0.11	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
98	0.11	0.00	0.02800	0.0	0.00288	0.43	0.64	15.20	1031.17	1611.20	9.73	0.00	0.000	0.000	0.003
TOT						8.52			20623.36	32223.99					
AVG					0.00288		0.64	15.20			9.73				
CUM						10.26									

********** 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
79	2.014	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
80	1.908	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
81	1.802	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
82	1.696	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
83	1.590	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
84	1.484	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
85	1.378	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
86	1.272	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
87	1.166	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
88	1.060	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
89	0.954	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
90	0.848	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
91	0.742	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
92	0.636	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
93	0.530	8.76	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
94	0.424	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
95	0.318	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
96	0.212	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00

97	0.106	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
98	0.000	8.75	1.14	0.05	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
AVG 20 DEG C RATE			1.10	0.05	0.00	0.00	0.00	0.00	0.00	0.51			0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.06	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CL mg/L	COND umhos	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	NBOD mg/L
79	2.014	21.80	0.27	88.90	760.20	7.49	10.14	0.00	10.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.55
80	1.908	21.80	0.28	88.90	760.20	7.43	10.62	0.00	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.66
81	1.802	21.80	0.29	88.90	760.20	7.39	11.08	0.00	11.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.76
82	1.696	21.80	0.30	88.90	760.20	7.34	11.54	0.00	11.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.87
83	1.590	21.80	0.31	88.90	760.20	7.31	11.99	0.00	11.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	2.97
84	1.484	21.80	0.33	88.90	760.20	7.27	12.42	0.00	12.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.06
85	1.378	21.80	0.34	88.90	760.20	7.24	12.85	0.00	12.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.16
86	1.272	21.80	0.35	88.90	760.20	7.21	13.26	0.00	13.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.25
87	1.166	21.80	0.36	88.90	760.20	7.19	13.67	0.00	13.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.34
88	1.060	21.80	0.37	88.90	760.20	7.16	14.07	0.00	14.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.43
89	0.954	21.80	0.38	88.90	760.20	7.13	14.46	0.00	14.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.51
90	0.848	21.80	0.39	88.90	760.20	7.11	14.84	0.00	14.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.59
91	0.742	21.80	0.40	88.90	760.20	7.08	15.21	0.00	15.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.67
92	0.636	21.80	0.41	88.90	760.20	7.06	15.57	0.00	15.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.75
93	0.530	21.80	0.42	88.90	760.20	7.04	15.93	0.00	15.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.83
94	0.424	21.80	0.44	88.90	760.20	7.01	16.27	0.00	16.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.90
95	0.318	21.80	0.45	88.90	760.20	6.99	16.61	0.00	16.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	3.97
96	0.212	21.80	0.46	88.90	760.20	6.97	16.94	0.00	16.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.04
97	0.106	21.80	0.47	88.90	760.20	6.95	17.27	0.00	17.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.11
98	0.000	21.80	0.48	88.90	760.20	6.93	17.58	0.00	17.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.	4.17

STREAM SUMMARY
Avondale Gardens

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Winter Projection Meeting DO Standard

TRAVEL TIME	=	10.26	DAYS		
MAXIMUM EFFLUENT	=	0.00	PERCENT		
FLOW	=	0.02800	TO	0.02800	m³/s
DISPERSION	=	0.0000	TO	0.0000	m²/s
VELOCITY	=	0.00288	TO	0.00666	m/s
DEPTH	=	0.46	TO	0.64	m
WIDTH	=	9.14	TO	15.20	m
BOD DECAY	=	0.04	TO	0.05	per day
NH3 DECAY	=	0.00	TO	0.00	per day
SOD	=	0.54	TO	0.57	g/m²/d
NH3 SOURCE	=	0.00	TO	0.00	g/m²/d
REAERATION	=	1.14	TO	1.71	per day
BOD SETTLING	=	0.00	TO	0.00	per day
ORG-N DECAY	=	0.00	TO	0.00	per day
ORG-N SETTLING	=	0.00	TO	0.00	per day

TEMPERATURE	=	21.80	TO	21.80	deg C
DISSOLVED OXYGEN	=	6.93	TO	7.84	mg/L

LA-QUAL model for Main Canal TMDL (subsegment 020501)
Winter Projection Meeting DO Standard

INPUT/OUTPUT LOADING SUMMARY

	FLOW m^3/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER INFLOW	0.056	38.2	28.9	0.0	0.0	0.0	0.0	0.0	0.0	11.4
INCREMENTAL INFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTFLOW THRU LOWER BNDRY	-0.056	-29.1	-61.3	0.0	0.0	0.0	0.0	0.0	0.0	-5.8
DISPERSION THRU LOWER BNDRY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NON-POINT INPUT		0.0	158.0	0.0	0.0					86.0
NATURAL REAERATION		310.0								
DAM REAERATION		0.0								
BACKGROUND SOD		-101.8								
BOD#1 DECAY		-125.6	-125.6							
BOD#1 SETTLING		0.0	0.0							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0		0.0						
BOD#2 SETTLING		0.0		0.0						
ANAEROBIC BOD#2 DECAY				0.0						
ORG-N DECAY		0.0			0.0	0.0				
ORG-N SETTLING					0.0	0.0				
NH3 DECAY		0.0				0.0	0.0			
BACKGROUND NH3 SOURCE						0.0				
OTHER DENITRIFICATION							0.0			
PHOSPHORUS SOURCE								0.0		
ALGAE PHOTOSYNTHESIS		0.0				0.0	0.0	0.0	0.0	
ALGAE RESPIRATION		0.0				0.0		0.0	0.0	
ALGAE SETTLING		0.0							0.0	
MACRO PHOTOSYNTHESIS		0.0				0.0	0.0	0.0		
NCM DECAY		-91.7								-91.7
NCM SETTLING		0.0								0.0
TOTAL INPUTS	0.056	348.2	186.9	0.0	0.0	0.0	0.0	0.0	0.0	97.4
TOTAL OUTPUTS	-0.056	-348.3	-186.9	0.0	0.0	0.0	0.0	0.0	0.0	-97.4
NET CONVERGENCE ERROR	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

.....EXECUTION COMPLETED