APPENDIX J

Printout of Calibration Model Output

TEXAS WATER COMMISSION WATER QUALITY STREAM MODEL
QUAL-TX VERSION 3.3 UPDATED DECEMBER 3, 1990

02/10/04
16:59:24

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

CARD TYPE		CONTROL TITLES
CNTROL01		QUAL-TX calibration for Lake Cataouatche, LA
CNTROL02		Final calibration run
CNTROL03	YES	ECHO
CNTROL04	NO	CAPS
CNTROL05	NO	INTE
CNTROL06	YES	FINA
CNTROL07	YES	LOAD
CNTROL08	YES	METR
CNTROL09	YES	OXYG
CNTROL10	YES	OVER
ENDATA01		

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

CARD TYPE		MODEL OPTION	
MODOPT01	NO	TEMP	
MODOPT02	NO	SALI	
MODOPT04	YES	CONSERVATIVE MATERIAL I = cond	IN umhos
MODOPT04	NO	CONSERVATIVE MATERIAL II	
MODOPT05	YES	DISS	
MODOPT06	YES	BIOC	
MODOPT07	YES	NITR	
MODOPT08	YES	PHOS	
MODOPT09	YES	CHLO	
MODOPT10	NO	MACR	
MODOPT11	NO	COLI	
MODOPT12	NO	NONC	
ENDATA02			

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

CARD TYPE	DESCRIPTION OF CONSTANT		VALUE
PROGRAM	MAXIMUM ITERATION LIMIT	=	5000.00000
PROGRAM	TOTAL DAILY RADIATION	=	416.00000
PROGRAM	P RELAXATION COEFFICIENT	=	0.10000
PROGRAM	P ERROR CLOSURE LIMITS	=	0.00500
ENDATA03			

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

CARD TYPE	RATE CODE	THETA VALUE
THETA	NH3 DECA	1.07000
THETA	BENTHAL	1.06500
THETA	ORGN DEC	1.02000

ENDATA04

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

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE

ENDATA05

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

CARD TYPE	DESCRIPTION OF CONSTANT		VALUE
LIGHT	LIGHT SATURATION CONSTANT	=	10.00000
N HALF	N HALF SATURATION CONSTANT	=	0.20000
P HALF	P HALF SATURATION CONSTANT	=	0.03000

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	B1	Bayou Verret #1	13.00	TO	11.50	0.1000	1.50	15	1	15
REACH ID	2	B2	Bayou Verret #2	11.50	TO	8.50	0.1000	3.00	30	16	45
REACH ID	3	B3	Bayou Verret #3	8.50	TO	6.30	0.1000	2.20	22	46	67
REACH ID	4	L1	Lake Cataouatche #1	6.30	TO	4.90	1.4000	1.40	1	68	68
REACH ID	5	L2	Lake Cataouatche #2	4.90	TO	3.40	1.5000	1.50	1	69	69
REACH ID	6	L3	Lake Cataouatche #3	3.40	TO	0.80	2.6000	2.60	1	70	70
REACH ID	7	L4	Lake Cataouatche #4	0.80	TO	0.00	0.8000	0.80	1	71	71

ENDATA08

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

CARD TYPE	REACH	ID	VELOCITY "A"	VELOCITY "B"	DEPTH "C"	DEPTH "D"	DEPTH "E"	MANNINGS "N"
HYDR-1	1	B1	0.00622000	1.000	2.700	0.000	0.000	0.000
HYDR-1	2	B2	0.00573000	1.000	2.400	0.000	0.000	0.000
HYDR-1	3	B3	0.00539000	1.000	2.100	0.000	0.000	0.000
HYDR-1	4	L1	0.00014200	1.000	2.200	0.000	0.000	0.000
HYDR-1	5	L2	0.00007300	1.000	2.400	0.000	0.000	0.000
HYDR-1	6	L3	0.00007300	1.000	2.500	0.000	0.000	0.000
HTDR-1	7	L4	0.00006580	1.000	1.800	0.000	0.000	0.000

ENDATA09

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

CARD TYPE	REACH	ID	TIDAL RANGE	DISPERSION "A"	DISPERSION "B"	DISPERSION "C"	DISPERSION "D"
HYDR-2	1	B1	1.00	0.500	0.000	0.000	0.000
HYDR-2	2	B2	1.00	0.500	0.000	0.000	0.000
HYDR-2	3	B3	1.00	0.500	0.000	0.000	0.000
HYDR-2	4	L1	1.00	2.600	0.000	0.000	0.000
HYDR-2	5	L2	1.00	2.600	0.000	0.000	0.000
HYDR-2	6	L3	1.00	2.600	0.000	0.000	0.000
HYDR-2	7	L4	1.00	2.600	0.000	0.000	0.000

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	B1	28.70	0.70	2.60	0.22	0.05	0.20	8.50	0.00
INITIAL	2	B2	29.20	0.69	2.80	0.23	0.05	0.21	14.80	0.00
INITIAL	3	B3	29.60	0.67	2.50	0.24	0.05	0.22	21.00	0.00
INITIAL	4	L1	31.00	0.52	5.00	0.18	0.05	0.15	13.00	0.00
INITIAL	5	L2	31.40	0.80	6.80	0.12	0.05	0.08	5.00	0.00
INITIAL	6	L3	31.00	0.99	6.90	0.13	0.05	0.02	28.00	0.00
INITIAL	7	L4	31.30	1.01	7.70	0.13	0.05	0.04	22.80	0.00

ENDATA11

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

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD	AEROB BOD DECAY	BOD SETT	BOD CONV TO SOD	ANAER BOD DECAY
COEF-1	1	B1	1.	0.240	0.000	0.000	1.600	0.050	0.000	0.000	0.000
COEF-1	2	B2	1.	0.280	0.000	0.000	1.600	0.050	0.000	0.000	0.000
COEF-1	3	B3	1.	0.310	0.000	0.000	1.300	0.050	0.000	0.000	0.000
COEF-1	4	L1	1.	0.370	0.000	0.000	0.500	0.050	0.000	0.000	0.000
COEF-1	5	L2	1.	0.340	0.000	0.000	0.000	0.050	0.000	0.000	0.000
COEF-1	6	L3	1.	0.330	0.000	0.000	0.000	0.050	0.000	0.000	0.000
COEF-1	7	L4	1.	0.460	0.000	0.000	0.000	0.050	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
COEF-2	1	B1	0.010	0.00	1.00	0.050	0.0025	0.0063	0.00
COEF-2	2	B2	0.010	0.00	1.00	0.050	0.0025	0.0063	0.00
COEF-2	3	B3	0.010	0.00	1.00	0.050	0.0020	0.0063	0.00
COEF-2	4	L1	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00
COEF-2	5	L2	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00
COEF-2	6	L3	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00
COEF-2	7	L4	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00

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
COEF-3	1	B1	1.00	0.060	0.50	0.08	1.35	0.10	0.00	0.00
COEF-3	2	B2	1.00	0.060	0.50	0.08	1.35	0.10	0.00	0.00
COEF-3	3	B3	1.00	0.060	0.50	0.08	1.35	0.10	0.00	0.00
COEF-3	4	L1	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00
COEF-3	5	L2	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00
COEF-3	6	L3	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00
COEF-3	7	L4	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00

ENDATA14

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

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

ENDATA15

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

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

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3	NO3+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	ORG-N	COLI	NCM	DO
NONPOINT	1	B1	68.00	1.00	0.00	0.00	0.00
NONPOINT	2	B2	198.00	14.50	0.00	0.00	0.00
NONPOINT	3	B3	120.00	9.00	0.00	0.00	0.00
NONPOINT	4	L1	2600.00	100.00	0.00	0.00	0.00
NONPOINT	5	L2	5000.00	325.00	0.00	0.00	0.00
NONPOINT	6	L3	16600.00	750.00	0.00	0.00	0.00
NONPOINT	7	L4	3600.00	150.00	0.00	0.00	0.00

ENDATA19

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

CARD TYPE	ELEMENT	NAME	UNIT	FLOW	TEMP	SALIN	CM-I	CM-II
HDWTR-1	1	Bayou Verret	0	0.00210	28.800	0.720	1250.000	0.000

ENDATA20

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

CARD TYPE	ELEMENT	NAME	DO	BOD	ORG-N	NH3	NO3+2
HDWTR-2	1	Bayou Verret	3.20	4.03	1.19	0.22	0.05

ENDATA21

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

CARD TYPE	ELEMENT	NAME	PHOS	CHL A	COLI	NCM
HDWTR-3	1	Bayou Verret	0.20	12.00	0.00	0.00

ENDATA22

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

CARD TYPE	JUNCTION ELEMENT	UPSTRM ELEMENT	NAME

ENDATA23

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

CARD TYPE	ELEMENT	NAME	FLOW	TEMP	SAL	CM-I	CM-II
WSTLD-1	68	LUMBER CANAL	0.90000	30.200	0.560	995.000	0.000
WSTLD-1	68	DAVIS POND	10.00000	30.200	0.560	995.000	0.000

ENDATA24

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

CARD TYPE	ELEMENT	NAME	DO	BOD	% BOD RMVL	ORG-N	NH3	% NITRIF	NO3+2
WSTLD-2	68	LUMBER CANAL	1.47	4.03	0.00	1.19	0.22	0.00	0.05
WSTLD-2	68	DAVIS POND	1.47	4.03	0.00	1.19	0.22	0.00	0.05

ENDATA25

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

CARD TYPE	ELEMENT	NAME	PHOS	CHL A	COLI	NCM
WSTLD-3	68	LUMBER CANAL	0.20	12.00	0.00	0.00
WSTLD-3	68	DAVIS POND	0.20	12.00	0.00	0.00

ENDATA26

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

CARD TYPE	CONSTITUENT		CONCENTRATION	
LOWER BC	TEMPERATURE	=	31.200	DEG C
LOWER BC	SALINTIY	=	0.950	PPT
LOWER BC	CONSERVATIVE MATERIAL I	=	1695.000	umhos
LOWER BC	CONSERVATIVE MATERIAL II	=	0.000	
LOWER BC	DISSOLVED OXYGEN	=	6.460	MG/L
LOWER BC	BIOCHEMICAL OXYGEN DEMAND	=	4.180	MG/L
LOWER BC	ORGANIC NITROGEN	=	1.010	MG/L
LOWER BC	AMMONIA NITROGEN	=	0.130	MG/L
LOWER BC	NITRATE + NITRITE NITROGEN	=	0.050	MG/L
LOWER BC	PHOSPHORUS	=	0.060	MG/L
LOWER BC	CHLOROPHYLL A	=	17.500	UG/L
LOWER BC	COLIFORM	=	0.000	#/100 ML
LOWER BC	NONCONSERVATIVE MATERIAL	=	0.000	

ENDATA27

$$$ DATA TYPE 28 (FLOW AUGMENTATION DATA) $$$

CARD TYPE	REACH	AVAIL HDWS	TARGET	ORDER OF AVAIL SOURCES

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

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

ENDATA30

1

.....NO ERRORS DETECTED IN INPUT DATA

.....HYDRAULIC CALCULATIONS COMPLETED

.....TRIDIAGONAL MATRIX TERMS INITIALIZED

.....PHOTOSYNTHETIC RATES CONVERGENT IN 467 ITERATIONS

.....OXYGEN DEPENDENT RATES CONVERGENT IN 1 ITERATIONS

.....CONSTITUENT CALCULATIONS COMPLETED

1

FINAL REPORT Bayou Verret
REACH NO. 1 Bayou Verret #1

QUAL-TX calibration for Lake Cataouatche, LA
Final calibration run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
1	HDWTR	0.0021	28.80	0.72	1250.0	0.0	3.20	4.03	4.03	1.19	0.22	0.05	0.20	12.0	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
1	13.00	12.90	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
2	12.90	12.80	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
3	12.80	12.70	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
4	12.70	12.60	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
5	12.60	12.50	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
6	12.50	12.40	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
7	12.40	12.30	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
8	12.30	12.20	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
9	12.20	12.10	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
10	12.10	12.00	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
11	12.00	11.90	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
12	11.90	11.80	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
13	11.80	11.70	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
14	11.70	11.60	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
15	11.60	11.50	0.0021	0.0	0.000	88.61	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.000
TOT						1329.13			241158.	89317.6					
AVG					0.000		2.70	59.5			160.8				
CUM						1329.13									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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	12.900	7.70	0.28	0.07	0.00	0.00	3.45	3.45	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
2	12.800	7.69	0.28	0.07	0.00	0.00	3.46	3.46	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
3	12.700	7.69	0.28	0.07	0.00	0.00	3.46	3.46	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
4	12.600	7.68	0.28	0.08	0.00	0.00	3.47	3.47	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
5	12.500	7.68	0.28	0.08	0.00	0.00	3.48	3.48	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
6	12.400	7.67	0.28	0.08	0.00	0.00	3.49	3.49	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
7	12.300	7.67	0.28	0.08	0.00	0.00	3.50	3.50	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
8	12.200	7.67	0.28	0.08	0.00	0.00	3.51	3.51	0.01	0.00	0.07	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00
9	12.100	7.66	0.28	0.08	0.00	0.00	3.52	3.52	0.01	0.00	0.07	0.00	0.00	0.01	0.26	0.00	0.00	0.00	0.00
10	12.000	7.66	0.28	0.08	0.00	0.00	3.53	3.53	0.01	0.00	0.07	0.00	0.00	0.01	0.26	0.00	0.00	0.00	0.00
11	11.900	7.65	0.28	0.08	0.00	0.00	3.55	3.55	0.01	0.00	0.07	0.00	0.00	0.01	0.26	0.00	0.00	0.00	0.00
12	11.800	7.65	0.28	0.08	0.00	0.00	3.56	3.56	0.01	0.00	0.07	0.00	0.00	0.01	0.26	0.00	0.00	0.00	0.00
13	11.700	7.64	0.28	0.08	0.00	0.00	3.57	3.57	0.01	0.00	0.07	0.00	0.00	0.01	0.26	0.00	0.00	0.00	0.00
14	11.600	7.64	0.28	0.08	0.00	0.00	3.59	3.59	0.01	0.00	0.07	0.00	0.00	0.01	0.27	0.00	0.00	0.00	0.00
15	11.500	7.64	0.28	0.08	0.00	0.00	3.60	3.60	0.01	0.00	0.07	0.00	0.00	0.01	0.27	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		1.60	0.01		0.05	0.00	0.00	0.01			0.00	0.00	
AVG 20 DEG C RATE			0.24		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
1	12.900	28.73	0.7	1171.2	0.0	2.74	3.92	3.92	1.16	0.22	0.28	1.66	0.23	13.8	0.0	0.	0.00
2	12.800	28.77	0.7	1171.0	0.0	2.73	3.92	3.92	1.17	0.22	0.28	1.66	0.23	13.8	0.0	0.	0.00
3	12.700	28.80	0.7	1170.8	0.0	2.73	3.92	3.92	1.17	0.22	0.28	1.67	0.23	13.8	0.0	0.	0.00
4	12.600	28.83	0.7	1170.6	0.0	2.72	3.93	3.93	1.18	0.22	0.28	1.68	0.23	13.8	0.0	0.	0.00
5	12.500	28.87	0.7	1170.4	0.0	2.71	3.94	3.94	1.19	0.22	0.28	1.69	0.23	13.9	0.0	0.	0.00
6	12.400	28.90	0.7	1170.2	0.0	2.70	3.95	3.95	1.20	0.22	0.28	1.70	0.23	13.9	0.0	0.	0.00
7	12.300	28.93	0.7	1170.0	0.0	2.69	3.97	3.97	1.21	0.22	0.28	1.71	0.23	14.0	0.0	0.	0.00
8	12.200	28.97	0.7	1169.8	0.0	2.68	3.99	3.99	1.23	0.22	0.28	1.73	0.23	14.1	0.0	0.	0.00
9	12.100	29.00	0.7	1169.6	0.0	2.67	4.02	4.02	1.25	0.23	0.28	1.75	0.23	14.2	0.0	0.	0.00
10	12.000	29.03	0.7	1169.4	0.0	2.67	4.05	4.05	1.27	0.23	0.28	1.77	0.22	14.3	0.0	0.	0.00
11	11.900	29.07	0.7	1169.2	0.0	2.66	4.09	4.09	1.29	0.23	0.28	1.80	0.22	14.4	0.0	0.	0.00
12	11.800	29.10	0.7	1168.9	0.0	2.66	4.13	4.13	1.32	0.23	0.27	1.82	0.22	14.5	0.0	0.	0.00
13	11.700	29.13	0.7	1168.7	0.0	2.66	4.18	4.18	1.35	0.23	0.27	1.85	0.22	14.7	0.0	0.	0.00
14	11.600	29.17	0.7	1168.5	0.0	2.67	4.24	4.24	1.38	0.23	0.27	1.88	0.22	14.8	0.0	0.	0.00
15	11.500	29.20	0.7	1168.3	0.0	2.69	4.31	4.31	1.41	0.23	0.27	1.92	0.22	15.0	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
1	12.900	0.80	0.56	0.23	.23	.71	.88	.79	.19	0.37	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
2	12.800	0.80	0.56	0.23	.23	.71	.88	.79	.19	0.37	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
3	12.700	0.80	0.56	0.23	.23	.71	.88	.79	.19	0.37	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
4	12.600	0.80	0.56	0.23	.23	.71	.88	.79	.19	0.38	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
5	12.500	0.80	0.56	0.23	.23	.71	.88	.79	.19	0.38	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
6	12.400	0.80	0.56	0.23	.23	.71	.88	.79	.19	0.38	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
7	12.300	0.80	0.55	0.23	.23	.71	.88	.79	.18	0.38	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
8	12.200	0.79	0.55	0.23	.23	.71	.88	.79	.18	0.38	0.15	2.00	.00	.00	.00	.00	.00	0.00	0.00	0.00
9	12.100	0.79	0.55	0.23	.23	.72	.88	.79	.18	0.38	0.15	1.99	.00	.00	.00	.00	.00	0.00	0.00	0.00
10	12.000	0.79	0.55	0.23	.23	.72	.88	.79	.18	0.38	0.15	1.99	.00	.00	.00	.00	.00	0.00	0.00	0.00
11	11.900	0.79	0.55	0.23	.23	.72	.88	.79	.18	0.38	0.15	1.99	.00	.00	.00	.00	.00	0.00	0.00	0.00
12	11.800	0.79	0.54	0.23	.23	.72	.88	.79	.18	0.38	0.15	1.99	.00	.00	.00	.00	.00	0.00	0.00	0.00
13	11.700	0.79	0.54	0.23	.23	.72	.88	.79	.18	0.38	0.15	1.98	.00	.00	.00	.00	.00	0.00	0.00	0.00
14	11.600	0.79	0.54	0.23	.23	.72	.88	.79	.18	0.38	0.15	1.98	.00	.00	.00	.00	.00	0.00	0.00	0.00
15	11.500	0.79	0.54	0.23	.23	.72	.88	.79	.18	0.38	0.15	1.97	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.50						1.35	0.10							0.00	0.00	

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

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FINAL REPORT Bayou Verret
REACH NO. 2 Bayou Verret #2

QUAL-TX calibration for Lake Cataouatche, LA
Final calibration run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
16	UPR RCH	0.0021	29.20	0.69	1168.3	0.0	2.69	4.31	4.31	1.41	0.23	0.27	0.22	15.0	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
16	11.50	11.40	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
17	11.40	11.30	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
18	11.30	11.20	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
19	11.20	11.10	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
20	11.10	11.00	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
21	11.00	10.90	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
22	10.90	10.80	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
23	10.80	10.70	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
24	10.70	10.60	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
25	10.60	10.50	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
26	10.50	10.40	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
27	10.40	10.30	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
28	10.30	10.20	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
29	10.20	10.10	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
30	10.10	10.00	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
31	10.00	9.90	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
32	9.90	9.80	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
33	9.80	9.70	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
34	9.70	9.60	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
35	9.60	9.50	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
36	9.50	9.40	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
37	9.40	9.30	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
38	9.30	9.20	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
39	9.20	9.10	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
40	9.10	9.00	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
41	9.00	8.90	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
42	8.90	8.80	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
43	8.80	8.70	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
44	8.70	8.60	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
45	8.60	8.50	0.0021	0.0	0.000	96.19	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.000
TOT						2885.58			523560.	218150.1					
AVG					0.000		2.40	72.7			174.5				
CUM						4214.71									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
16	11.400	7.63	0.33	0.08	0.00	0.00	3.62	3.62	0.01	0.00	0.07	0.00	0.00	0.01	0.33	0.00	0.00	0.00	0.00
17	11.300	7.63	0.33	0.08	0.00	0.00	3.63	3.63	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
18	11.200	7.63	0.33	0.08	0.00	0.00	3.64	3.64	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
19	11.100	7.63	0.33	0.08	0.00	0.00	3.64	3.64	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
20	11.000	7.63	0.33	0.08	0.00	0.00	3.65	3.65	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
21	10.900	7.62	0.33	0.08	0.00	0.00	3.66	3.66	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
22	10.800	7.62	0.33	0.08	0.00	0.00	3.67	3.67	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
23	10.700	7.62	0.33	0.08	0.00	0.00	3.67	3.67	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
24	10.600	7.62	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
25	10.500	7.62	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
26	10.400	7.62	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
27	10.300	7.61	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
28	10.200	7.61	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
29	10.100	7.61	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
30	10.000	7.61	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
31	9.900	7.61	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
32	9.800	7.61	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
33	9.700	7.60	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
34	9.600	7.60	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
35	9.500	7.60	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
36	9.400	7.60	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.34	0.00	0.00	0.00	0.00
37	9.300	7.60	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.33	0.00	0.00	0.00	0.00
38	9.200	7.60	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.33	0.00	0.00	0.00	0.00
39	9.100	7.59	0.33	0.08	0.00	0.00	3.69	3.69	0.01	0.00	0.07	0.00	0.00	0.01	0.33	0.00	0.00	0.00	0.00
40	9.000	7.59	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.07	0.00	0.00	0.01	0.33	0.00	0.00	0.00	0.00
41	8.900	7.59	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.07	0.00	0.00	0.01	0.32	0.00	0.00	0.00	0.00
42	8.800	7.59	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.07	0.00	0.00	0.01	0.32	0.00	0.00	0.00	0.00
43	8.700	7.59	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.07	0.00	0.00	0.01	0.32	0.00	0.00	0.00	0.00
44	8.600	7.58	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.08	0.00	0.00	0.01	0.31	0.00	0.00	0.00	0.00
45	8.500	7.58	0.33	0.08	0.00	0.00	3.68	3.68	0.01	0.00	0.08	0.00	0.00	0.01	0.31	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		1.60	0.01		0.05	0.00	0.00	0.01			0.00	0.00	
AVG 20 DEG C RATE			0.28		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
16	11.400	29.21	0.7	1168.1	0.0	2.72	4.39	4.39	1.45	0.23	0.27	1.95	0.22	15.2	0.0	0.	0.00
17	11.300	29.23	0.7	1167.9	0.0	2.74	4.45	4.45	1.48	0.24	0.27	1.99	0.22	15.4	0.0	0.	0.00
18	11.200	29.24	0.7	1167.7	0.0	2.75	4.51	4.51	1.51	0.24	0.27	2.02	0.22	15.5	0.0	0.	0.00
19	11.100	29.25	0.7	1167.5	0.0	2.76	4.55	4.55	1.54	0.24	0.26	2.04	0.21	15.6	0.0	0.	0.00
20	11.000	29.27	0.7	1167.3	0.0	2.76	4.60	4.60	1.57	0.24	0.26	2.07	0.21	15.7	0.0	0.	0.00
21	10.900	29.28	0.7	1167.1	0.0	2.76	4.63	4.63	1.59	0.24	0.26	2.10	0.21	15.8	0.0	0.	0.00
22	10.800	29.29	0.7	1166.9	0.0	2.75	4.66	4.66	1.62	0.24	0.26	2.12	0.21	15.9	0.0	0.	0.00
23	10.700	29.31	0.7	1166.7	0.0	2.75	4.68	4.68	1.64	0.24	0.26	2.14	0.21	16.0	0.0	0.	0.00
24	10.600	29.32	0.7	1166.5	0.0	2.74	4.70	4.70	1.66	0.24	0.26	2.16	0.21	16.0	0.0	0.	0.00
25	10.500	29.33	0.7	1166.3	0.0	2.74	4.72	4.72	1.67	0.24	0.26	2.18	0.21	16.0	0.0	0.	0.00
26	10.400	29.35	0.7	1166.1	0.0	2.73	4.73	4.73	1.69	0.25	0.26	2.19	0.20	16.1	0.0	0.	0.00
27	10.300	29.36	0.7	1165.9	0.0	2.72	4.74	4.74	1.70	0.25	0.26	2.20	0.20	16.1	0.0	0.	0.00
28	10.200	29.37	0.7	1165.7	0.0	2.72	4.75	4.75	1.71	0.25	0.25	2.22	0.20	16.1	0.0	0.	0.00
29	10.100	29.39	0.7	1165.5	0.0	2.71	4.75	4.75	1.72	0.25	0.25	2.23	0.20	16.0	0.0	0.	0.00
30	10.000	29.40	0.7	1165.3	0.0	2.71	4.75	4.75	1.73	0.25	0.25	2.23	0.20	16.0	0.0	0.	0.00
31	9.900	29.41	0.7	1165.1	0.0	2.71	4.75	4.75	1.74	0.25	0.25	2.24	0.20	16.0	0.0	0.	0.00
32	9.800	29.43	0.7	1164.9	0.0	2.71	4.74	4.74	1.75	0.25	0.25	2.24	0.20	15.9	0.0	0.	0.00
33	9.700	29.44	0.7	1164.7	0.0	2.71	4.74	4.74	1.75	0.25	0.25	2.25	0.20	15.9	0.0	0.	0.00
34	9.600	29.45	0.7	1164.5	0.0	2.71	4.72	4.72	1.75	0.25	0.25	2.25	0.19	15.8	0.0	0.	0.00
35	9.500	29.47	0.7	1164.3	0.0	2.71	4.71	4.71	1.76	0.24	0.24	2.24	0.19	15.7	0.0	0.	0.00
36	9.400	29.48	0.7	1164.1	0.0	2.72	4.69	4.69	1.76	0.24	0.24	2.24	0.19	15.7	0.0	0.	0.00
37	9.300	29.49	0.7	1163.9	0.0	2.73	4.67	4.67	1.75	0.24	0.24	2.23	0.19	15.6	0.0	0.	0.00
38	9.200	29.51	0.7	1163.7	0.0	2.74	4.65	4.65	1.75	0.24	0.24	2.23	0.19	15.5	0.0	0.	0.00
39	9.100	29.52	0.7	1163.4	0.0	2.75	4.62	4.62	1.75	0.24	0.23	2.22	0.19	15.4	0.0	0.	0.00
40	9.000	29.53	0.7	1163.2	0.0	2.78	4.58	4.58	1.74	0.24	0.23	2.20	0.19	15.3	0.0	0.	0.00
41	8.900	29.55	0.7	1163.0	0.0	2.80	4.54	4.54	1.73	0.23	0.22	2.19	0.18	15.2	0.0	0.	0.00
42	8.800	29.56	0.7	1162.8	0.0	2.84	4.49	4.49	1.72	0.23	0.22	2.17	0.18	15.1	0.0	0.	0.00
43	8.700	29.57	0.7	1162.6	0.0	2.89	4.44	4.44	1.71	0.23	0.22	2.15	0.18	15.1	0.0	0.	0.00
44	8.600	29.59	0.7	1162.4	0.0	2.96	4.38	4.38	1.70	0.22	0.21	2.13	0.18	15.0	0.0	0.	0.00
45	8.500	29.60	0.7	1162.2	0.0	3.04	4.31	4.31	1.68	0.22	0.21	2.11	0.18	15.0	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
16	11.400	0.78	0.53	0.26	.26	.72	.88	.79	.20	0.42	0.15	2.20	.00	.00	.00	.00	.00	0.00	0.00	0.00
17	11.300	0.78	0.53	0.26	.26	.72	.88	.79	.20	0.42	0.15	2.19	.00	.00	.00	.00	.00	0.00	0.00	0.00
18	11.200	0.78	0.53	0.26	.26	.71	.88	.79	.20	0.42	0.15	2.19	.00	.00	.00	.00	.00	0.00	0.00	0.00
19	11.100	0.78	0.53	0.26	.26	.71	.88	.79	.20	0.42	0.15	2.18	.00	.00	.00	.00	.00	0.00	0.00	0.00
20	11.000	0.78	0.52	0.26	.26	.71	.88	.79	.20	0.42	0.15	2.18	.00	.00	.00	.00	.00	0.00	0.00	0.00
21	10.900	0.78	0.52	0.26	.26	.71	.88	.79	.20	0.42	0.15	2.18	.00	.00	.00	.00	.00	0.00	0.00	0.00
22	10.800	0.78	0.52	0.26	.26	.72	.88	.79	.20	0.42	0.15	2.18	.00	.00	.00	.00	.00	0.00	0.00	0.00
23	10.700	0.78	0.52	0.26	.26	.72	.87	.79	.20	0.42	0.15	2.18	.00	.00	.00	.00	.00	0.00	0.00	0.00
24	10.600	0.78	0.52	0.26	.26	.72	.87	.79	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
25	10.500	0.78	0.51	0.26	.26	.72	.87	.79	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
26	10.400	0.78	0.51	0.26	.26	.72	.87	.79	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
27	10.300	0.78	0.51	0.26	.26	.71	.87	.79	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
28	10.200	0.78	0.51	0.26	.26	.71	.87	.79	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
29	10.100	0.78	0.51	0.26	.26	.71	.87	.78	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
30	10.000	0.78	0.51	0.26	.26	.71	.87	.78	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
31	9.900	0.78	0.50	0.26	.26	.71	.87	.78	.20	0.42	0.15	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
32	9.800	0.78	0.50	0.26	.26	.71	.87	.78	.20	0.42	0.15	2.16	.00	.00	.00	.00	.00	0.00	0.00	0.00
33	9.700	0.78	0.50	0.26	.26	.71	.87	.78	.20	0.42	0.15	2.16	.00	.00	.00	.00	.00	0.00	0.00	0.00
34	9.600	0.78	0.50	0.26	.26	.71	.87	.78	.20	0.42	0.15	2.16	.00	.00	.00	.00	.00	0.00	0.00	0.00
35	9.500	0.78	0.50	0.26	.26	.71	.87	.78	.20	0.42	0.15	2.16	.00	.00	.00	.00	.00	0.00	0.00	0.00
36	9.400	0.78	0.50	0.26	.26	.71	.86	.78	.20	0.42	0.15	2.16	.00	.00	.00	.00	.00	0.00	0.00	0.00
37	9.300	0.78	0.50	0.26	.26	.71	.86	.78	.20	0.42	0.15	2.16	.00	.00	.00	.00	.00	0.00	0.00	0.00
38	9.200	0.78	0.50	0.26	.26	.70	.86	.78	.20	0.42	0.15	2.15	.00	.00	.00	.00	.00	0.00	0.00	0.00
39	9.100	0.78	0.49	0.26	.26	.70	.86	.77	.20	0.42	0.15	2.15	.00	.00	.00	.00	.00	0.00	0.00	0.00
40	9.000	0.78	0.49	0.26	.26	.70	.86	.77	.20	0.42	0.15	2.15	.00	.00	.00	.00	.00	0.00	0.00	0.00
41	8.900	0.78	0.49	0.26	.26	.70	.86	.77	.20	0.41	0.16	2.14	.00	.00	.00	.00	.00	0.00	0.00	0.00
42	8.800	0.79	0.49	0.26	.26	.69	.86	.77	.20	0.41	0.16	2.14	.00	.00	.00	.00	.00	0.00	0.00	0.00
43	8.700	0.79	0.49	0.26	.26	.69	.86	.76	.20	0.41	0.16	2.13	.00	.00	.00	.00	.00	0.00	0.00	0.00
44	8.600	0.79	0.49	0.26	.26	.68	.86	.76	.20	0.41	0.16	2.12	.00	.00	.00	.00	.00	0.00	0.00	0.00
45	8.500	0.79	0.49	0.26	.26	.68	.86	.76	.20	0.41	0.16	2.11	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.50						1.35	0.10							0.00	0.00	

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

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FINAL REPORT Bayou Verret
REACH NO. 3 Bayou Verret #3

QUAL-TX calibration for Lake Cataouatche, LA
Final calibration run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
46	UPR RCH	0.0021	29.60	0.67	1162.2	0.0	3.04	4.31	4.31	1.68	0.22	0.21	0.18	15.0	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
46	8.50	8.40	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
47	8.40	8.30	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
48	8.30	8.20	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
49	8.20	8.10	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
50	8.10	8.00	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
51	8.00	7.90	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
52	7.90	7.80	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
53	7.80	7.70	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
54	7.70	7.60	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
55	7.60	7.50	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
56	7.50	7.40	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
57	7.40	7.30	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
58	7.30	7.20	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
59	7.20	7.10	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
60	7.10	7.00	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
61	7.00	6.90	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
62	6.90	6.80	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
63	6.80	6.70	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
64	6.70	6.60	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
65	6.60	6.50	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
66	6.50	6.40	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
67	6.40	6.30	0.0021	0.0	0.000	102.25	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.000
TOT						2249.58			408163.	194363.5					
AVG					0.000		2.10	88.3			185.5				
CUM						6464.29									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
46	8.400	7.57	0.37	0.08	0.00	0.00	3.14	3.14	0.01	0.00	0.08	0.00	0.00	0.01	0.38	0.00	0.00	0.00	0.00
47	8.300	7.57	0.37	0.08	0.00	0.00	3.15	3.15	0.01	0.00	0.08	0.00	0.00	0.01	0.38	0.00	0.00	0.00	0.00
48	8.200	7.56	0.37	0.08	0.00	0.00	3.16	3.16	0.01	0.00	0.08	0.00	0.00	0.01	0.37	0.00	0.00	0.00	0.00
49	8.100	7.55	0.37	0.08	0.00	0.00	3.17	3.17	0.01	0.00	0.08	0.00	0.00	0.01	0.37	0.00	0.00	0.00	0.00
50	8.000	7.54	0.37	0.08	0.00	0.00	3.17	3.17	0.01	0.00	0.08	0.00	0.00	0.01	0.37	0.00	0.00	0.00	0.00
51	7.900	7.53	0.37	0.08	0.00	0.00	3.18	3.18	0.01	0.00	0.08	0.00	0.00	0.01	0.36	0.00	0.00	0.00	0.00
52	7.800	7.53	0.37	0.08	0.00	0.00	3.19	3.19	0.01	0.00	0.08	0.00	0.00	0.01	0.36	0.00	0.00	0.00	0.00
53	7.700	7.52	0.37	0.08	0.00	0.00	3.20	3.20	0.01	0.00	0.08	0.00	0.00	0.01	0.36	0.00	0.00	0.00	0.00
54	7.600	7.51	0.37	0.08	0.00	0.00	3.21	3.21	0.01	0.00	0.08	0.00	0.00	0.01	0.36	0.00	0.00	0.00	0.00
55	7.500	7.50	0.37	0.08	0.00	0.00	3.22	3.22	0.01	0.00	0.08	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
56	7.400	7.50	0.37	0.08	0.00	0.00	3.24	3.24	0.01	0.00	0.08	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
57	7.300	7.49	0.38	0.08	0.00	0.00	3.26	3.26	0.01	0.00	0.08	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
58	7.200	7.48	0.38	0.08	0.00	0.00	3.28	3.28	0.01	0.00	0.08	0.00	0.00	0.01	0.35	0.00	0.00	0.00	0.00
59	7.100	7.47	0.38	0.08	0.00	0.00	3.30	3.30	0.01	0.00	0.08	0.00	0.00	0.01	0.36	0.00	0.00	0.00	0.00
60	7.000	7.46	0.38	0.08	0.00	0.00	3.33	3.33	0.01	0.00	0.08	0.00	0.00	0.01	0.36	0.00	0.00	0.00	0.00
61	6.900	7.46	0.38	0.08	0.00	0.00	3.36	3.36	0.01	0.00	0.09	0.00	0.00	0.01	0.36	0.00	0.00	0.00	0.00
62	6.800	7.45	0.38	0.08	0.00	0.00	3.40	3.40	0.01	0.00	0.09	0.00	0.00	0.01	0.37	0.00	0.00	0.00	0.00
63	6.700	7.44	0.38	0.08	0.00	0.00	3.44	3.44	0.01	0.00	0.09	0.00	0.00	0.01	0.38	0.00	0.00	0.00	0.00
64	6.600	7.43	0.38	0.08	0.00	0.00	3.49	3.49	0.01	0.00	0.09	0.00	0.00	0.01	0.39	0.00	0.00	0.00	0.00
65	6.500	7.42	0.38	0.08	0.00	0.00	3.55	3.55	0.01	0.00	0.09	0.00	0.00	0.01	0.41	0.00	0.00	0.00	0.00
66	6.400	7.42	0.38	0.08	0.00	0.00	3.62	3.62	0.01	0.00	0.09	0.00	0.00	0.01	0.43	0.00	0.00	0.00	0.00
67	6.300	7.41	0.38	0.08	0.00	0.00	3.70	3.70	0.01	0.00	0.10	0.00	0.00	0.01	0.45	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		1.30	0.01		0.05	0.00	0.00	0.01			0.00	0.00	
AVG 20 DEG C RATE			0.31		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
46	8.400	29.66	0.7	1162.0	0.0	3.15	4.23	4.23	1.67	0.21	0.20	2.08	0.18	14.9	0.0	0.	0.00
47	8.300	29.73	0.7	1161.8	0.0	3.22	4.17	4.17	1.65	0.21	0.20	2.06	0.17	14.9	0.0	0.	0.00
48	8.200	29.79	0.6	1161.6	0.0	3.28	4.11	4.11	1.64	0.21	0.19	2.03	0.17	14.8	0.0	0.	0.00
49	8.100	29.85	0.6	1161.4	0.0	3.31	4.05	4.05	1.62	0.20	0.19	2.01	0.17	14.8	0.0	0.	0.00
50	8.000	29.92	0.6	1161.2	0.0	3.34	4.00	4.00	1.60	0.20	0.18	1.98	0.17	14.7	0.0	0.	0.00
51	7.900	29.98	0.6	1161.0	0.0	3.36	3.96	3.96	1.58	0.19	0.18	1.96	0.17	14.7	0.0	0.	0.00
52	7.800	30.05	0.6	1160.8	0.0	3.37	3.92	3.92	1.57	0.19	0.17	1.93	0.16	14.6	0.0	0.	0.00
53	7.700	30.11	0.6	1160.6	0.0	3.37	3.89	3.89	1.55	0.19	0.17	1.90	0.16	14.6	0.0	0.	0.00
54	7.600	30.17	0.6	1160.4	0.0	3.38	3.85	3.85	1.53	0.18	0.17	1.87	0.16	14.6	0.0	0.	0.00
55	7.500	30.24	0.6	1160.2	0.0	3.38	3.82	3.82	1.50	0.18	0.16	1.85	0.16	14.6	0.0	0.	0.00
56	7.400	30.30	0.6	1160.0	0.0	3.39	3.80	3.80	1.48	0.18	0.16	1.82	0.15	14.7	0.0	0.	0.00
57	7.300	30.36	0.6	1159.8	0.0	3.40	3.77	3.77	1.46	0.17	0.16	1.79	0.15	14.8	0.0	0.	0.00
58	7.200	30.43	0.6	1159.6	0.0	3.41	3.75	3.75	1.44	0.17	0.15	1.76	0.15	15.0	0.0	0.	0.00
59	7.100	30.49	0.6	1159.4	0.0	3.44	3.73	3.73	1.41	0.16	0.15	1.73	0.15	15.3	0.0	0.	0.00
60	7.000	30.55	0.6	1159.2	0.0	3.48	3.72	3.72	1.39	0.16	0.15	1.70	0.14	15.6	0.0	0.	0.00
61	6.900	30.62	0.6	1159.0	0.0	3.55	3.70	3.70	1.36	0.16	0.15	1.66	0.14	16.0	0.0	0.	0.00
62	6.800	30.68	0.6	1158.7	0.0	3.64	3.69	3.69	1.33	0.15	0.15	1.63	0.14	16.5	0.0	0.	0.00
63	6.700	30.75	0.5	1158.5	0.0	3.76	3.67	3.67	1.30	0.15	0.15	1.60	0.13	17.1	0.0	0.	0.00
64	6.600	30.81	0.5	1158.3	0.0	3.95	3.66	3.66	1.27	0.15	0.15	1.57	0.13	17.9	0.0	0.	0.00
65	6.500	30.87	0.5	1158.1	0.0	4.20	3.65	3.65	1.24	0.14	0.16	1.54	0.13	18.8	0.0	0.	0.00
66	6.400	30.94	0.5	1157.9	0.0	4.55	3.65	3.65	1.20	0.14	0.17	1.50	0.12	19.9	0.0	0.	0.00
67	6.300	31.00	0.5	1157.7	0.0	5.03	3.64	3.64	1.16	0.13	0.17	1.47	0.12	21.3	0.0	0.	0.00

* CM-I = cond umhos
** G/CU M

CM-II =

NCM =

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
46	8.400	0.79	0.49	0.30	.29	.67	.85	.75	.22	0.46	0.16	2.36	.00	.00	.00	.00	.00	0.00	0.00	0.00
47	8.300	0.79	0.48	0.30	.29	.67	.85	.75	.22	0.46	0.16	2.35	.00	.00	.00	.00	.00	0.00	0.00	0.00
48	8.200	0.79	0.48	0.30	.29	.66	.85	.75	.22	0.46	0.16	2.34	.00	.00	.00	.00	.00	0.00	0.00	0.00
49	8.100	0.79	0.48	0.30	.29	.66	.85	.74	.22	0.46	0.16	2.33	.00	.00	.00	.00	.00	0.00	0.00	0.00
50	8.000	0.79	0.48	0.30	.29	.66	.85	.74	.22	0.46	0.16	2.32	.00	.00	.00	.00	.00	0.00	0.00	0.00
51	7.900	0.79	0.48	0.30	.29	.65	.85	.74	.21	0.46	0.16	2.31	.00	.00	.00	.00	.00	0.00	0.00	0.00
52	7.800	0.79	0.48	0.30	.29	.65	.85	.73	.21	0.46	0.16	2.30	.00	.00	.00	.00	.00	0.00	0.00	0.00
53	7.700	0.79	0.48	0.30	.29	.64	.84	.73	.21	0.45	0.16	2.29	.00	.00	.00	.00	.00	0.00	0.00	0.00
54	7.600	0.79	0.48	0.30	.29	.64	.84	.72	.21	0.45	0.16	2.27	.00	.00	.00	.00	.00	0.00	0.00	0.00
55	7.500	0.79	0.48	0.30	.29	.63	.84	.72	.21	0.45	0.16	2.26	.00	.00	.00	.00	.00	0.00	0.00	0.00
56	7.400	0.79	0.48	0.30	.29	.63	.84	.72	.21	0.45	0.16	2.25	.00	.00	.00	.00	.00	0.00	0.00	0.00
57	7.300	0.79	0.48	0.30	.29	.62	.83	.71	.21	0.45	0.16	2.23	.00	.00	.00	.00	.00	0.00	0.00	0.00
58	7.200	0.79	0.48	0.30	.29	.62	.83	.71	.21	0.45	0.16	2.22	.00	.00	.00	.00	.00	0.00	0.00	0.00
59	7.100	0.78	0.48	0.31	.29	.61	.83	.70	.20	0.45	0.16	2.20	.00	.00	.00	.00	.00	0.00	0.00	0.00
60	7.000	0.78	0.48	0.31	.29	.61	.83	.70	.20	0.44	0.16	2.18	.00	.00	.00	.00	.00	0.00	0.00	0.00
61	6.900	0.78	0.49	0.31	.29	.61	.82	.70	.20	0.44	0.16	2.17	.00	.00	.00	.00	.00	0.00	0.00	0.00
62	6.800	0.77	0.49	0.31	.29	.60	.82	.69	.20	0.44	0.16	2.15	.00	.00	.00	.00	.00	0.00	0.00	0.00
63	6.700	0.77	0.50	0.31	.28	.60	.82	.69	.20	0.44	0.16	2.13	.00	.00	.00	.00	.00	0.00	0.00	0.00
64	6.600	0.76	0.51	0.31	.28	.60	.81	.69	.20	0.43	0.16	2.12	.00	.00	.00	.00	.00	0.00	0.00	0.00
65	6.500	0.76	0.53	0.31	.28	.60	.81	.69	.19	0.43	0.16	2.10	.00	.00	.00	.00	.00	0.00	0.00	0.00
66	6.400	0.75	0.55	0.31	.28	.60	.80	.69	.19	0.43	0.17	2.09	.00	.00	.00	.00	.00	0.00	0.00	0.00
67	6.300	0.74	0.57	0.31	.27	.61	.80	.69	.19	0.43	0.17	2.07	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.50						1.35	0.10							0.00	0.00	

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

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FINAL REPORT Bayou Verret
REACH NO. 4 Lake Cataouatche #1

QUAL-TX calibration for Lake Cataouatche, LA
Final calibration run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
68	UPR RCH	0.0021	31.00	0.52	1157.7	0.0	5.03	3.64	3.64	1.16	0.13	0.17	0.12	21.3	0.	0.00
68	WSTLD	0.9000	30.20	0.56	995.0	0.0	1.47	4.03	4.03	1.19	0.22	0.05	0.20	12.0	0.	0.00
68	WSTLD	10.0000	30.20	0.56	995.0	0.0	1.47	4.03	4.03	1.19	0.22	0.05	0.20	12.0	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
68	6.30	4.90	10.9021	100.0	0.002	10.47	2.20	3201.0	9859155.	4481434.0	7042.3	0.	0.000	2.600	0.002
TOT						10.47			9859155.	4481434.0					
AVG					0.002		2.20	3201.0			7042.3				
CUM						6474.76									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
68	4.900	7.35	0.46	0.08	0.00	0.00	1.47	1.47	0.01	0.00	0.20	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.50	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.37		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
68	4.900	31.40	0.8	1157.7	0.0	5.06	3.64	3.64	1.16	0.13	0.18	1.47	0.12	21.3	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
68	4.900	0.74	0.57	0.12	.26	.61	.80	.69	.18	0.32	0.17	1.54	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

1

FINAL REPORT Bayou Verret
REACH NO. 5 Lake Cataouatche #2

QUAL-TX calibration for Lake Cataouatche, LA
Final calibration run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
69	UPR RCH	10.9021	31.40	0.80	1157.7	0.0	5.06	3.64	3.64	1.16	0.13	0.18	0.12	21.3	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
69	4.90	3.40	10.9021	100.0	0.001	21.81	2.40	5707.8	20547944.	8561643.0	13698.6	0.	0.000	2.600	0.001
TOT						21.81			20547944.	8561643.0					
AVG					0.001		2.40	5707.8			13698.6				
CUM						6496.57									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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	3.400	7.39	0.42	0.08	0.00	0.00	0.46	0.46	0.01	0.00	0.20	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.00	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.34		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
69	3.400	31.00	1.0	1252.0	0.0	6.04	3.68	3.68	1.17	0.12	0.21	1.51	0.09	22.0	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
69	3.400	0.73	0.63	0.11	.24	.62	.74	.68	.16	0.28	0.17	1.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

1

FINAL REPORT Bayou Verret
REACH NO. 6 Lake Cataouatche #3

QUAL-TX calibration for Lake Cataouatche, LA
Final calibration run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
70	UPR RCH	10.9021	31.00	0.99	1252.0	0.0	6.04	3.68	3.68	1.17	0.12	0.21	0.09	22.0	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
70	3.40	0.80	10.9021	100.0	0.001	37.81	2.50	5479.5	35616436.	14246574.0	13698.6	0.	0.000	2.600	0.001
TOT						37.81			35616436.	14246574.0					
AVG					0.001		2.50	5479.5			13698.6				
CUM						6534.38									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
70	0.800	7.35	0.41	0.08	0.00	0.00	0.42	0.42	0.01	0.00	0.21	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.00	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.33		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
70	0.800	31.30	1.0	1413.3	0.0	6.06	4.58	4.58	1.17	0.12	0.21	1.50	0.06	20.2	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
70	0.800	0.75	0.65	0.10	.24	.62	.67	.65	.15	0.27	0.17	1.29	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

1

FINAL REPORT Bayou Verret QUAL-TX calibration for Lake Cataouatche, LA
REACH NO. 7 Lake Cataouatche #4 Final calibration run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
71	UPR RCH	10.9021	31.30	1.01	1413.3	0.0	6.06	4.58	4.58	1.17	0.12	0.21	0.06	20.2	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
71	0.80	0.00	10.9021	100.0	0.001	12.91	1.80	8443.1	12158055.	6754475.0	15197.6	0.	0.000	2.600	0.001
TOT						12.91			12158055.	6754475.0					
AVG					0.001		1.80	8443.1			15197.6				
CUM						6547.29									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
71	0.000	7.37	0.56	0.08	0.00	0.00	0.39	0.39	0.01	0.00	0.21	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.00	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.46		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
71	0.000	31.20	0.9	1625.4	0.0	6.43	4.22	4.22	1.05	0.12	0.10	1.27	0.06	18.5	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
71	0.000	0.76	0.46	0.14	.32	.52	.66	.58	.19	0.33	0.17	1.56	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

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QUAL-TX calibration for Lake Cataouatche, LA
Final calibration run

INPUT/OUTPUT LOADING SUMMARY

	FLOW CMS	DO KG/D	BOD KG/D	ORG-N KG/D	NH3-N KG/D	NO3-N KG/D	PHOS KG/D	CHL A KG/D	NCM
HEADWATER INFLOW	0.002	0.6	0.7	0.2	0.0	0.0	0.0	2.2	0.0
INCREMENTAL INFLOW	0.000	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
NON-POINT INPUT		0.0	28186.0	1349.5					0.0
WASTELOADS	10.900	1384.4	3795.3	1120.7	207.2	47.1	188.4	11301.1	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTFLOW THRU LOWER BNDRY	-10.902	-6058.3	-3973.7	-988.4	-110.2	-95.2	-54.4	-17382.3	0.0
DISPERSION THRU LOWER BNDRY		241.6	-329.3	-335.5	111.1	-436.1	18.8	-8140.0	0.0
REAERATION		48609.1							
BACKGROUND BENTHAL		-5960.8							
AEROBIC BOD DECAY		-27679.0	-27679.0						
BOD SETTLING		0.0	0.0						
ANAEROBIC BOD DECAY			0.0						
ORGANIC N HYDROLYSIS		0.0		-1146.5	1146.5				
ORGANIC N SETTLING				0.0	0.0				
NH3 DECAY		-8367.6			-1932.5	1932.5			
BACKGROUND NH3 SOURCE					154.0				
DENITRIFICATION			0.0			0.0			
PHOSPHORUS SOURCE							4.0		
ALGAE PHOTOSYNTHESIS		45367.4			-961.8	-1448.3	-368.6	472577.6	
ALGAE RESPIRATION		-32606.0			1385.8		211.9	-271716.8	
ALGAE SETTLING		-14931.4						-186643.0	
MACRO PHOTOSYNTHESIS		0.0			0.0	0.0	0.0		
NCM DECAY		0.0							0.0
NCM SETTLING		0.0							0.0
TOTAL INPUTS	10.902	95603.1	31982.0	2470.4	3004.5	1979.6	423.1	483880.9	0.0
TOTAL OUTPUTS	-10.902	-95603.2	-31982.0	-2470.4	-3004.5	-1979.6	-423.1	-483882.1	0.0
NET CONVERGENCE ERROR	0.000	-0.1	0.0	0.0	0.0	0.0	0.0	-1.2	0.0

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.....EXECUTION COMPLETED

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APPENDIX K

DO Calculations (Verification Survey)

Table K.1.. Estimation of Daily Average DO Using Continuous Data for Station 020203-1 from Verification Survey.

Continuous Monitoring Data (020203-1)			Instantaneous Data				
Date/Time	DO (mg/L)	DO as fraction of daily average	Station	Date	Time	Measured DO at sampling time (mg/L)	Estimated daily avg DO at this station (mg/L)
7/9/2003 0:05	2.64	0.8004					
7/9/2003 0:15	2.47	0.7488					
7/9/2003 0:25	2.45	0.7428					
7/9/2003 0:35	2.36	0.7155					
7/9/2003 0:45	2.59	0.7852					
7/9/2003 0:55	2.50	0.7579					
7/9/2003 1:05	2.44	0.7397					
7/9/2003 1:15	2.46	0.7458					
7/9/2003 1:25	2.57	0.7791					
7/9/2003 1:35	2.54	0.7700					
7/9/2003 1:45	2.52	0.7640					
7/9/2003 1:55	2.55	0.7731					
7/9/2003 2:05	2.69	0.8155					
7/9/2003 2:15	2.61	0.7913					
7/9/2003 2:25	2.48	0.7518					
7/9/2003 2:35	2.65	0.8034					
7/9/2003 2:45	2.51	0.7609					
7/9/2003 2:55	2.44	0.7397					
7/9/2003 3:05	2.40	0.7276					
7/9/2003 3:15	2.49	0.7549					
7/9/2003 3:25	2.59	0.7852					
7/9/2003 3:35	2.41	0.7306					
7/9/2003 3:45	2.55	0.7731					
7/9/2003 3:55	2.60	0.7882					
7/9/2003 4:05	2.53	0.7670					
7/9/2003 4:15	2.69	0.8155					
7/9/2003 4:25	2.70	0.8185					
7/9/2003 4:35	2.60	0.7882					
7/9/2003 4:45	2.59	0.7852					
7/9/2003 4:55	2.60	0.7882					
7/9/2003 5:05	2.57	0.7791					
7/9/2003 5:15	2.51	0.7609					
7/9/2003 5:25	2.54	0.7700					
7/9/2003 5:35	2.52	0.7640					
7/9/2003 5:45	2.56	0.7761					
7/9/2003 5:55	2.47	0.7488					
7/9/2003 6:05	2.47	0.7488					
7/9/2003 6:15	2.50	0.7579					
7/9/2003 6:25	2.45	0.7428					
7/9/2003 6:35	2.45	0.7428					
7/9/2003 6:45	2.44	0.7397					
7/9/2003 6:55	2.41	0.7306					
7/9/2003 7:05	2.37	0.7185					
7/9/2003 7:15	2.36	0.7155					
7/9/2003 7:25	2.37	0.7185					
7/9/2003 7:35	2.37	0.7185					
7/9/2003 7:45	2.37	0.7185					
7/9/2003 7:55	2.35	0.7124					
7/9/2003 8:05	2.33	0.7064					
7/9/2003 8:15	2.49	0.7549					
7/9/2003 8:25	2.42	0.7337					

Continuous Monitoring Data (020203-1)			Instantaneous Data				
Date/Time	DO (mg/L)	DO as fraction of daily average	Station	Date	Time	Measured DO at sampling time (mg/L)	Estimated daily avg DO at this station (mg/L)
7/9/2003 8:35	2.42	0.7337					
7/9/2003 8:45	2.35	0.7124					
7/9/2003 8:55	2.37	0.7185					
7/9/2003 9:05	2.41	0.7306					
7/9/2003 9:15	2.45	0.7428					
7/9/2003 9:25	2.40	0.7276					
7/9/2003 9:35	2.48	0.7518					
7/9/2003 9:45	2.38	0.7215					
7/9/2003 9:55	2.28	0.6912					
7/9/2003 10:05	2.12	0.6427					
7/9/2003 10:15	2.02	0.6124					
7/9/2003 10:25	2.55	0.7731					
7/9/2003 10:35	3.01	0.9125	020303-5	7/9/2003	10:40	0.4	0.44
7/9/2003 10:45	2.62	0.7943					
7/9/2003 10:55	2.27	0.6882	020303-15	7/9/2003	11:00	4.7	6.83
7/9/2003 11:05	2.14	0.6488					
7/9/2003 11:15	2.06	0.6245					
7/9/2003 11:25	2.26	0.6852					
7/9/2003 11:35	2.39	0.7246					
7/9/2003 11:45	2.92	0.8852					
7/9/2003 11:55	2.66	0.8064					
7/9/2003 12:05	2.20	0.6670					
7/9/2003 12:15	2.53	0.7670					
7/9/2003 12:25	2.15	0.6518					
7/9/2003 12:35	2.43	0.7367					
7/9/2003 12:45	2.09	0.6336					
7/9/2003 12:55	2.44	0.7397					
7/9/2003 13:05	2.47	0.7488					
7/9/2003 13:15	2.42	0.7337					
7/9/2003 13:25	2.91	0.8822					
7/9/2003 13:35	3.37	1.0217					
7/9/2003 13:45	3.30	1.0004					
7/9/2003 13:55	3.07	0.9307	020303-4	7/9/2003	14:00	2.10	2.26
7/9/2003 14:05	3.42	1.0368					
7/9/2003 14:15	2.91	0.8822	020303-3	7/9/2003	14:20	2.80	3.17
7/9/2003 14:25	3.62	1.0975					
7/9/2003 14:35	3.77	1.1429	020303-2	7/9/2003	14:35	2.80	2.45
7/9/2003 14:45	3.67	1.1126	020303-1	7/9/2003	14:50	3.80	3.42
7/9/2003 14:55	3.33	1.0095					
7/9/2003 15:05	3.82	1.1581					
7/9/2003 15:15	3.26	0.9883					
7/9/2003 15:25	3.21	0.9732					
7/9/2003 15:35	3.25	0.9853					
7/9/2003 15:45	4.39	1.3309					
7/9/2003 15:55	4.94	1.4976					
7/9/2003 16:05	4.76	1.4431					
7/9/2003 16:15	4.51	1.3673					
7/9/2003 16:25	4.69	1.4218					
7/9/2003 16:35	4.81	1.4582					
7/9/2003 16:45	5.07	1.5370					
7/9/2003 16:55	5.02	1.5219					
7/9/2003 17:05	5.33	1.6159					
7/9/2003 17:15	5.14	1.5583					
7/9/2003 17:25	5.32	1.6128					

Continuous Monitoring Data (020203-1)			Instantaneous Data				
Date/Time	DO (mg/L)	DO as fraction of daily average	Station	Date	Time	Measured DO at sampling time (mg/L)	Estimated daily avg DO at this station (mg/L)
7/9/2003 17:35	5.32	1.6128					
7/9/2003 17:45	5.48	1.6613					
7/9/2003 17:55	5.34	1.6189					
7/9/2003 18:05	3.56	1.0793					
7/9/2003 18:15	5.52	1.6735					
7/9/2003 18:25	5.89	1.7856					
7/9/2003 18:35	5.76	1.7462					
7/9/2003 18:45	5.78	1.7523					
7/9/2003 18:55	4.73	1.4340					
7/9/2003 19:05	4.42	1.3400					
7/9/2003 19:15	5.15	1.5613					
7/9/2003 19:25	4.54	1.3764					
7/9/2003 19:35	4.22	1.2794					
7/9/2003 19:45	4.50	1.3642					
7/9/2003 19:55	4.43	1.3430					
7/9/2003 20:05	4.64	1.4067					
7/9/2003 20:15	4.52	1.3703					
7/9/2003 20:25	4.94	1.4976					
7/9/2003 20:35	5.16	1.5643					
7/9/2003 20:45	4.87	1.4764					
7/9/2003 20:55	5.04	1.5279					
7/9/2003 21:05	4.91	1.4885					
7/9/2003 21:15	4.67	1.4158					
7/9/2003 21:25	4.76	1.4431					
7/9/2003 21:35	4.81	1.4582					
7/9/2003 21:45	4.72	1.4309					
7/9/2003 21:55	4.64	1.4067					
7/9/2003 22:05	4.64	1.4067					
7/9/2003 22:15	4.56	1.3824					
7/9/2003 22:25	4.20	1.2733					
7/9/2003 22:35	4.02	1.2187					
7/9/2003 22:45	4.00	1.2127					
7/9/2003 22:55	3.87	1.1732					
7/9/2003 23:05	3.75	1.1369					
7/9/2003 23:15	3.49	1.0580					
7/9/2003 23:25	3.39	1.0277					
7/9/2003 23:35	3.21	0.9732					
7/9/2003 23:45	2.94	0.8913					
7/9/2003 23:55	2.88	0.8731					
AVERAGE =	3.30						

FILE: R:\PROJECTS\2110-611\CD_LAKE_CAT\APP K DO CAL (VERIF SURVEY)\DO CALCULATIONS-LK_CAT-VERIF.XLS

Table K.2. Estimation of Daily Average DO Using Continuous Data for Station 020203-7 from Verification Survey.

Continuous Monitoring Data (020203-7)			Instantaneous Data				
Date/Time	DO (mg/L)	DO as fraction of daily average	Station	Date	Time	Measured DO at sampling time (mg/L)	Estimated daily avg DO at this station (mg/L)
7/9/2003 0:05	6.81	0.9094					
7/9/2003 0:15	6.87	0.9174					
7/9/2003 0:25	6.83	0.9120					
7/9/2003 0:35	6.84	0.9134					
7/9/2003 0:45	6.81	0.9094					
7/9/2003 0:55	6.81	0.9094					
7/9/2003 1:05	6.85	0.9147					
7/9/2003 1:15	6.83	0.9120					
7/9/2003 1:25	6.79	0.9067					
7/9/2003 1:35	6.79	0.9067					
7/9/2003 1:45	6.76	0.9027					
7/9/2003 1:55	6.77	0.9040					
7/9/2003 2:05	6.76	0.9027					
7/9/2003 2:15	6.72	0.8974					
7/9/2003 2:25	6.76	0.9027					
7/9/2003 2:35	6.75	0.9014					
7/9/2003 2:45	6.75	0.9014					
7/9/2003 2:55	6.73	0.8987					
7/9/2003 3:05	6.67	0.8907					
7/9/2003 3:15	6.68	0.8920					
7/9/2003 3:25	6.65	0.8880					
7/9/2003 3:35	6.70	0.8947					
7/9/2003 3:45	6.65	0.8880					
7/9/2003 3:55	6.63	0.8853					
7/9/2003 4:05	6.62	0.8840					
7/9/2003 4:15	6.66	0.8893					
7/9/2003 4:25	6.66	0.8893					
7/9/2003 4:35	6.58	0.8787					
7/9/2003 4:45	6.61	0.8827					
7/9/2003 4:55	6.58	0.8787					
7/9/2003 5:05	6.64	0.8867					
7/9/2003 5:15	6.63	0.8853					
7/9/2003 5:25	6.55	0.8747					
7/9/2003 5:35	6.59	0.8800					
7/9/2003 5:45	6.54	0.8733					
7/9/2003 5:55	6.53	0.8720					
7/9/2003 6:05	6.58	0.8787					
7/9/2003 6:15	6.53	0.8720					
7/9/2003 6:25	6.58	0.8787					
7/9/2003 6:35	6.52	0.8706					
7/9/2003 6:45	6.52	0.8706					
7/9/2003 6:55	6.53	0.8720					
7/9/2003 7:05	6.51	0.8693					
7/9/2003 7:15	6.52	0.8706					
7/9/2003 7:25	6.52	0.8706					
7/9/2003 7:35	6.53	0.8720					
7/9/2003 7:45	6.61	0.8827					
7/9/2003 7:55	6.55	0.8747					
7/9/2003 8:05	6.57	0.8773					
7/9/2003 8:15	6.66	0.8893					
7/9/2003 8:25	6.63	0.8853					

Continuous Monitoring Data (020203-7)

Date/Time	DO (mg/L)	DO as fraction of daily average
7/9/2003 8:35	6.68	0.8920
7/9/2003 8:45	6.74	0.9000
7/9/2003 8:55	6.66	0.8893
7/9/2003 9:05	6.68	0.8920
7/9/2003 9:15	6.69	0.8933
7/9/2003 9:25	6.72	0.8974
7/9/2003 9:35	6.80	0.9080
7/9/2003 9:45	6.80	0.9080
7/9/2003 9:55	6.85	0.9147
7/9/2003 10:05	6.87	0.9174
7/9/2003 10:15	6.90	0.9214
7/9/2003 10:25	6.92	0.9241
7/9/2003 10:35	6.87	0.9174
7/9/2003 10:45	6.98	0.9321
7/9/2003 10:55	6.97	0.9307
7/9/2003 11:05	7.11	0.9494
7/9/2003 11:15	7.03	0.9388
7/9/2003 11:25	7.12	0.9508
7/9/2003 11:35	7.15	0.9548
7/9/2003 11:45	7.33	0.9788
7/9/2003 11:55	7.32	0.9775
7/9/2003 12:05	7.41	0.9895
7/9/2003 12:15	7.67	1.0242
7/9/2003 12:25	7.56	1.0095
7/9/2003 12:35	7.89	1.0536
7/9/2003 12:45	7.89	1.0536
7/9/2003 12:55	7.99	1.0669
7/9/2003 13:05	7.71	1.0296
7/9/2003 13:15	7.60	1.0149
7/9/2003 13:25	7.96	1.0629
7/9/2003 13:35	8.62	1.1511
7/9/2003 13:45	8.71	1.1631
7/9/2003 13:55	7.51	1.0028
7/9/2003 14:05	8.89	1.1871
7/9/2003 14:15	8.62	1.1511
7/9/2003 14:25	8.79	1.1738
7/9/2003 14:35	8.65	1.1551
7/9/2003 14:45	8.74	1.1671
7/9/2003 14:55	8.73	1.1658
7/9/2003 15:05	8.83	1.1791
7/9/2003 15:15	8.66	1.1564
7/9/2003 15:25	8.72	1.1644
7/9/2003 15:35	8.49	1.1337
7/9/2003 15:45	8.50	1.1350
7/9/2003 15:55	8.48	1.1324
7/9/2003 16:05	8.52	1.1377
7/9/2003 16:15	8.40	1.1217
7/9/2003 16:25	8.40	1.1217
7/9/2003 16:35	8.44	1.1270
7/9/2003 16:45	8.43	1.1257
7/9/2003 16:55	8.50	1.1350
7/9/2003 17:05	8.43	1.1257
7/9/2003 17:15	8.41	1.1230
7/9/2003 17:25	8.48	1.1324

Instantaneous Data

Station	Date	Time	Measured DO at sampling time (mg/L)	Estimated daily avg DO at this station (mg/L)
020303-9	7/9/2003	8:50	7.90	8.78
020303-11	7/9/2003	9:25	8.40	9.36
020303-13	7/9/2003	9:45	7.70	8.48
020303-8	7/9/2003	10:10	6.60	7.19
020303-6	7/9/2003	11:05	6.30	6.64
020303-12	7/9/2003	11:35	2.8	2.93
020303-9	7/9/2003	12:05	8.70	8.79
020303-14	7/9/2003	12:45	8.30	7.88
020303-7A	7/9/2003	13:15	8.00	7.88
020303-7B	7/9/2003	13:25	7.80	7.34
020303-10	7/9/2003	13:45	7.80	6.71

Continuous Monitoring Data (020203-7)

Date/Time	DO (mg/L)	DO as fraction of daily average
7/9/2003 17:35	8.45	1.1284
7/9/2003 17:45	8.41	1.1230
7/9/2003 17:55	8.46	1.1297
7/9/2003 18:05	8.46	1.1297
7/9/2003 18:15	8.48	1.1324
7/9/2003 18:25	8.49	1.1337
7/9/2003 18:35	8.49	1.1337
7/9/2003 18:45	8.48	1.1324
7/9/2003 18:55	8.45	1.1284
7/9/2003 19:05	8.38	1.1190
7/9/2003 19:15	8.37	1.1177
7/9/2003 19:25	8.30	1.1083
7/9/2003 19:35	8.27	1.1043
7/9/2003 19:45	8.26	1.1030
7/9/2003 19:55	8.28	1.1057
7/9/2003 20:05	8.27	1.1043
7/9/2003 20:15	8.20	1.0950
7/9/2003 20:25	8.20	1.0950
7/9/2003 20:35	8.28	1.1057
7/9/2003 20:45	8.22	1.0977
7/9/2003 20:55	8.20	1.0950
7/9/2003 21:05	8.15	1.0883
7/9/2003 21:15	8.19	1.0937
7/9/2003 21:25	8.10	1.0816
7/9/2003 21:35	8.06	1.0763
7/9/2003 21:45	8.00	1.0683
7/9/2003 21:55	8.10	1.0816
7/9/2003 22:05	8.05	1.0750
7/9/2003 22:15	7.99	1.0669
7/9/2003 22:25	8.04	1.0736
7/9/2003 22:35	8.01	1.0696
7/9/2003 22:45	7.99	1.0669
7/9/2003 22:55	7.80	1.0416
7/9/2003 23:05	7.90	1.0549
7/9/2003 23:15	7.91	1.0563
7/9/2003 23:25	7.82	1.0442
7/9/2003 23:35	7.79	1.0402
7/9/2003 23:45	7.72	1.0309
7/9/2003 23:55	7.77	1.0376
Average =	7.49	

Instantaneous Data

Station	Date	Time	Measured DO at sampling time (mg/L)	Estimated daily avg DO at this station (mg/L)

FILE: R:\PROJECTS\2110-611\CD_LAKE_CAT\APP K DO CAL (VERIF SURVEY)\DO CALCULATIONS-LK_CAT-VERIF.XLS

APPENDIX L

Model Inputs Verification Survey

APPENDIX L. LAKE CATAOUATCHE MODEL INPUTS FOR VERIFICATION

Table L.1. Verification Inputs for Hydraulics (Data Types 9 and 10).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Velocity coefficient, a	1	0.0062200	Same as calibration
	2	0.0057300	
	3	0.0053900	
	4	0.0001420	
	5	0.0000730	
	6	0.0000730	
	7	0.0000658	
Velocity exponent, b	1 – 7	1	
Depth coefficient, c	1	2.7	
	2	2.4	
	3	2.1	
	4	2.2	
	5	2.4	
	6	2.5	
	7	1.8	
Depth exponent, d	1 – 7	0	
Depth constant, e	1 – 7	0	
Dispersion coefficient (m^2/sec)	1 – 3	0.5	
	4 – 7	2.6	

Table L.2. Verification Inputs for Initial Conditions (Data Type 11).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Temperature, ºC	1	29.5	Verification survey on 7/09/03 station 020303-1, 1 m depth
	2	27.4	Verification survey on 7/09/03 station 020303-2, 1 m depth
	3	27.7	Verification survey on 7/09/03 station 020303-3, 1 m depth
	4	28.1	Verification survey on 7/09/03 station 020303-6, 1 m depth
	5	29.2	Verification survey on 7/09/03; average of stations 020303-7A, 020303-7B and 020303-10 at 1 m depth
	6	28.5	Verification survey on 7/09/03; average of stations 020303-9 and 020303-13 at 1 m depths
	7	28.3	Verification survey on 7/09/03 station 020303-11 at 1 m depth
Salinity, ppt	1	0.14	Calculated from conductivity. Soruces of conductivity measurements same as for temperatures listed above.
	2	0.15	
	3	0.15	
	4	0.20	
	5	0.49	
	6	0.64	
	7	0.57	
DO, mg/L	1	3.4	Estimated daily average from verification survey on 7/09/03; station 020303-1 at 1 m depth
	2	2.5	Estimated daily average from verification survey on 7/09/03; station 020303-2 at 1 m depth
	3	3.2	Estimated daily average from verification survey on 7/09/03; station 020303-3 at 1 m depth
	4	6.6	Estimated daily average from verification survey on 7/09/03; station 020303-6 at 1 m depth
	5	7.3	Estimated daily average from verification survey on 7/09/03; average of stations 020303-7A, 020303-7B and 020303-10 at 1 m depths
	6	8.6	Estimated daily average from verification survey on 7/09/03; average of stations 020303-9 and 020303-13 at 1 m depths
	7	9.4	Estimated daily average from verification survey on 7/09/03; stations 020303-11 at 1 m depth

Ammonia N, mg/L	1	0.19	Verification survey on 7/09/03; station 020303-1
	2	0.22	Linear interpolation of reaches 1 and 3
	3	0.24	Verification survey on 7/09/03; station 020303-3
	4	0.23	Linear interpolation of reaches 3 and 5
	5	0.22	Verification survey on 7/09/03; average of stations 020303-7A, 020303-7B and 020303-10
	6	0.21	Verification survey on 7/09/03; station 020303-9
	7	0.24	Linear interpolation of reach 6 and lower boundary conditions (average of stations 020303-12 and 020303-14)
NO3 + NO2 N, mg/L	1 – 6	0.05	Set to half of detection (0.1 mg/L) because all measurements of NO2-N and NO3-N during verification survey were less than detection
	7	0.09	Linear interpolation of reach 6 and lower boundary conditions (average of stations 020303-12 and 020303-14)
Phosphorus, mg/L	1	0.26	Verification survey on 7/09/03; station 020303-1
	2	0.24	Linear interpolation of reaches 1 and 3
	3	0.22	Verification survey on 7/09/03; station 020303-3
	4	0.12	Linear interpolation of reaches 3 and 5
	5	0.01	Verification survey on 7/09/03; average of stations 020303-7A, 020303-7B and 020303-10
	6	0.01	Verification survey on 7/09/03 station 020303-9
	7	0.11	Linear interpolation of reach 6 and lower boundary conditions (average of stations 020303-12 and 020303-14)
Chlorophyll, ug/L	1	10	Verification survey on 7/09/03; station 020303-1
	2	10	Linear interpolation of reaches 1 and 3
	3	10	Verification survey on 7/09/03; station 020303-3
	4	10	Linear interpolation of reaches 3 and 5
	5	10	Verification survey on 7/09/03; average of stations 020303-7A, 020303-7B and 020303-10
	6	10	Verification survey on 7/09/03 station 020303-9
	7	10	Linear interpolation of reach 6 and lower boundary conditions (average of stations 020303-12 and 020303-14)

Table L.3. Verification Inputs for Kinetic Coefficients (Data Types 3, 6, 12, and 13).

Parameter name or description	Reach(es)	Value used in model	Data Source / Comment
Reaeration option	1 – 7	1	K2=a
Reaeration rate, K_2	1	0.24/day	Same as calibration (0.664 m/day divided by depth)
	2	0.28/day	
	3	0.31/day	
	4	0.34/day	Calculated as the wind-aided surface transfer coefficient (0.74 m/day) divided by the reach depths in Data Type 9.
	5	0..31/day	
	6	0.30/day	
	7	0.41/day	
CBODu decay rate	1 – 7	0.05/day	Same as calibration
Organic N decay rate	1 – 7	0.01/day	
Ammonia N decay rate	1 – 3	0.05/day	
	4 – 7	0.10/day	
Total daily radiation	1 – 7	416 langleys	
Nitrogen half saturation constant	1 – 7	0.2 mg/L	
Phosphorus half saturation constant	1 – 7	0.03 mg/L	
Light half saturation constant	1 – 7	10 langleys per hour	
Algae max. growth rate	1 – 3	1.35/day	
	4 – 7	1.05/day	
Algae respiration rate	1 – 7	0.10/day	
Algae settling rate	1 – 3	0.5 m/day	
	4 – 7	0.2 m/day	
Secchi depth with no algae present	1 – 7	1.0 m	
Algae to chlorphyll ratio	1 – 7	0.06 mg algae / µg chlorophyll	
Conversion of settled algae to SOD	1 – 7	0.08 mg O_2 per µg chlorophyll	

Table L.4. Verification Inputs for NPS Loads (Data Types 12, 13, and 19).

Parameter name or description	Reach	Value used in model	Data Source / Comment
Sediment oxygen demand, $g/m^2/day$	1	1.6	Same as calibration
	2	1.6	
	3	1.3	
	4	0.5	
	5	0	
	6	0	
	7	0	
Benthic ammonia, $g/m^2/day$	1	0.0025	
	2	0.0025	
	3	0.002	
	4	0.002	
	5	0.002	
	6	0.002	
	7	0.002	
Benthic phosphorus, $g/m^2/day$	1	0.0063	
	2	0.0063	
	3	0.0063	
	4	0	
	5	0	
	6	0	
	7	0	
CBODu mass loads, kg/day	1	68	
	2	198	
	3	120	
	4	2600	
	5	5000	
	6	16600	
	7	3600	
Organic Nitrogen mass loads, kg/day	1	1	
	2	14.5	
	3	9	
	4	100	
	5	325	
	6	750	
	7	150	

Table L.5. Verification Inputs for Headwater (Data Types 20, 21, and 22).

Name of inflow	Parameter name	Value used in model	Data Source / Comment
Headwater Bayou Verret	Flow rate	1.68 m^3/sec	See section 5.4
	Temperature	29.5ºC	Verification survey on 7/09/03; station 020303-1 at 1 m depth
	Specific conductivity	250 µmhos	
	DO	3.3 mg/L	24 hour average of continuous monitoring data on 7/09/03 from station 020303-1
	CBODu	2.6 mg/L	Calculated by GSBOD using data from verification survey on 7/09/04 at station 020303-1
	Organic N	1.31 mg/L	Verification survey on 7/09/03; station 020303-1; TKN minus ammonia
	Ammonia N	0.19 mg/L	Verification survey on 7/09/03; station 020303-1
	NO2 + NO3	0.05 mg/L	Set to half the detection level since measurement was less than detection
	Phosphorus	0.26 mg/L	Verification survey on 7/09/03; station 020303-1

Table L.6. Verification Inputs for Wasteload (Data Types 24, 25, and 26).

Name of inflow	Parameter name	Value used in model	Data Source / Comment
Louisiana Cypress Lumber Canal	Flow rate	0.72 m^3/sec	See Section 5.6
	Temperature	26.6ºC	Verification survey station 020303-5, 1 m depth
	Specific conductivity	300 µmhos	
	DO	0.44 mg/L	Estimated average daily DO for verification survey on 7/09/03 at station 020303-5 using continuous DO monitoring data from station 020303-1
	CBODu	2.62 mg/L	Calculated by GSBOD using data from verification survey on 7/09/03 at station 020303-1
	Organic N	1.31 mg/L	Verification survey on 7/09/03; station 020303-1; TKN minus ammonia
	Ammonia N	0.19 mg/L	Verification survey on 7/09/03; station 020303-1
	NO2 + NO3	0.05 mg/L	Set to half the detection level since measurement was less than detection
	Phosphorus	0.26 mg/L	Verification survey on 7/09/03; station 020303-1
	Chlorophyll	10 ug/L	
Davis Pond Freshwater Diversion	Flow rate	8.0 m3/sec	See Section 5.6
	Temperature	29.0ºC	Verification survey on 7/09/03; station 020303-15, 1 m depth
	Specific conductivity	300 µmhos	
	DO	6.83 mg/L	Estimated average daily DO for verification survey on 7/09/03 at station 020303-15 using continuous DO monitoring data form station 020303-1
	CBODu	2.62 mg/L	Calculated by GSBOD using data form verification survey on 7/09/03 at station 020303-1
	Organic N	1.31 mg/L	Verification survey on 7/09/03; station 020303-1; TKN minus ammonia
	Ammonia N	0.19 mg/L	Verification survey on 7/09/03; station 020303-1
	NO2 + NO3	0.05 mg/L	Set to half the detection level since measurement was less than detection
	Phosphorus	0.26 mg/L	Verification survey on 7/09/03; station 020303-1
	Chlorophyll	10 ug/L	

Table L.7. Verification Inputs for boundary Conditions (Data Type 27).

Parameter name	Value used in model	Data Source / Comment
Temperature	28.6ºC	Verification survey on 7/09/03; average of stations 020303-12 and 020303-14, 1 m depths
Salinity	0.580 ppt	Calculated using average specific conductivity from stations 020303-12 and 020303-14 from verification survey on 7/09/03.
Specific Conductivity	1025 µmhos	Verification survey on 7/09/03; average of station 020303-12 and 020303-14, 1 m depth
DO	5.41 mg/L	Estimated average daily DO from stations 020303-12 and 020303-14 from verification survey on 7/09/03
CBODu	3.18 mg/L	Calculated from verification survey on 7/09/03; average of stations 020303-12 and 020303-14 using GSBOD spreadsheet provided by LDEQ
Organic N	0.75 mg/L	Verification survey on 7/09/03; average of stations 020303-12 and 020303-14 TKN minus ammonia
Ammonia N	0.25 mg/L	Verification survey on 7/09/03; average of station s020303-12 and 020303-14
NO2 + NO3	0.09 mg/L	Verification survey on 7/09/03; average of station s020303-12 and 0203030-14 (half of detection limit used for samples reported as "non-detect")
Phosphorus	0.08 mg/L	Verification survey on 7/09/03; average of station 020303-12 and 020303-14
Chlorphyll	10 ug/L	

APPENDIX M

Calculations of K_L (Verification Survey)

Wind Aided Reaeration for Lake Cataouatche

Wind Aided Reaeration Coefficient Equation (Eq.3-23 from Rates, Constants, and Kinetics publication)

$K_{L\ with\ wind} = K_{L\ without\ wind}\ [1+(0.2395V_w^{1.643})]$ **Equation 1**

V_w = wind velocity in meters per second
K_2 = reaeration in 1/day that does not account for wind effects. For Louisiana equation use K_2 = 0.664/D.
D = depth in meters
$K_L = K_2 * D$ (=oxygen transfer coefficient "a" in model)

Formula to correct wind speed for elevation (obtained from LDEQ):

$V_{w@\ height\ z} = V_{w@\ height\ s}\ [(z/s)^{0.143}]$ **Equation 2**

CALCULATIONS FOR VERIFICATION PERIOD:

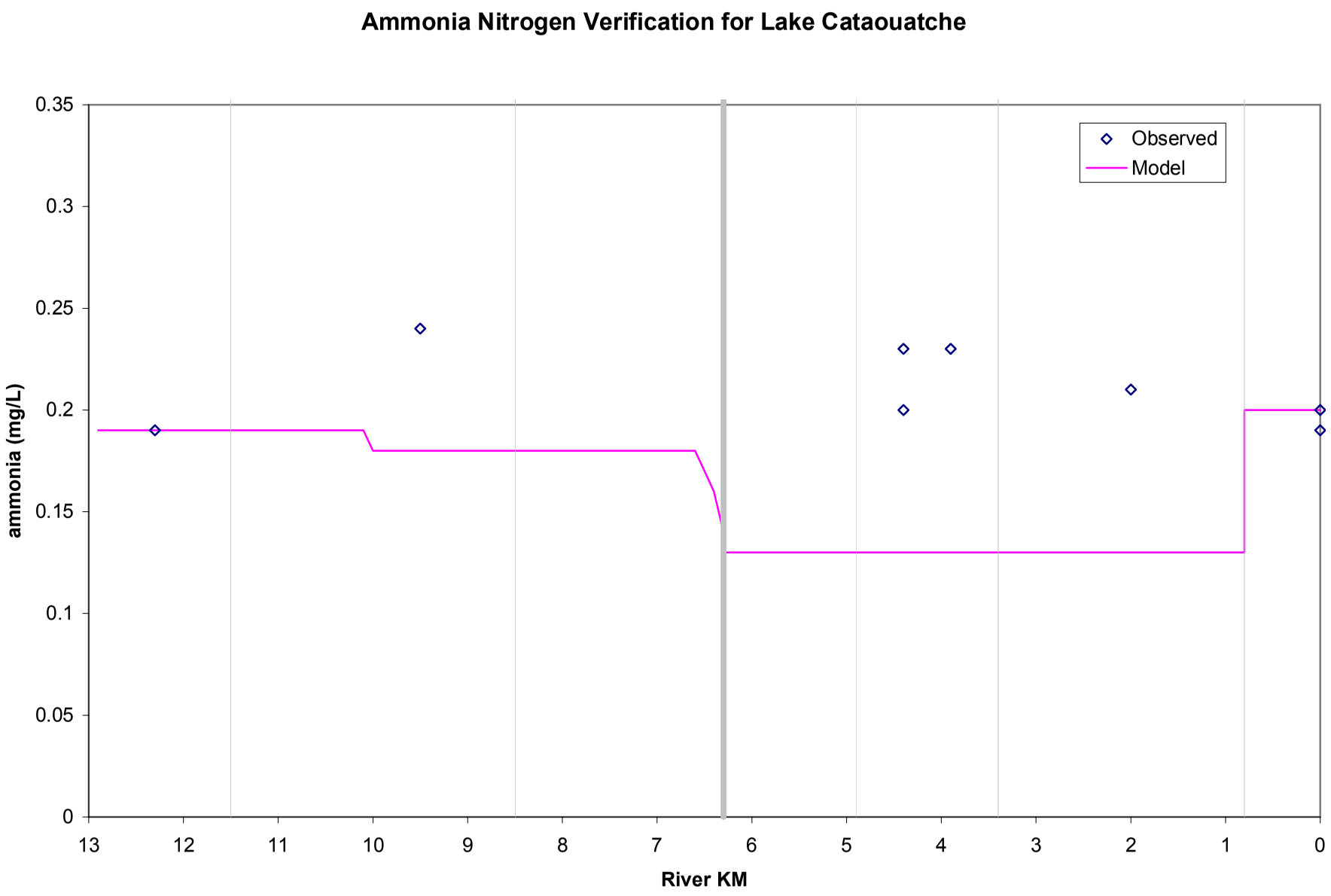
Verification Period: July 9, 2003

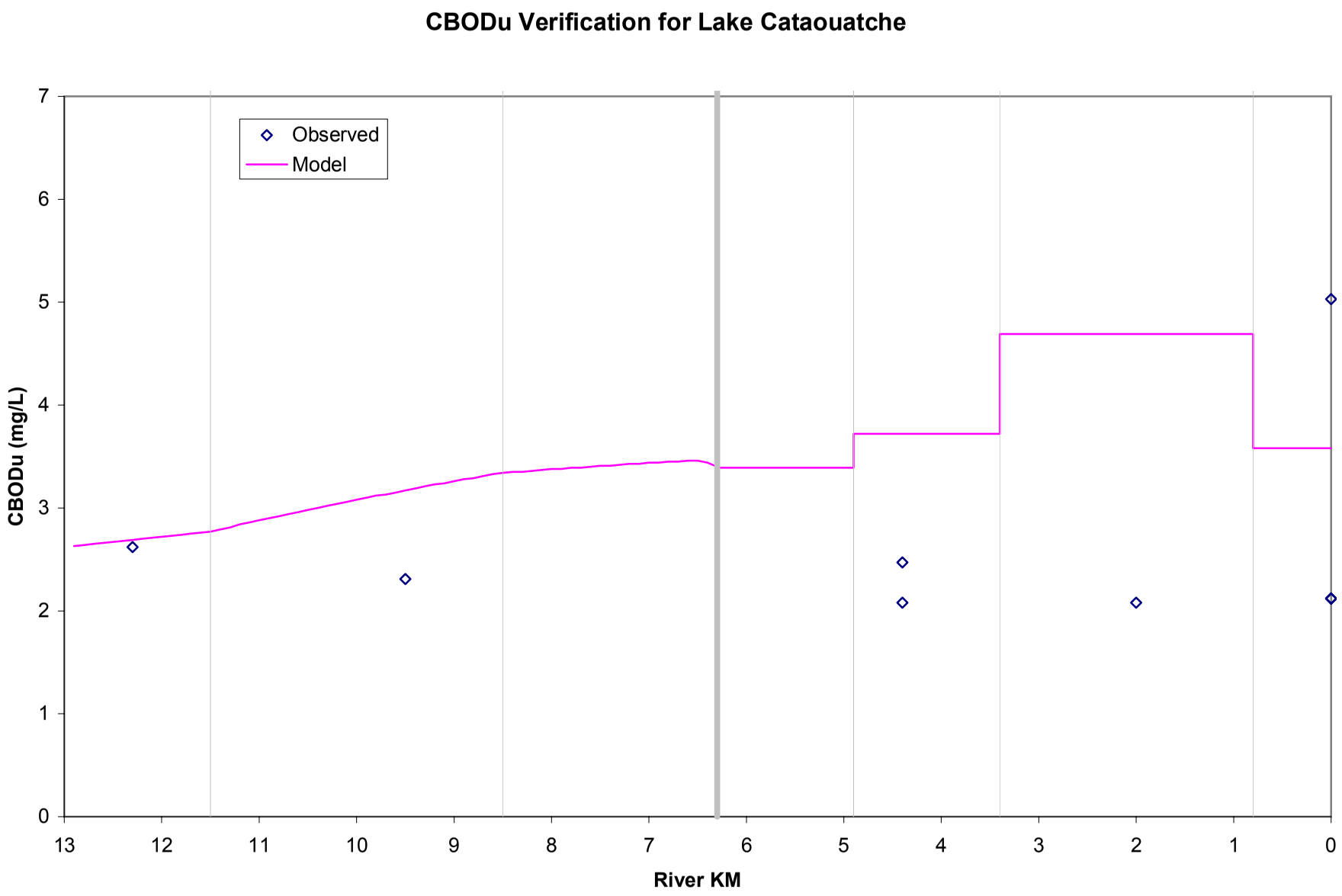
Station	Average Wind Speed (knots)	Average Wind Speed (m/s)	Height of Wind Measurement (m)	Height for Calculating Wind-Aided K_L (m)	Wind Speed at Surface using Eqn 2 (m/s)	K_L without wind (m/day)	K_L with wind using Eqn 1 (m/day)
New Orleans Intl. Airport	2.4	1.2	10	0.1	0.6	0.664	0.74

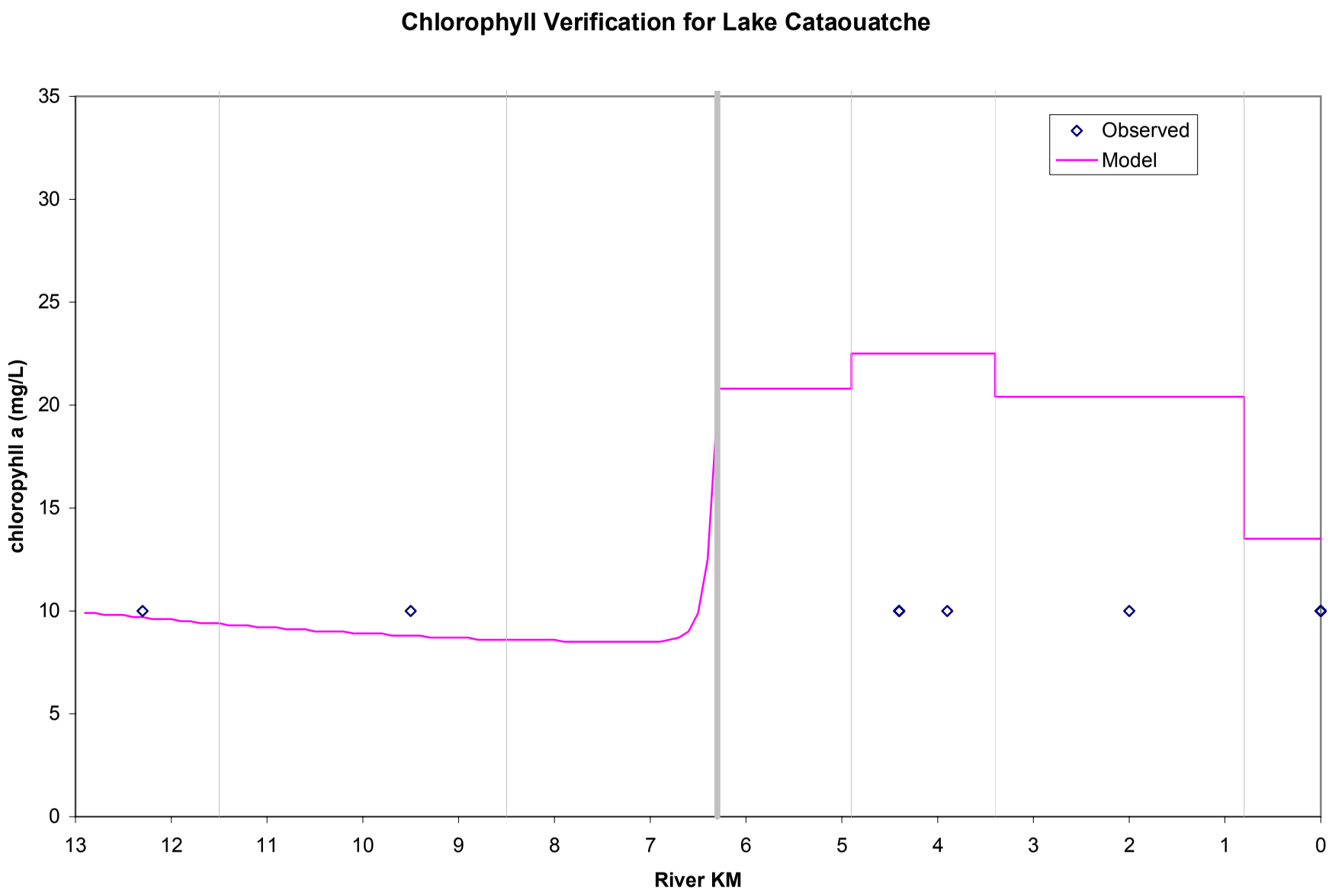
FILE: R:\PROJECTS\2110-611\CD_LAKE_CAT\APP M CAL KL (VERIF)\WIND_SPEED2.XLS

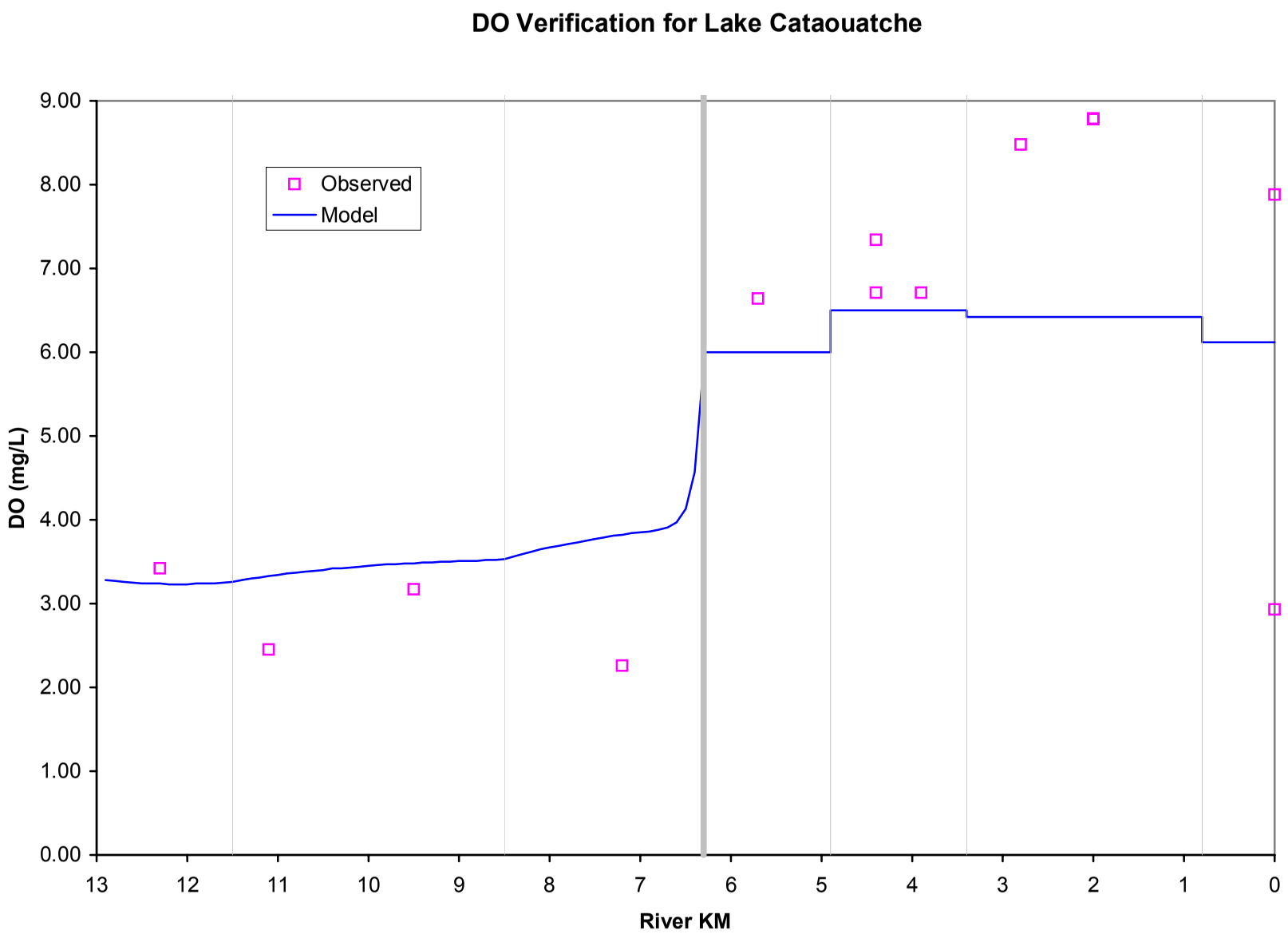
APPENDIX N

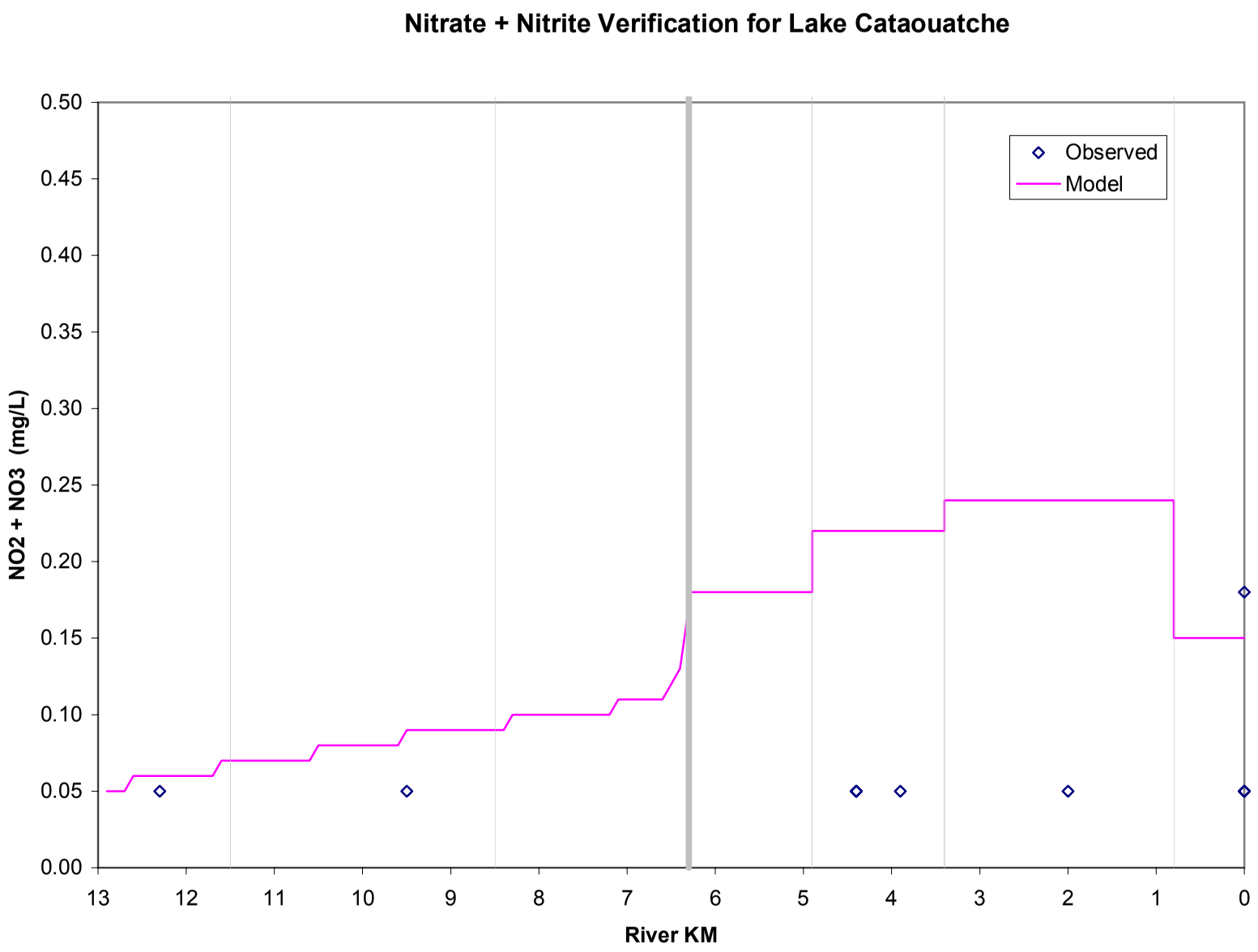
Plots of Verification Model Results

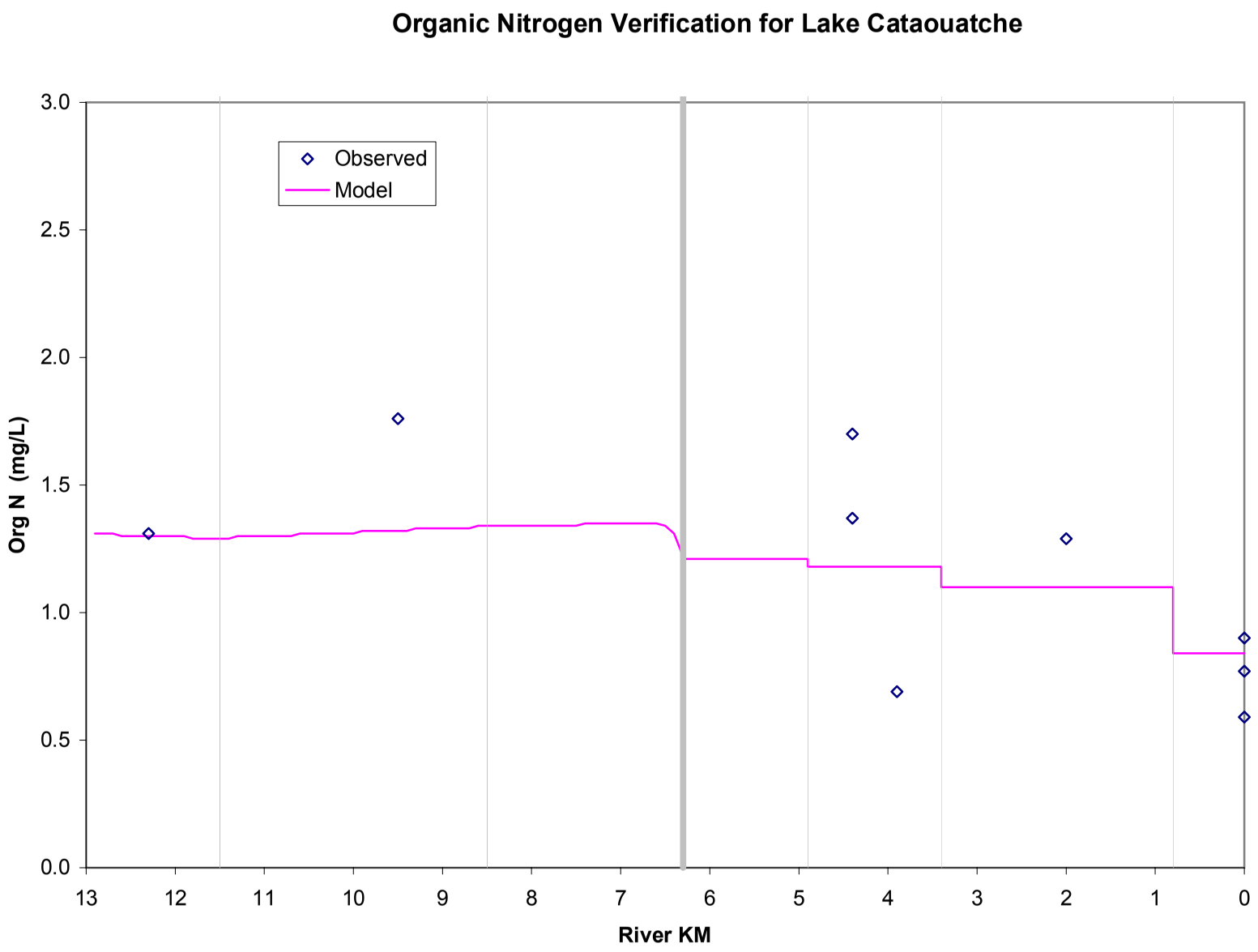

Ammonia Nitrogen Verification for Lake Cataouatche
ammonia (mg/L)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
13
12
11
10
9
8
7
6
5
4
3
2
1
0
River KM
Observed
Model

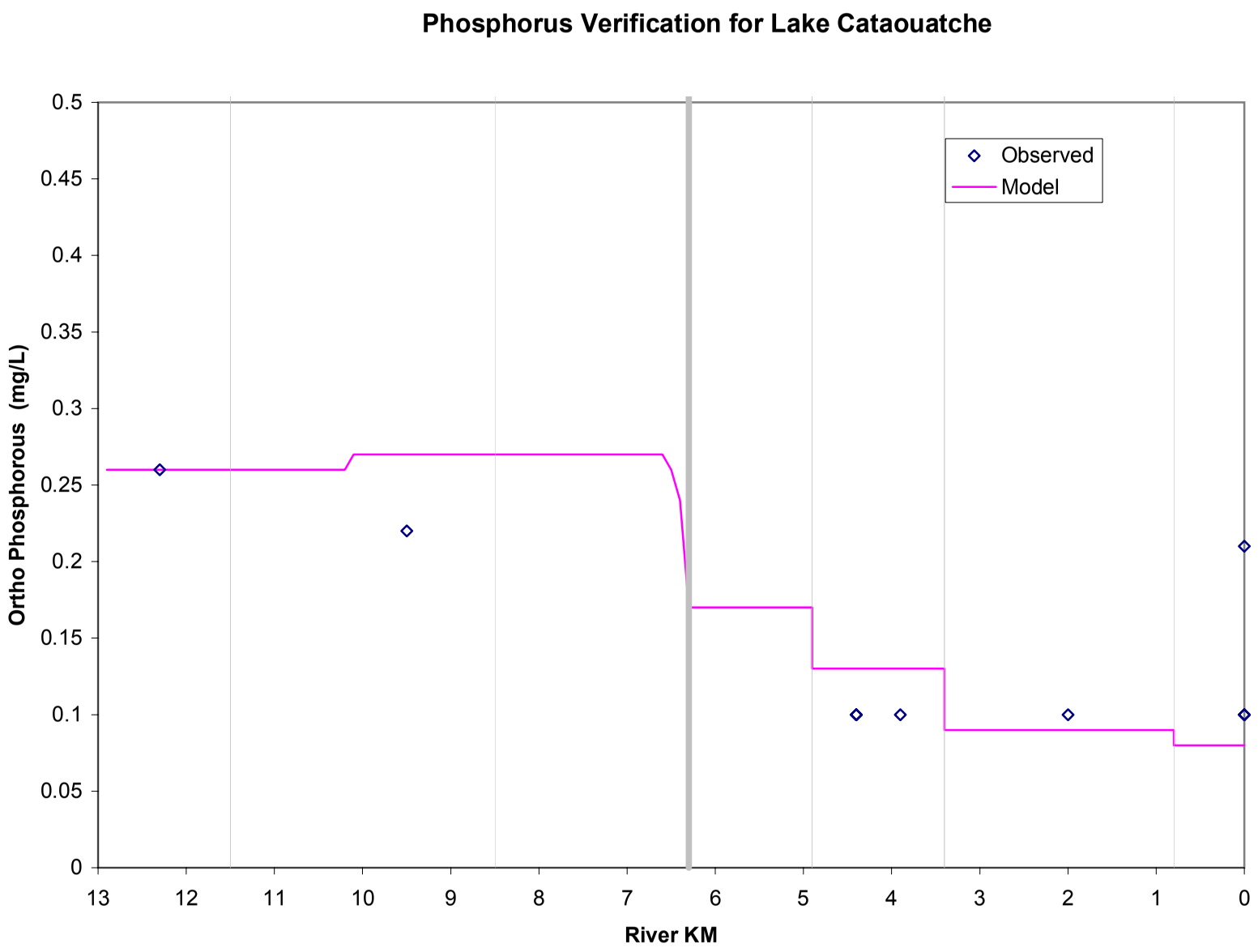

CBODu Verification for Lake Cataouatche
Observed
Model
CBODu (mg/L)
River KM
0
1
2
3
4
5
6
7
13
12
11
10
9
8
7
6
5
4
3
2
1
0

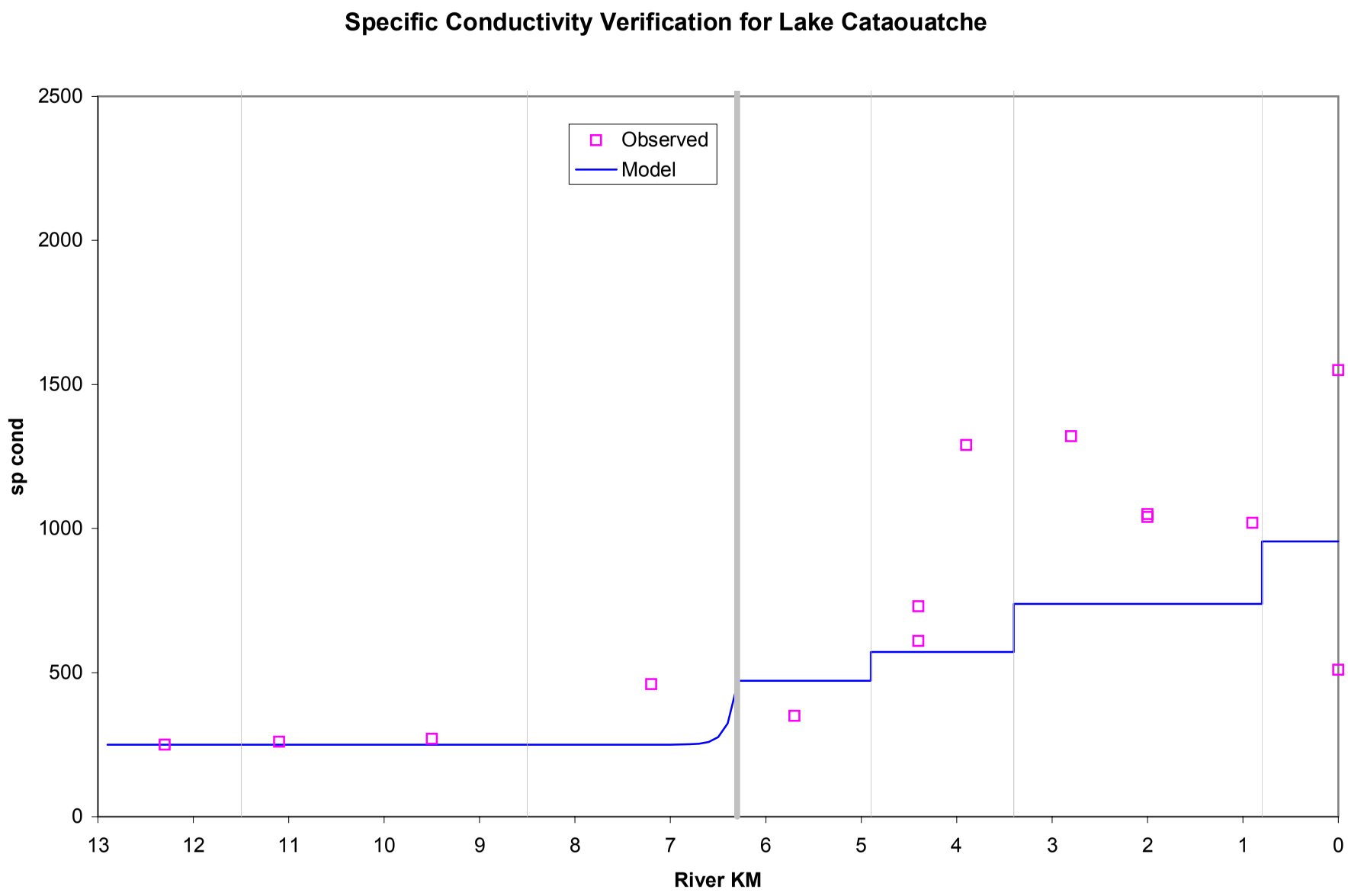

Chlorophyll Verification for Lake Cataouatche
Observed
Model
chloropyhll a (mg/L)
35
30
25
20
15
10
5
0
13
12
11
10
9
8
7
6
5
4
3
2
1
0
River KM


DO Verification for Lake Cataouatche
Observed
Model
DO (mg/L)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
13
12
11
10
9
8
7
6
5
4
3
2
1
0
River KM


Nitrate + Nitrite Verification for Lake Cataouatche
NO2 + NO3 (mg/L)
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
13
12
11
10
9
8
7
6
5
4
3
2
1
0
River KM
Observed
Model


Organic Nitrogen Verification for Lake Cataouatche
Observed
Model
Org N (mg/L)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
13
12
11
10
9
8
7
6
5
4
3
2
1
0
River KM


Phosphorus Verification for Lake Cataouatche
Ortho Phosphorous (mg/L)
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
13
12
11
10
9
8
7
6
5
4
3
2
1
0
River KM
Observed
Model


Specific Conductivity Verification for Lake Cataouatche
Observed
Model
sp cond
2500
2000
1500
1000
500
0
13
12
11
10
9
8
7
6
5
4
3
2
1
0
River KM

APPENDIX O

Printout of Verification Model Output

TEXAS WATER COMMISSION WATER QUALITY STREAM MODEL 02/10/04
QUAL-TX VERSION 3.3 UPDATED DECEMBER 3, 1990 17:00:49

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

CARD TYPE		CONTROL TITLES
CNTROL01		QUAL-TX calibration for Lake Cataouatche, LA
CNTROL02		Verification run
CNTROL03	YES	ECHO
CNTROL04	NO	CAPS
CNTROL05	NO	INTE
CNTROL06	YES	FINA
CNTROL07	YES	LOAD
CNTROL08	YES	METR
CNTROL09	YES	OXYG
CNTROL10	YES	OVER
ENDATA01		

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

CARD TYPE		MODEL OPTION	
MODOPT01	NO	TEMP	
MODOPT02	NO	SALI	
MODOPT04	YES	CONSERVATIVE MATERIAL I = cond	IN umhos
MODOPT04	NO	CONSERVATIVE MATERIAL II	
MODOPT05	YES	DISS	
MODOPT06	YES	BIOC	
MODOPT07	YES	NITR	
MODOPT08	YES	PHOS	
MODOPT09	YES	CHLO	
MODOPT10	NO	MACR	
MODOPT11	NO	COLI	
MODOPT12	NO	NONC	
ENDATA02			

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

CARD TYPE	DESCRIPTION OF CONSTANT		VALUE
PROGRAM	MAXIMUM ITERATION LIMIT	=	5000.00000
PROGRAM	TOTAL DAILY RADIATION	=	416.00000
PROGRAM	P RELAXATION COEFFICIENT	=	0.10000
PROGRAM	P ERROR CLOSURE LIMITS	=	0.00500
ENDATA03			

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

CARD TYPE	RATE CODE	THETA VALUE
THETA	NH3 DECA	1.07000
THETA	BENTHAL	1.06500
THETA	ORGN DEC	1.02000

ENDATA04

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

CARD TYPE	DESCRIPTION OF CONSTANT	VALUE

ENDATA05

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

CARD TYPE	DESCRIPTION OF CONSTANT		VALUE
LIGHT	LIGHT SATURATION CONSTANT	=	10.00000
N HALF	N HALF SATURATION CONSTANT	=	0.20000
P HALF	P HALF SATURATION CONSTANT	=	0.03000

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	B1	Bayou Verret #1	13.00	TO	11.50	0.1000	1.50	15	1	15
REACH ID	2	B2	Bayou Verret #2	11.50	TO	8.50	0.1000	3.00	30	16	45
REACH ID	3	B3	Bayou Verret #3	8.50	TO	6.30	0.1000	2.20	22	46	67
REACH ID	4	L1	Lake Cataouatche #1	6.30	TO	4.90	1.4000	1.40	1	68	68
REACH ID	5	L2	Lake Cataouatche #2	4.90	TO	3.40	1.5000	1.50	1	69	69
REACH ID	6	L3	Lake Cataouatche #3	3.40	TO	0.80	2.6000	2.60	1	70	70
REACH ID	7	L4	Lake Cataouatche #4	0.80	TO	0.00	0.8000	0.80	1	71	71

ENDATA08

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

CARD TYPE	REACH	ID	VELOCITY "A"	VELOCITY "B"	DEPTH "C"	DEPTH "D"	DEPTH "E"	MANNINGS "N"
HYDR-1	1	B1	0.00622000	1.000	2.700	0.000	0.000	0.000
HYDR-1	2	B2	0.00573000	1.000	2.400	0.000	0.000	0.000
HYDR-1	3	B3	0.00539000	1.000	2.100	0.000	0.000	0.000
HYDR-1	4	L1	0.00014200	1.000	2.200	0.000	0.000	0.000
HYDR-1	5	L2	0.00007300	1.000	2.400	0.000	0.000	0.000
HYDR-1	6	L3	0.00007300	1.000	2.500	0.000	0.000	0.000
HTDR-1	7	L4	0.00006580	1.000	1.800	0.000	0.000	0.000

ENDATA09

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

CARD TYPE	REACH	ID	TIDAL RANGE	DISPERSION "A"	DISPERSION "B"	DISPERSION "C"	DISPERSION "D"
HYDR-2	1	B1	1.00	0.500	0.000	0.000	0.000
HYDR-2	2	B2	1.00	0.500	0.000	0.000	0.000
HYDR-2	3	B3	1.00	0.500	0.000	0.000	0.000
HYDR-2	4	L1	1.00	2.600	0.000	0.000	0.000
HYDR-2	5	L2	1.00	2.600	0.000	0.000	0.000
HYDR-2	6	L3	1.00	2.600	0.000	0.000	0.000
HYDR-2	7	L4	1.00	2.600	0.000	0.000	0.000

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	B1	29.50	0.14	3.40	0.19	0.05	0.26	10.00	0.00
INITIAL	2	B2	27.40	0.15	2.50	0.22	0.05	0.24	10.00	0.00
INITIAL	3	B3	27.70	0.15	3.20	0.24	0.05	0.22	10.00	0.00
INITIAL	4	L1	28.10	0.20	6.60	0.23	0.05	0.12	10.00	0.00
INITIAL	5	L2	29.20	0.49	7.30	0.22	0.05	0.01	10.00	0.00
INITIAL	6	L3	28.50	0.64	8.60	0.21	0.05	0.01	10.00	0.00
INITIAL	7	L4	28.30	0.57	9.40	0.24	0.09	0.11	10.00	0.00

ENDATA11

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

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD	AEROB BOD DECAY	BOD SETT	BOD CONV TO SOD	ANAER BOD DECAY
COEF-1	1	B1	1.	0.240	0.000	0.000	1.600	0.050	0.000	0.000	0.000
COEF-1	2	B2	1.	0.280	0.000	0.000	1.600	0.050	0.000	0.000	0.000
COEF-1	3	B3	1.	0.310	0.000	0.000	1.300	0.050	0.000	0.000	0.000
COEF-1	4	L1	1.	0.340	0.000	0.000	0.500	0.050	0.000	0.000	0.000
COEF-1	5	L2	1.	0.310	0.000	0.000	0.000	0.050	0.000	0.000	0.000
COEF-1	6	L3	1.	0.300	0.000	0.000	0.000	0.050	0.000	0.000	0.000
COEF-1	7	L4	1.	0.410	0.000	0.000	0.000	0.050	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
COEF-2	1	B1	0.010	0.00	1.00	0.050	0.0025	0.0063	0.00
COEF-2	2	B2	0.010	0.00	1.00	0.050	0.0025	0.0063	0.00
COEF-2	3	B3	0.010	0.00	1.00	0.050	0.0020	0.0063	0.00
COEF-2	4	L1	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00
COEF-2	5	L2	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00
COEF-2	6	L3	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00
COEF-2	7	L4	0.010	0.00	1.00	0.100	0.0020	0.0000	0.00

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
COEF-3	1	B1	1.00	0.060	0.50	0.08	1.35	0.10	0.00	0.00
COEF-3	2	B2	1.00	0.060	0.50	0.08	1.35	0.10	0.00	0.00
COEF-3	3	B3	1.00	0.060	0.50	0.08	1.35	0.10	0.00	0.00
COEF-3	4	L1	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00
COEF-3	5	L2	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00
COEF-3	6	L3	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00
COEF-3	7	L4	1.00	0.060	0.20	0.08	1.05	0.10	0.00	0.00

ENDATA14

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

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

ENDATA15

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

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

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3	NO3+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	ORG-N	COLI	NCM	DO
NONPOINT	1	B1	68.00	1.00	0.00	0.00	0.00
NONPOINT	2	B2	198.00	14.50	0.00	0.00	0.00
NONPOINT	3	B3	120.00	9.00	0.00	0.00	0.00
NONPOINT	4	L1	2600.00	100.00	0.00	0.00	0.00
NONPOINT	5	L2	5000.00	325.00	0.00	0.00	0.00
NONPOINT	6	L3	16600.00	750.00	0.00	0.00	0.00
NONPOINT	7	L4	3600.00	150.00	0.00	0.00	0.00

ENDATA19

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

CARD TYPE	ELEMENT	NAME	UNIT	FLOW	TEMP	SALIN	CM-I	CM-II
HDWTR-1	1	Bayou Verret	0	1.68000	29.500	0.140	250.000	0.000

ENDATA20

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

CARD TYPE	ELEMENT	NAME	DO	BOD	ORG-N	NH3	NO3+2
HDWTR-2	1	Bayou Verret	3.30	2.62	1.31	0.19	0.05

ENDATA21

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

CARD TYPE	ELEMENT	NAME	PHOS	CHL A	COLI	NCM
HDWTR-3	1	Bayou Verret	0.26	10.00	0.00	0.00

ENDATA22

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

CARD TYPE	JUNCTION ELEMENT	UPSTRM ELEMENT	NAME

ENDATA23

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

CARD TYPE	ELEMENT	NAME	FLOW	TEMP	SAL	CM-I	CM-II
WSTLD-1	68	LUMBER CANAL	0.72000	26.600	0.170	300.000	0.000
WSTLD-1	68	DAVIS POND	8.00000	29.000	0.170	300.000	0.000

ENDATA24

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

CARD TYPE	ELEMENT	NAME	DO	BOD	% BOD RMVL	ORG-N	NH3	% NITRIF	NO3+2
WSTLD-2	68	LUMBER CANAL	0.44	2.62	0.00	1.31	0.19	0.00	0.05
WSTLD-2	68	DAVIS POND	6.83	2.62	0.00	1.31	0.19	0.00	0.05

ENDATA25

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

CARD TYPE	ELEMENT	NAME	PHOS	CHL A	COLI	NCM
WSTLD-3	68	LUMBER CANAL	0.26	10.00	0.00	0.00
WSTLD-3	68	DAVIS POND	0.26	10.00	0.00	0.00

ENDATA26

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

CARD TYPE          CONSTITUENT                        CONCENTRATION

LOWER BC     TEMPERATURE                        =     28.600 DEG C
LOWER BC     SALINTIY                           =      0.580 PPT
LOWER BC     CONSERVATIVE MATERIAL I            =   1025.000 umhos
LOWER BC     CONSERVATIVE MATERIAL II           =      0.000
LOWER BC     DISSOLVED OXYGEN                   =      5.410 MG/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND          =      3.180 MG/L
LOWER BC     ORGANIC NITROGEN                   =      0.750 MG/L
LOWER BC     AMMONIA NITROGEN                   =      0.250 MG/L
LOWER BC     NITRATE + NITRITE NITROGEN         =      0.090 MG/L
LOWER BC     PHOSPHORUS                         =      0.080 MG/L
LOWER BC     CHLOROPHYLL A                      =     10.000 UG/L
LOWER BC     COLIFORM                           =      0.000 #/100 ML
LOWER BC     NONCONSERVATIVE MATERIAL           =      0.000
ENDATA27


$$$ DATA TYPE 28 (FLOW AUGMENTATION DATA) $$$

CARD TYPE        REACH       AVAIL HDWS       TARGET             ORDER OF AVAIL SOURCES

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


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

ENDATA30

1

.....NO ERRORS DETECTED IN INPUT DATA

.....HYDRAULIC CALCULATIONS COMPLETED

.....TRIDIAGONAL MATRIX TERMS INITIALIZED

.....PHOTOSYNTHETIC RATES CONVERGENT IN 599 ITERATIONS

.....OXYGEN DEPENDENT RATES CONVERGENT IN   1 ITERATIONS

.....CONSTITUENT CALCULATIONS COMPLETED
1
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FINAL REPORT Bayou Verret
REACH NO. 1 Bayou Verret #1

QUAL-TX calibration for Lake Cataouatche, LA
Verification run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
1	HDWTR	1.6800	29.50	0.14	250.0	0.0	3.30	2.62	2.62	1.31	0.19	0.05	0.26	10.0	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
1	13.00	12.90	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
2	12.90	12.80	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
3	12.80	12.70	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
4	12.70	12.60	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
5	12.60	12.50	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
6	12.50	12.40	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
7	12.40	12.30	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
8	12.30	12.20	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
9	12.20	12.10	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
10	12.10	12.00	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
11	12.00	11.90	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
12	11.90	11.80	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
13	11.80	11.70	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
14	11.70	11.60	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
15	11.60	11.50	1.6800	0.0	0.010	0.11	2.70	59.5	16077.	5954.5	160.8	0.	0.000	0.500	0.010
TOT						1.66			241158.	89317.6					
AVG					0.010		2.70	59.5			160.8				
CUM						1.66									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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	12.900	7.64	0.29	0.08	0.00	0.00	3.38	3.38	0.01	0.00	0.08	0.00	0.00	0.01	0.15	0.00	0.00	0.00	0.00
2	12.800	7.66	0.28	0.08	0.00	0.00	3.35	3.35	0.01	0.00	0.08	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
3	12.700	7.67	0.28	0.08	0.00	0.00	3.32	3.32	0.01	0.00	0.08	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
4	12.600	7.69	0.28	0.08	0.00	0.00	3.29	3.29	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
5	12.500	7.71	0.28	0.07	0.00	0.00	3.27	3.27	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
6	12.400	7.73	0.28	0.07	0.00	0.00	3.24	3.24	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
7	12.300	7.75	0.28	0.07	0.00	0.00	3.21	3.21	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
8	12.200	7.77	0.28	0.07	0.00	0.00	3.18	3.18	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
9	12.100	7.79	0.28	0.07	0.00	0.00	3.15	3.15	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
10	12.000	7.81	0.28	0.07	0.00	0.00	3.13	3.13	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
11	11.900	7.83	0.28	0.07	0.00	0.00	3.10	3.10	0.01	0.00	0.07	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00
12	11.800	7.85	0.28	0.07	0.00	0.00	3.07	3.07	0.01	0.00	0.07	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00
13	11.700	7.87	0.28	0.07	0.00	0.00	3.05	3.05	0.01	0.00	0.07	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00
14	11.600	7.89	0.28	0.07	0.00	0.00	3.02	3.02	0.01	0.00	0.07	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00
15	11.500	7.90	0.28	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		1.60	0.01		0.05	0.00	0.00	0.01			0.00	0.00	
AVG 20 DEG C RATE			0.24		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
1	12.900	29.36	0.1	250.0	0.0	3.28	2.63	2.63	1.31	0.19	0.05	1.55	0.26	9.9	0.0	0.	0.00
2	12.800	29.22	0.1	250.0	0.0	3.27	2.64	2.64	1.31	0.19	0.05	1.55	0.26	9.9	0.0	0.	0.00
3	12.700	29.08	0.1	250.0	0.0	3.26	2.65	2.65	1.31	0.19	0.05	1.55	0.26	9.8	0.0	0.	0.00
4	12.600	28.94	0.1	250.0	0.0	3.25	2.66	2.66	1.30	0.19	0.06	1.55	0.26	9.8	0.0	0.	0.00
5	12.500	28.80	0.1	250.0	0.0	3.24	2.67	2.67	1.30	0.19	0.06	1.55	0.26	9.8	0.0	0.	0.00
6	12.400	28.66	0.1	250.0	0.0	3.24	2.68	2.68	1.30	0.19	0.06	1.55	0.26	9.7	0.0	0.	0.00
7	12.300	28.52	0.1	250.0	0.0	3.24	2.69	2.69	1.30	0.19	0.06	1.55	0.26	9.7	0.0	0.	0.00
8	12.200	28.38	0.1	250.0	0.0	3.23	2.70	2.70	1.30	0.19	0.06	1.55	0.26	9.6	0.0	0.	0.00
9	12.100	28.24	0.1	250.0	0.0	3.23	2.71	2.71	1.30	0.19	0.06	1.55	0.26	9.6	0.0	0.	0.00
10	12.000	28.10	0.1	250.0	0.0	3.23	2.72	2.72	1.30	0.19	0.06	1.55	0.26	9.6	0.0	0.	0.00
11	11.900	27.96	0.1	250.0	0.0	3.24	2.73	2.73	1.30	0.19	0.06	1.55	0.26	9.5	0.0	0.	0.00
12	11.800	27.82	0.1	250.0	0.0	3.24	2.74	2.74	1.29	0.19	0.06	1.55	0.26	9.5	0.0	0.	0.00
13	11.700	27.68	0.1	250.0	0.0	3.24	2.75	2.75	1.29	0.19	0.06	1.55	0.26	9.4	0.0	0.	0.00
14	11.600	27.54	0.1	250.0	0.0	3.25	2.76	2.76	1.29	0.19	0.07	1.55	0.26	9.4	0.0	0.	0.00
15	11.500	27.40	0.2	250.0	0.0	3.26	2.77	2.77	1.29	0.19	0.07	1.55	0.26	9.4	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
1	12.900	0.83	0.21	0.23	.24	.55	.90	.68	.17	0.35	0.15	1.80	.00	.00	.00	.00	.00	0.00	0.00	0.00
2	12.800	0.83	0.22	0.23	.24	.55	.90	.68	.17	0.34	0.15	1.80	.00	.00	.00	.00	.00	0.00	0.00	0.00
3	12.700	0.84	0.22	0.23	.25	.55	.90	.68	.17	0.34	0.15	1.80	.00	.00	.00	.00	.00	0.00	0.00	0.00
4	12.600	0.84	0.23	0.23	.25	.55	.90	.68	.17	0.34	0.15	1.80	.00	.00	.00	.00	.00	0.00	0.00	0.00
5	12.500	0.84	0.23	0.23	.25	.55	.90	.68	.17	0.34	0.15	1.81	.00	.00	.00	.00	.00	0.00	0.00	0.00
6	12.400	0.84	0.23	0.23	.25	.55	.90	.68	.17	0.34	0.15	1.81	.00	.00	.00	.00	.00	0.00	0.00	0.00
7	12.300	0.84	0.24	0.23	.25	.55	.90	.68	.17	0.34	0.15	1.81	.00	.00	.00	.00	.00	0.00	0.00	0.00
8	12.200	0.84	0.24	0.23	.25	.55	.90	.68	.17	0.33	0.15	1.82	.00	.00	.00	.00	.00	0.00	0.00	0.00
9	12.100	0.84	0.24	0.23	.25	.55	.90	.68	.17	0.33	0.15	1.82	.00	.00	.00	.00	.00	0.00	0.00	0.00
10	12.000	0.84	0.25	0.22	.25	.55	.90	.69	.17	0.33	0.15	1.82	.00	.00	.00	.00	.00	0.00	0.00	0.00
11	11.900	0.84	0.25	0.22	.25	.56	.90	.69	.17	0.33	0.14	1.82	.00	.00	.00	.00	.00	0.00	0.00	0.00
12	11.800	0.84	0.25	0.22	.25	.56	.90	.69	.17	0.33	0.14	1.83	.00	.00	.00	.00	.00	0.00	0.00	0.00
13	11.700	0.84	0.26	0.22	.25	.56	.90	.69	.17	0.33	0.14	1.83	.00	.00	.00	.00	.00	0.00	0.00	0.00
14	11.600	0.84	0.26	0.22	.25	.56	.90	.69	.17	0.32	0.14	1.83	.00	.00	.00	.00	.00	0.00	0.00	0.00
15	11.500	0.84	0.26	0.22	.25	.56	.90	.69	.17	0.32	0.14	1.83	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.50						1.35	0.10							0.00	0.00	

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

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FINAL REPORT. Bayou Verret
REACH NO. 2 Bayou Verret #2

QUAL-TX calibration for Lake Cataouatche, LA
Verification run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
16	UPR RCH	1.6800	27.40	0.15	250.0	0.0	3.26	2.77	2.77	1.29	0.19	0.07	0.26	9.4	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
16	11.50	11.40	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
17	11.40	11.30	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
18	11.30	11.20	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
19	11.20	11.10	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
20	11.10	11.00	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
21	11.00	10.90	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
22	10.90	10.80	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
23	10.80	10.70	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
24	10.70	10.60	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
25	10.60	10.50	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
26	10.50	10.40	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
27	10.40	10.30	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
28	10.30	10.20	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
29	10.20	10.10	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
30	10.10	10.00	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
31	10.00	9.90	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
32	9.90	9.80	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
33	9.80	9.70	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
34	9.70	9.60	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
35	9.60	9.50	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
36	9.50	9.40	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
37	9.40	9.30	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
38	9.30	9.20	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
39	9.20	9.10	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
40	9.10	9.00	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
41	9.00	8.90	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
42	8.90	8.80	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
43	8.80	8.70	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
44	8.70	8.60	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
45	8.60	8.50	1.6800	0.0	0.010	0.12	2.40	72.7	17452.	7271.7	174.5	0.	0.000	0.500	0.010
TOT						3.61			523560.	218150.1					
AVG					0.010		2.40	72.7			174.5				
CUM						5.27									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
16	11.400	7.90	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
17	11.300	7.90	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
18	11.200	7.90	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
19	11.100	7.90	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
20	11.000	7.90	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
21	10.900	7.90	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
22	10.800	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
23	10.700	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
24	10.600	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
25	10.500	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
26	10.400	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
27	10.300	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
28	10.200	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
29	10.100	7.89	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
30	10.000	7.88	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
31	9.900	7.88	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
32	9.800	7.88	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
33	9.700	7.88	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
34	9.600	7.88	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
35	9.500	7.88	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
36	9.400	7.88	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
37	9.300	7.87	0.32	0.07	0.00	0.00	3.00	3.00	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
38	9.200	7.87	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
39	9.100	7.87	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
40	9.000	7.87	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
41	8.900	7.87	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
42	8.800	7.87	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
43	8.700	7.87	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
44	8.600	7.86	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
45	8.500	7.86	0.32	0.07	0.00	0.00	3.01	3.01	0.01	0.00	0.07	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		1.60	0.01		0.05	0.00	0.00	0.01			0.00	0.00	
AVG 20 DEG C RATE			0.28		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
16	11.400	27.41	0.2	250.0	0.0	3.28	2.79	2.79	1.29	0.19	0.07	1.55	0.26	9.3	0.0	0.	0.00
17	11.300	27.42	0.2	250.0	0.0	3.30	2.81	2.81	1.30	0.19	0.07	1.55	0.26	9.3	0.0	0.	0.00
18	11.200	27.43	0.2	250.0	0.0	3.31	2.84	2.84	1.30	0.19	0.07	1.55	0.26	9.3	0.0	0.	0.00
19	11.100	27.44	0.2	250.0	0.0	3.33	2.86	2.86	1.30	0.19	0.07	1.55	0.26	9.2	0.0	0.	0.00
20	11.000	27.45	0.2	250.0	0.0	3.34	2.88	2.88	1.30	0.19	0.07	1.56	0.26	9.2	0.0	0.	0.00
21	10.900	27.46	0.2	250.0	0.0	3.36	2.90	2.90	1.30	0.19	0.07	1.56	0.26	9.2	0.0	0.	0.00
22	10.800	27.47	0.2	250.0	0.0	3.37	2.92	2.92	1.30	0.19	0.07	1.56	0.26	9.1	0.0	0.	0.00
23	10.700	27.48	0.2	250.0	0.0	3.38	2.94	2.94	1.30	0.19	0.07	1.56	0.26	9.1	0.0	0.	0.00
24	10.600	27.49	0.2	250.0	0.0	3.39	2.96	2.96	1.31	0.19	0.07	1.57	0.26	9.1	0.0	0.	0.00
25	10.500	27.50	0.2	250.0	0.0	3.40	2.98	2.98	1.31	0.19	0.08	1.57	0.26	9.0	0.0	0.	0.00
26	10.400	27.51	0.2	250.0	0.0	3.42	3.00	3.00	1.31	0.19	0.08	1.57	0.26	9.0	0.0	0.	0.00
27	10.300	27.52	0.2	250.0	0.0	3.42	3.02	3.02	1.31	0.19	0.08	1.57	0.26	9.0	0.0	0.	0.00
28	10.200	27.53	0.2	250.0	0.0	3.43	3.04	3.04	1.31	0.19	0.08	1.58	0.26	9.0	0.0	0.	0.00
29	10.100	27.54	0.2	250.0	0.0	3.44	3.06	3.06	1.31	0.19	0.08	1.58	0.27	8.9	0.0	0.	0.00
30	10.000	27.55	0.2	250.0	0.0	3.45	3.08	3.08	1.31	0.18	0.08	1.58	0.27	8.9	0.0	0.	0.00
31	9.900	27.56	0.2	250.0	0.0	3.46	3.10	3.10	1.32	0.18	0.08	1.58	0.27	8.9	0.0	0.	0.00
32	9.800	27.57	0.2	250.0	0.0	3.47	3.12	3.12	1.32	0.18	0.08	1.58	0.27	8.9	0.0	0.	0.00
33	9.700	27.58	0.2	250.0	0.0	3.47	3.13	3.13	1.32	0.18	0.08	1.59	0.27	8.8	0.0	0.	0.00
34	9.600	27.59	0.2	250.0	0.0	3.48	3.15	3.15	1.32	0.18	0.08	1.59	0.27	8.8	0.0	0.	0.00
35	9.500	27.60	0.2	250.0	0.0	3.48	3.17	3.17	1.32	0.18	0.09	1.59	0.27	8.8	0.0	0.	0.00
36	9.400	27.61	0.2	250.0	0.0	3.49	3.19	3.19	1.32	0.18	0.09	1.59	0.27	8.8	0.0	0.	0.00
37	9.300	27.62	0.2	250.0	0.0	3.49	3.21	3.21	1.33	0.18	0.09	1.60	0.27	8.7	0.0	0.	0.00
38	9.200	27.63	0.2	250.0	0.0	3.50	3.23	3.23	1.33	0.18	0.09	1.60	0.27	8.7	0.0	0.	0.00
39	9.100	27.64	0.2	250.0	0.0	3.50	3.24	3.24	1.33	0.18	0.09	1.60	0.27	8.7	0.0	0.	0.00
40	9.000	27.65	0.2	250.0	0.0	3.51	3.26	3.26	1.33	0.18	0.09	1.60	0.27	8.7	0.0	0.	0.00
41	8.900	27.66	0.2	250.0	0.0	3.51	3.28	3.28	1.33	0.18	0.09	1.61	0.27	8.7	0.0	0.	0.00
42	8.800	27.67	0.2	250.0	0.0	3.51	3.29	3.29	1.33	0.18	0.09	1.61	0.27	8.6	0.0	0.	0.00
43	8.700	27.68	0.2	250.0	0.0	3.52	3.31	3.31	1.33	0.18	0.09	1.61	0.27	8.6	0.0	0.	0.00
44	8.600	27.69	0.2	250.0	0.0	3.52	3.33	3.33	1.34	0.18	0.09	1.61	0.27	8.6	0.0	0.	0.00
45	8.500	27.70	0.2	250.0	0.0	3.53	3.34	3.34	1.34	0.18	0.09	1.61	0.27	8.6	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
16	11.400	0.84	0.26	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.04	.00	.00	.00	.00	.00	0.00	0.00	0.00
17	11.300	0.84	0.27	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.04	.00	.00	.00	.00	.00	0.00	0.00	0.00
18	11.200	0.84	0.27	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.05	.00	.00	.00	.00	.00	0.00	0.00	0.00
19	11.100	0.84	0.27	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.05	.00	.00	.00	.00	.00	0.00	0.00	0.00
20	11.000	0.84	0.28	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.05	.00	.00	.00	.00	.00	0.00	0.00	0.00
21	10.900	0.84	0.28	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.05	.00	.00	.00	.00	.00	0.00	0.00	0.00
22	10.800	0.84	0.28	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.06	.00	.00	.00	.00	.00	0.00	0.00	0.00
23	10.700	0.84	0.28	0.25	.27	.56	.90	.69	.19	0.36	0.14	2.06	.00	.00	.00	.00	.00	0.00	0.00	0.00
24	10.600	0.84	0.29	0.25	.27	.57	.90	.69	.19	0.36	0.14	2.06	.00	.00	.00	.00	.00	0.00	0.00	0.00
25	10.500	0.84	0.29	0.25	.27	.57	.90	.69	.19	0.36	0.14	2.06	.00	.00	.00	.00	.00	0.00	0.00	0.00
26	10.400	0.84	0.29	0.25	.27	.57	.90	.70	.19	0.36	0.14	2.06	.00	.00	.00	.00	.00	0.00	0.00	0.00
27	10.300	0.84	0.30	0.25	.28	.57	.90	.70	.19	0.36	0.14	2.07	.00	.00	.00	.00	.00	0.00	0.00	0.00
28	10.200	0.84	0.30	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.07	.00	.00	.00	.00	.00	0.00	0.00	0.00
29	10.100	0.85	0.30	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.07	.00	.00	.00	.00	.00	0.00	0.00	0.00
30	10.000	0.85	0.30	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.07	.00	.00	.00	.00	.00	0.00	0.00	0.00
31	9.900	0.85	0.31	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.08	.00	.00	.00	.00	.00	0.00	0.00	0.00
32	9.800	0.85	0.31	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.08	.00	.00	.00	.00	.00	0.00	0.00	0.00
33	9.700	0.85	0.31	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.08	.00	.00	.00	.00	.00	0.00	0.00	0.00
34	9.600	0.85	0.31	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.08	.00	.00	.00	.00	.00	0.00	0.00	0.00
35	9.500	0.85	0.32	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.09	.00	.00	.00	.00	.00	0.00	0.00	0.00
36	9.400	0.85	0.32	0.25	.28	.57	.90	.70	.19	0.37	0.14	2.09	.00	.00	.00	.00	.00	0.00	0.00	0.00
37	9.300	0.85	0.32	0.25	.28	.58	.90	.70	.19	0.37	0.14	2.09	.00	.00	.00	.00	.00	0.00	0.00	0.00
38	9.200	0.85	0.32	0.25	.28	.58	.90	.70	.19	0.37	0.14	2.09	.00	.00	.00	.00	.00	0.00	0.00	0.00
39	9.100	0.85	0.32	0.25	.28	.58	.90	.70	.19	0.37	0.14	2.09	.00	.00	.00	.00	.00	0.00	0.00	0.00
40	9.000	0.85	0.33	0.25	.28	.58	.90	.70	.19	0.37	0.14	2.10	.00	.00	.00	.00	.00	0.00	0.00	0.00
41	8.900	0.85	0.33	0.25	.28	.58	.90	.70	.19	0.37	0.14	2.10	.00	.00	.00	.00	.00	0.00	0.00	0.00
42	8.800	0.85	0.33	0.25	.28	.58	.90	.70	.19	0.37	0.14	2.10	.00	.00	.00	.00	.00	0.00	0.00	0.00
43	8.700	0.85	0.33	0.25	.28	.58	.90	.71	.19	0.37	0.14	2.10	.00	.00	.00	.00	.00	0.00	0.00	0.00
44	8.600	0.85	0.34	0.25	.28	.58	.90	.71	.19	0.37	0.14	2.10	.00	.00	.00	.00	.00	0.00	0.00	0.00
45	8.500	0.85	0.34	0.25	.28	.58	.90	.71	.20	0.38	0.14	2.11	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.50						1.35	0.10							0.00	0.00	

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

FINAL REPORT Bayou Verret
REACH NO. 3 Bayou Verret #3

QUAL-TX calibration for Lake Cataouatche, LA
Verification run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
46	UPR RCH	1.6800	27.70	0.15	250.0	0.0	3.53	3.34	3.34	1.34	0.18	0.09	0.27	8.6	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
46	8.50	8.40	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
47	8.40	8.30	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
48	8.30	8.20	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
49	8.20	8.10	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
50	8.10	8.00	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
51	8.00	7.90	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
52	7.90	7.80	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
53	7.80	7.70	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
54	7.70	7.60	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
55	7.60	7.50	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
56	7.50	7.40	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
57	7.40	7.30	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
58	7.30	7.20	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
59	7.20	7.10	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
60	7.10	7.00	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
61	7.00	6.90	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
62	6.90	6.80	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
63	6.80	6.70	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
64	6.70	6.60	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
65	6.60	6.50	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
66	6.50	6.40	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
67	6.40	6.30	1.6800	0.0	0.009	0.13	2.10	88.3	18553.	8834.7	185.5	0.	0.000	0.500	0.009
TOT						2.81			408163.	194363.5					
AVG					0.009		2.10	88.3			185.5				
CUM						8.08									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
46	8.400	7.86	0.36	0.07	0.00	0.00	2.53	2.53	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
47	8.300	7.86	0.36	0.07	0.00	0.00	2.53	2.53	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
48	8.200	7.85	0.36	0.07	0.00	0.00	2.53	2.53	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
49	8.100	7.85	0.36	0.07	0.00	0.00	2.53	2.53	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
50	8.000	7.85	0.36	0.07	0.00	0.00	2.53	2.53	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
51	7.900	7.85	0.36	0.07	0.00	0.00	2.54	2.54	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
52	7.800	7.84	0.36	0.07	0.00	0.00	2.54	2.54	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
53	7.700	7.84	0.36	0.07	0.00	0.00	2.54	2.54	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
54	7.600	7.84	0.36	0.07	0.00	0.00	2.54	2.54	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
55	7.500	7.84	0.36	0.07	0.00	0.00	2.55	2.55	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
56	7.400	7.83	0.36	0.07	0.00	0.00	2.55	2.55	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
57	7.300	7.83	0.36	0.07	0.00	0.00	2.55	2.55	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
58	7.200	7.83	0.36	0.07	0.00	0.00	2.55	2.55	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
59	7.100	7.83	0.36	0.07	0.00	0.00	2.56	2.56	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
60	7.000	7.82	0.36	0.07	0.00	0.00	2.56	2.56	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
61	6.900	7.82	0.36	0.07	0.00	0.00	2.56	2.56	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
62	6.800	7.82	0.36	0.07	0.00	0.00	2.57	2.57	0.01	0.00	0.07	0.00	0.00	0.01	0.20	0.00	0.00	0.00	0.00
63	6.700	7.82	0.36	0.07	0.00	0.00	2.57	2.57	0.01	0.00	0.07	0.00	0.00	0.01	0.21	0.00	0.00	0.00	0.00
64	6.600	7.81	0.36	0.07	0.00	0.00	2.59	2.59	0.01	0.00	0.07	0.00	0.00	0.01	0.21	0.00	0.00	0.00	0.00
65	6.500	7.81	0.36	0.07	0.00	0.00	2.64	2.64	0.01	0.00	0.08	0.00	0.00	0.01	0.23	0.00	0.00	0.00	0.00
66	6.400	7.81	0.36	0.07	0.00	0.00	2.77	2.77	0.01	0.00	0.08	0.00	0.00	0.01	0.28	0.00	0.00	0.00	0.00
67	6.300	7.80	0.36	0.07	0.00	0.00	3.13	3.13	0.01	0.00	0.08	0.00	0.00	0.01	0.40	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		1.30	0.01		0.05	0.00	0.00	0.01			0.00	0.00	
AVG 20 DEG C RATE			0.31		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
46	8.400	27.72	0.2	250.0	0.0	3.56	3.35	3.35	1.34	0.18	0.09	1.62	0.27	8.6	0.0	0.	0.00
47	8.300	27.74	0.2	250.0	0.0	3.59	3.35	3.35	1.34	0.18	0.10	1.62	0.27	8.6	0.0	0.	0.00
48	8.200	27.75	0.2	250.0	0.0	3.62	3.36	3.36	1.34	0.18	0.10	1.62	0.27	8.6	0.0	0.	0.00
49	8.100	27.77	0.2	250.0	0.0	3.65	3.37	3.37	1.34	0.18	0.10	1.62	0.27	8.6	0.0	0.	0.00
50	8.000	27.79	0.2	250.0	0.0	3.67	3.38	3.38	1.34	0.18	0.10	1.62	0.27	8.6	0.0	0.	0.00
51	7.900	27.81	0.2	250.0	0.0	3.69	3.38	3.38	1.34	0.18	0.10	1.62	0.27	8.5	0.0	0.	0.00
52	7.800	27.83	0.2	250.0	0.0	3.71	3.39	3.39	1.34	0.18	0.10	1.62	0.27	8.5	0.0	0.	0.00
53	7.700	27.85	0.2	250.0	0.0	3.73	3.39	3.39	1.34	0.18	0.10	1.63	0.27	8.5	0.0	0.	0.00
54	7.600	27.86	0.2	250.0	0.0	3.75	3.40	3.40	1.34	0.18	0.10	1.63	0.27	8.5	0.0	0.	0.00
55	7.500	27.88	0.2	250.0	0.0	3.77	3.41	3.41	1.34	0.18	0.10	1.63	0.27	8.5	0.0	0.	0.00
56	7.400	27.90	0.2	250.0	0.0	3.79	3.41	3.41	1.35	0.18	0.10	1.63	0.27	8.5	0.0	0.	0.00
57	7.300	27.92	0.2	250.0	0.0	3.81	3.42	3.42	1.35	0.18	0.10	1.63	0.27	8.5	0.0	0.	0.00
58	7.200	27.94	0.2	250.0	0.0	3.82	3.43	3.43	1.35	0.18	0.10	1.63	0.27	8.5	0.0	0.	0.00
59	7.100	27.95	0.2	250.1	0.0	3.84	3.43	3.43	1.35	0.18	0.11	1.64	0.27	8.5	0.0	0.	0.00
60	7.000	27.97	0.2	250.1	0.0	3.85	3.44	3.44	1.35	0.18	0.11	1.64	0.27	8.5	0.0	0.	0.00
61	6.900	27.99	0.2	250.4	0.0	3.86	3.44	3.44	1.35	0.18	0.11	1.64	0.27	8.5	0.0	0.	0.00
62	6.800	28.01	0.2	251.2	0.0	3.88	3.45	3.45	1.35	0.18	0.11	1.64	0.27	8.6	0.0	0.	0.00
63	6.700	28.03	0.2	253.3	0.0	3.91	3.45	3.45	1.35	0.18	0.11	1.64	0.27	8.7	0.0	0.	0.00
64	6.600	28.05	0.2	259.3	0.0	3.97	3.46	3.46	1.35	0.18	0.11	1.64	0.27	9.0	0.0	0.	0.00
65	6.500	28.06	0.2	276.2	0.0	4.13	3.46	3.46	1.34	0.17	0.12	1.63	0.26	9.9	0.0	0.	0.00
66	6.400	28.08	0.2	323.5	0.0	4.57	3.44	3.44	1.31	0.16	0.13	1.60	0.24	12.5	0.0	0.	0.00
67	6.300	28.10	0.2	456.7	0.0	5.85	3.40	3.40	1.22	0.14	0.17	1.53	0.17	19.9	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
46	8.400	0.85	0.34	0.29	.31	.58	.90	.71	.22	0.42	0.14	2.35	.00	.00	.00	.00	.00	0.00	0.00	0.00
47	8.300	0.85	0.34	0.29	.31	.58	.90	.71	.22	0.42	0.14	2.36	.00	.00	.00	.00	.00	0.00	0.00	0.00
48	8.200	0.85	0.34	0.29	.31	.58	.90	.71	.22	0.42	0.14	2.36	.00	.00	.00	.00	.00	0.00	0.00	0.00
49	8.100	0.85	0.35	0.29	.31	.58	.90	.71	.22	0.42	0.14	2.36	.00	.00	.00	.00	.00	0.00	0.00	0.00
50	8.000	0.85	0.35	0.29	.31	.58	.90	.71	.22	0.42	0.14	2.36	.00	.00	.00	.00	.00	0.00	0.00	0.00
51	7.900	0.85	0.35	0.29	.31	.59	.90	.71	.22	0.42	0.14	2.36	.00	.00	.00	.00	.00	0.00	0.00	0.00
52	7.800	0.85	0.35	0.29	.31	.59	.90	.71	.22	0.42	0.14	2.36	.00	.00	.00	.00	.00	0.00	0.00	0.00
53	7.700	0.85	0.36	0.29	.31	.59	.90	.71	.22	0.42	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
54	7.600	0.85	0.36	0.29	.31	.59	.90	.71	.22	0.42	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
55	7.500	0.85	0.36	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
56	7.400	0.85	0.36	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
57	7.300	0.85	0.36	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
58	7.200	0.85	0.37	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
59	7.100	0.85	0.37	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
60	7.000	0.85	0.37	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.38	.00	.00	.00	.00	.00	0.00	0.00	0.00
61	6.900	0.85	0.37	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.38	.00	.00	.00	.00	.00	0.00	0.00	0.00
62	6.800	0.85	0.38	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.38	.00	.00	.00	.00	.00	0.00	0.00	0.00
63	6.700	0.85	0.38	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.38	.00	.00	.00	.00	.00	0.00	0.00	0.00
64	6.600	0.84	0.39	0.29	.31	.59	.90	.71	.22	0.43	0.14	2.37	.00	.00	.00	.00	.00	0.00	0.00	0.00
65	6.500	0.83	0.40	0.29	.30	.59	.90	.71	.22	0.43	0.14	2.35	.00	.00	.00	.00	.00	0.00	0.00	0.00
66	6.400	0.81	0.45	0.29	.30	.60	.89	.71	.21	0.42	0.14	2.30	.00	.00	.00	.00	.00	0.00	0.00	0.00
67	6.300	0.75	0.56	0.29	.28	.61	.85	.71	.20	0.39	0.15	2.16	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.50						1.35	0.10							0.00	0.00	

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

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FINAL REPORT Bayou Verret
REACH NO. 4 Lake Cataouatche #1

QUAL-TX calibration for Lake Cataouatche, LA
Verification run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
68	UPR RCH	1.6800	28.10	0.20	456.7	0.0	5.85	3.40	3.40	1.22	0.14	0.17	0.17	19.9	0.	0.00
68	WSTLD	0.7200	26.60	0.17	300.0	0.0	0.44	2.62	2.62	1.31	0.19	0.05	0.26	10.0	0.	0.00
68	WSTLD	8.0000	29.00	0.17	300.0	0.0	6.83	2.62	2.62	1.31	0.19	0.05	0.26	10.0	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
68	6.30	4.90	10.4000	83.8	0.001	10.97	2.20	3201.0	9859155.	4481434.0	7042.3	0.	0.000	2.600	0.001
TOT						10.97			9859155.	4481434.0					
AVG					0.001		2.20	3201.0			7042.3				
CUM						19.05									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
68	4.900	7.64	0.40	0.08	0.00	0.00	1.31	1.31	0.01	0.00	0.18	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.50	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.34		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
68	4.900	29.20	0.5	471.9	0.0	6.00	3.39	3.39	1.21	0.13	0.18	1.52	0.17	20.8	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =
** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
68	4.900	0.74	0.58	0.11	.26	.61	.85	.71	.19	0.30	0.15	1.58	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

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FINAL REPORT Bayou Verret
REACH NO. 5 Lake Cataouatche #2

QUAL-TX calibration for Lake Cataouatche, LA
Verification run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
69	UPR RCH	10.4000	29.20	0.49	471.9	0.0	6.00	3.39	3.39	1.21	0.13	0.18	0.17	20.8	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
69	4.90	3.40	10.4000	83.8	0.001	22.87	2.40	5707.8	20547944.	8561643.0	13698.6	0.	0.000	2.600	0.001
TOT						22.87			20547944.	8561643.0					
AVG					0.001		2.40	5707.8			13698.6				
CUM						41.92									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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	3.400	7.73	0.36	0.07	0.00	0.00	0.44	0.44	0.01	0.00	0.17	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.00	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.31		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
69	3.400	28.50	0.6	571.5	0.0	6.50	3.72	3.72	1.18	0.13	0.22	1.52	0.13	22.5	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
69	3.400	0.73	0.63	0.10	.24	.63	.81	.71	.17	0.27	0.15	1.44	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

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FINAL REPORT Bayou Verret
REACH NO. 6 Lake Cataouatche #3

QUAL-TX calibration for Lake Cataouatche, LA
Verification run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
70	UPR RCH	10.4000	28.50	0.64	571.5	0.0	6.50	3.72	3.72	1.18	0.13	0.22	0.13	22.5	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
70	3.40	0.80	10.4000	83.8	0.001	39.64	2.50	5479.5	35616436.	14246574.0	13698.6	0.	0.000	2.600	0.001
TOT						39.64			35616436.	14246574.0					
AVG					0.001		2.50	5479.5			13698.6				
CUM						81.56									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
70	0.800	7.76	0.35	0.07	0.00	0.00	0.40	0.40	0.01	0.00	0.17	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.00	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.30		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
70	0.800	28.30	0.6	738.9	0.0	6.42	4.69	4.69	1.10	0.13	0.24	1.47	0.09	20.4	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
70	0.800	0.74	0.64	0.10	.24	.65	.76	.70	.17	0.25	0.15	1.39	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

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FINAL REPORT Bayou Verret QUAL-TX calibration for Lake Cataouatche, LA
REACH NO. 7 Lake Cataouatche #4 Verification run

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

ELEM NO.	TYPE	FLOW CMS	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	PHOS MG/L	CHL A UG/L	COLI #/100ML	NCM *
71	UPR RCH	10.4000	28.30	0.57	738.9	0.0	6.42	4.69	4.69	1.10	0.13	0.24	0.09	20.4	0.	0.00

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

ELEM NO.	BEGIN DIST KM	ENDING DIST KM	FLOW CMS	PCT EFF	ADVCTV VELO M/S	TRAVEL TIME DAYS	DEPTH M	WIDTH M	VOLUME CU M	SURFACE AREA SQ M	X-SECT AREA SQ M	TIDAL PRISM CU M	TIDAL VELO M/S	DISPRSN SQ M/S	MEAN VELO M/S
71	0.80	0.00	10.4000	83.8	0.001	13.53	1.80	8443.1	12158055.	6754476.0	15197.6	0.	0.000	2.600	0.001
TOT						13.53			12158055.	6754476.0					
AVG					0.001		1.80	8443.1			15197.6				
CUM						95.09									

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

ELEM NO.	ENDING DIST	SAT D.O. MG/L	REAER RATE 1/DA	CBOD DECAY 1/DA	CBOD SETT 1/DA	ANBOD DECAY 1/DA	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
71	0.000	7.72	0.48	0.07	0.00	0.00	0.26	0.26	0.01	0.00	0.17	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
20 DEG C RATE				0.05		0.00		0.00	0.01		0.10	0.00	0.00	0.00			0.00	0.00	
AVG 20 DEG C RATE			0.41		0.00					0.00									0.00

* G/SQ M/D ** MG/L/DAY

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO MG/L	BOD MG/L	EBOD MG/L	ORGN MG/L	NH3 MG/L	NO3+2 MG/L	TOTN MG/L	PHOS MG/L	CHL A UG/L	MACRO **	COLI #/100ML	NCM *
71	0.000	28.60	0.6	955.2	0.0	6.12	3.58	3.58	0.84	0.20	0.15	1.18	0.08	13.5	0.0	0.	0.00

* CM-I = cond umhos CM-II = NCM =

** G/CU M

********** ALGAE AND MACROPHYTE DATA **********

ELEM NO.	ENDING DIST	SECCHI DEPTH M	NITR PREF	ALG SETT 1/DA	ALG LIT LIM	ALG N LIM	ALG P LIM	ALG N&P LIM	ALG TOT LIM	ALG GROW 1/DA	ALG RESP 1/DA	A P/R RATIO	MAC LIT LIM	MAC N LIM	MAC P LIM	MAC N&P LIM	MAC TOT LIM	MAC GROW 1/DA	MAC RESP 1/DA	M P/R RATIO
71	0.000	0.80	0.44	0.14	.33	.63	.73	.68	.22	0.35	0.15	1.89	.00	.00	.00	.00	.00	0.00	0.00	0.00
20 DEG C RATE				0.20						1.05	0.10							0.00	0.00	

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

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QUAL-TX calibration for Lake Cataouatche, LA
Verification run

INPUT/OUTPUT LOADING SUMMARY

	FLOW CMS	DO KG/D	BOD KG/D	ORG-N KG/D	NH3-N KG/D	NO3-N KG/D	PHOS KG/D	CHL A KG/D	NCM
HEADWATER INFLOW	1.680	479.0	380.3	190.1	27.6	7.3	37.7	1451.5	0.0
INCREMENTAL INFLOW	0.000	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
NON-POINT INPUT		0.0	28186.0	1349.5					0.0
WASTELOADS	8.720	4748.3	1973.9	987.0	143.1	37.7	195.9	7534.1	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTFLOW THRU LOWER BNDRY	-10.400	-5496.2	-3217.2	-752.4	-175.3	-135.0	-72.9	-12126.7	0.0
DISPERSION THRU LOWER BNDRY		-6031.3	-3417.0	-745.3	468.8	-514.2	-9.2	-29835.6	0.0
REAERATION		43455.0							
BACKGROUND BENTHAL		-5219.4							
AEROBIC BOD DECAY		-23906.1	-23906.1						
BOD SETTLING		0.0	0.0						
ANAEROBIC BOD DECAY			0.0						
ORGANIC N HYDROLYSIS		0.0		-1028.9	1028.9				
ORGANIC N SETTLING				0.0	0.0				
NH3 DECAY		-8289.0			-1914.3	1914.3			
BACKGROUND NH3 SOURCE					127.2				
DENITRIFICATION			0.0			0.0			
PHOSPHORUS SOURCE							3.8		
ALGAE PHOTOSYNTHESIS		41390.8			-888.8	-1310.1	-336.3	431154.4	
ALGAE RESPIRATION		-27830.9			1182.8		180.9	-231923.8	
ALGAE SETTLING		-13300.4						-166254.6	
MACRO PHOTOSYNTHESIS		0.0			0.0	0.0	0.0		
NCM DECAY		0.0							0.0
NCM SETTLING		0.0							0.0
TOTAL INPUTS	10.400	90073.1	30540.2	2526.6	2978.4	1959.2	418.3	440140.0	0.0
TOTAL OUTPUTS	-10.400	-90073.2	-30540.2	-2526.6	-2978.4	-1959.2	-418.3	-440140.7	0.0
NET CONVERGENCE ERROR	0.000	-0.1	0.0	0.0	0.0	0.0	0.0	-0.7	0.0

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.....EXECUTION COMPLETED

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