DRAFT

TMDLs for Dissolved Oxygen in Selected Subsegments in the Pearl River Basin, Louisiana

(090105, 090204, 090207)

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EXECUTIVE SUMMARY

Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's (USEPA) Water Quality Planning and Management Regulations (at Title 40 of the *Code of Federal Regulations* [CFR] Part 130) require states to develop Total Maximum Daily Loads (TMDLs) for impaired waterbodies. A TMDL establishes the amount of a pollutant that a waterbody can assimilate while still meeting the water quality standard for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and nonpoint sources to restore and maintain the quality of the state's water resources (USEPA 1991).

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody and may include a future growth (FG) component. The TMDL components are illustrated using the following equation:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS + FG$$

The study area for this TMDL includes three Pearl River Basin subsegments. The Pearl River flows along the border of Louisiana and Mississippi. It originates in Mississippi at the confluence of Nanawaya and Tallahaga creeks and flows southerly for almost 500 miles. It has a drainage area of almost 9,000 square miles. In the TMDL study area, the largest percentage of area is wetland, followed by forest, shrubland, and agriculture.

The Louisiana Department of Environmental Quality (LDEQ) has included three Pearl River Basin subsegments on the state's 2004 section 303(d) list of impaired waterbodies. The subsegments are listed for dissolved oxygen impairments. The impaired designated uses for the subsegments (Table ES-1) are primary and secondary contact recreation (PCR and SCR), and fish and wildlife propagation (FWP). The subsegments are either fully supporting (F) or not supporting (N).

Table ES-1. Section 303(d) listing for subsegments included in this report

Subsegment	Subsegment name	Subsegment description	Designated use		
			PCR	SCR	FWP
090105	Pearl River Navigation Canal	Pools Bluff to Lock No. 3	F	F	N
090204	Pearl River Navigation Canal	Below Lock No.3	F	F	N
090207	Middle River and West Middle River	West Pearl River to Little Lake	F	F	N

A water quality model (LA-QUAL) was set up to simulate dissolved oxygen, 25-day carbonaceous biochemical oxygen demand (CBOD), ammonia, and nitrite/nitrate. The model was calibrated using data from field work conducted in August 2006. The projection simulation was run at critical flows and temperatures to address seasonality, as the Clean Water Act

requires. Reductions of nonpoint source loads were required for the projection simulation to show the dissolved oxygen standard, 5 mg/L, being maintained. In general, the modeling in this study was consistent with guidance in the Louisiana TMDL technical procedures manual (LDEQ 2005). TMDLs for oxygen-demanding substances (CBOD, ammonia, and sediment oxygen demand) were calculated using the results of the projection simulation.

Table ES-2 presents a summary of the TMDLs for the subsegments addressed in this report. The numeric water quality criterion that applies to the impaired subsegments and was used to calculate the total allowable pollutant loads is 5 mg/L.

In TMDL development, allowable loadings from all pollutant sources that cumulatively amount to no more than the TMDL must be established, thereby providing the basis for establishing water quality-based controls. WLAs were assigned to permitted point source discharges. The LAs include background loadings and human-induced nonpoint sources. An explicit MOS of 10 percent and an FG component of 10 percent were also included. Table ES-3 presents a summary of the reduction percentages for LAs. Reduction percentages for total oxygen demand ranged from 23 to 67 percent. There were no reductions for WLAs (ES-4).

Table ES-2. Summary of dissolved oxygen TMDLs, WLAs, LAs, MOSs, and FGs for Pearl River Basin

Subsegment	Oxygen demand (kg/d)				
090105	SOD	CBOD	Ammonia[a]	Nitrate[a]	Total
WLA	0.00	4.48	13.86	0.00	18.34
MOS for WLA	0.00	0.56	1.73	0.00	2.29
FG for WLA	0.00	0.56	1.73	0.00	2.29
LA	178.00	646.40	49.54	248.72	1,122.65
MOS for LA	22.25	80.80	6.19	31.09	140.33
FG for LA	22.25	80.80	6.19	31.09	140.33
TMDL	222.50	813.60	79.24	310.89	1,426.23
Subsegment	Oxygen demand (kg/d)				
090204	SOD	CBOD	Ammonia[a]	Nitrate[a]	Total
WLA	0.00	6.92	3.21	0.00	10.13
MOS for WLA	0.00	0.86	0.40	0.00	1.27
FG for WLA	0.00	0.86	0.40	0.00	1.27
LA	984.80	561.20	393.86	60.97	2,000.82
MOS for LA	123.10	70.15	49.23	7.62	250.10
FG for LA	123.10	70.15	49.23	7.62	250.10
TMDL	1,231.00	710.14	496.33	76.21	2,513.69
Subsegment	Oxygen demand (kg/d)				
090207	SOD	CBOD	Ammonia[a]	Nitrate[a]	Total
WLA	0.00	0.00	0.00	0.00	0.00
MOS for WLA	0.00	0.00	0.00	0.00	0.00
FG for WLA	0.00	0.00	0.00	0.00	0.00
LA	2,940.40	2,811.04	33.25	1,752.44	7,537.13
MOS for LA	367.55	351.38	4.16	219.05	942.14
FG for LA	367.55	351.38	4.16	219.05	942.14
TMDL	3,675.50	3,513.80	41.57	2,190.55	9,421.42

[a] Converted to oxygen demand. (concentration × 4.33 [conversion factor])

Table ES-3. Summary of reduction percentages for LAs in the Pearl River Basin

Subsegment	Percent reduction				
	SOD	CBOD	Ammonia	Nitrate	Total
090105	17.93	30.01	4.69	5.53	22.73
090204	37.13	60.64	9.43	12.00	42.83
090207	67.47	76.46	66.55	3.64	67.08

Table ES-4. Summary of WLAs for the Pearl River Basin

Sub-segment	Permit #	Outfall	Facility Name	Flow (gpd)	BOD_5 Limit (mg/L)	Ammonia Limit (mg/L)	BOD_5 (lb/d)	Ammonia (lb/d)
090105	LA0106143	001	Double D Meat Co.	5,500			5.600	4.000
090204	LA0055638	001	MacKenzie Co LLC	3,645	45[a]	10.00	1.369	0.304
		002		800	45	3.49[b]	0.300	0.023
		003		1,080	45[a]	10.00	0.406	0.090
090204	LAG480357	001	St. Tammany Parish Government-Bush Maintenance	2,000	45	3.49[b]	0.751	0.058
		002		200	45[a]	3.49[b]	0.075	0.006
090204	LAG530499		Bellsouth Telecommunications J2840	5,000	45	3.49[b]	1.878	0.146
090204	LAG530848	001	Highway 21 LLC	5,000	45	3.49[b]	1.878	0.146
090204	LAG531949	001	Hebron Baptist Church of Bush La - Hebron B	1,800	45	3.49[b]	0.676	0.052
090204	LAG541203	001	Sixth Ward Junior High School	5,240	30	2.33[b]	1.312	0.102

[a] Concentration obtained from Louisiana general sanitary permit with similar flow.
[b] Concentration calculated as described in LTP assuming secondary treatment and mechanical plants.

Hurricane Katrina made landfall on Monday, August 29, 2005, as a Category 4 hurricane. The storm brought heavy winds and rain to southeast Louisiana. Floodwaters breached several levees, flooding large areas of coastal Louisiana. The hurricane caused a change in sedimentation and water quality in southern Louisiana. Several federal and state agencies, including EPA and LDEQ, are engaged in collecting environmental data and assessing the recovery of the Gulf of Mexico waters. The proposed TMDLs in this report were developed on the basis of pre- and post-hurricane conditions. Therefore, some post-hurricane conditions and other factors could delay implementation of these proposed TMDLs, render some proposed TMDLs obsolete, or require modifications of the TMDLs. Hurricane effects might be a valid justification for some TMDL modification, however, any deviation from the TMDLs should be justified using site-specific data or information.

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1 INTRODUCTION

Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's (USEPA) Water Quality Planning and Management Regulations (at Title 40 of the *Code of Federal Regulations* [CFR] Part 130) require states to develop Total Maximum Daily Loads (TMDLs) for waterbodies that are not supporting their designated uses, even if pollutant sources have implemented technology-based controls. A TMDL establishes the maximum allowable load (mass per unit time) of a pollutant that a waterbody is able to assimilate while still supporting its designated uses. The maximum allowable load is determined on the basis of the relationship between pollutant sources and in-stream water quality. A TMDL provides the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and nonpoint sources to restore and maintain the quality of the state's water resources (USEPA 1991).

Monitoring data collected by the Louisiana Department of Environmental Quality (LDEQ) indicate that observed dissolved oxygen water quality sometimes does not meet criteria for three subsegments in the Pearl River Basin. The impaired designated uses for the subsegments are primary and secondary contact recreation, and fish and wildlife propagation. The subsegments are either fully supporting (F) or not supporting (N) the designated uses. Table 1-1 presents information from Louisiana's 2004 section 303(d) list for the three subsegments. All subsegments have the suspected cause of "unknown sources," which indicates that various sources might be present but not enough data are available to identify them.

Table 1-1. Subsegments and impairments addressed in this report

Subsegment	Subsegment name	Subsegment description	Designated use		
			PCR	SCR	FWP
090105	Pearl River Navigation Canal	Pools Bluff to Lock No. 3	F	F	N
090204	Pearl River Navigation Canal	Below Lock No.3	F	F	N
090207	Middle River and West Middle River	West Pearl River to Little Lake	F	F	N

Oxygen concentrations in the water column fluctuate under natural conditions, but severe depletion usually results from human activities that introduce large quantities of biodegradable organic materials into surface waters. In polluted waters, bacterial degradation of organic materials can result in a net decline in oxygen concentrations in the water. Oxygen depletion can also result from chemical reactions that place a chemical oxygen demand on receiving waters. Other factors, such as temperature and salinity, influence the amount of oxygen dissolved in water. Prolonged hot weather decreases oxygen concentrations and can cause fish kills even in clean waters because warm water cannot hold as much oxygen as cold water (Scorecard 2005). Other factors affecting dissolved oxygen concentrations include the following (Murphy 2005):

- Volume and velocity of water flowing in the waterbody
- Climate/season
- The type and number of organisms in the waterbody
- Altitude
- Dissolved or suspended solids

- Amount of nutrients in the water
- Organic wastes
- Riparian vegetation
- Groundwater inflow

Low dissolved oxygen concentrations in streams can be linked to both natural conditions and human activities. In Louisiana, natural stream conditions like low flow, high temperature, and high organic content often result in dissolved oxygen levels already below current water quality criteria, making it difficult to develop standards for Best Management Practices (BMPs) (Mason et al. 2007). Additional data for these 303(d) listed areas are needed to determine whether the low dissolved oxygen occurs naturally or is related to human activity (is anthropogenic).

2 BACKGROUND INFORMATION

2.1 General Description

The Pearl River flows along the border of Louisiana and Mississippi. It originates in Mississippi at the confluence of Nanawaya and Tallahaga creeks and flows southerly for almost 500 miles. It has a drainage area of almost 9,000 square miles. About 50 miles above its mouth, the Pearl River splits and forms the East Pearl River and West Pearl River. Both portions flow to Lake Borgne and eventually to the Gulf of Mexico. In Louisiana the Pearl River Basin includes portions of Washington and St. Tammany parishes, as well as a small portion of Tangipahoa Parish. The watershed's U.S. Geological Survey (USGS) hydrologic unit codes are 03180004 and 03180005.

The area of interest for this TMDL consists of selected subsegments in the Pearl River and East Pearl River watersheds in Washington and St. Tammany parishes. Table 2-1 lists the parish and approximate drainage area of each subsegment, and Figures 2-1 and 2-2 shows the locations of the subsegments.

Table 2-1. Parish and drainage area for each listed subsegment in the Pearl River Basin

Subsegment number	Subsegment name	Parish	Subsegment area (acres)
090105	Pearl River Navigation Canal	Washington	8,108
090204	Pearl River Navigation Canal	St. Tammany	26,386
090207	Middle River and West Middle River	St. Tammany	18,185

2.2 Land Use

Land use data were obtained from the 2001 USGS National Land Cover Dataset (NLCD; Table 2-2 and Figure 2-3). The predominant land use in the impaired subsegments is wetland. The percentage of wetlands in the watersheds ranges from 30 percent to 97 percent, followed by forest, shrubland, and agriculture. There is very little developed land in any of the three subsegments. Subsegments 090105 and 090204 have large areas of forest and woody wetland. Subsegment 090207 is almost entirely wetland and open water. It has only just over 1 percent developed area, which consists of highways.

Table 2-2. Land use percentages for each listed subsegment in the Pearl River Basin

Sub-segment	Open water	Developed	Barren land	Forest	Grass/ shrub	Pasture/ hay	Cultivated crops	Woody wetland	Emergent herbaceous wetland
090105	2.60	6.83	0.09	22.56	15.31	12.76	2.42	36.04	1.40
090204	2.27	5.14	0.07	33.17	19.79	5.37	3.81	29.88	0.51
090207	6.30	1.07	0.02	0.02	0.00	0.00	0.00	63.07	29.52

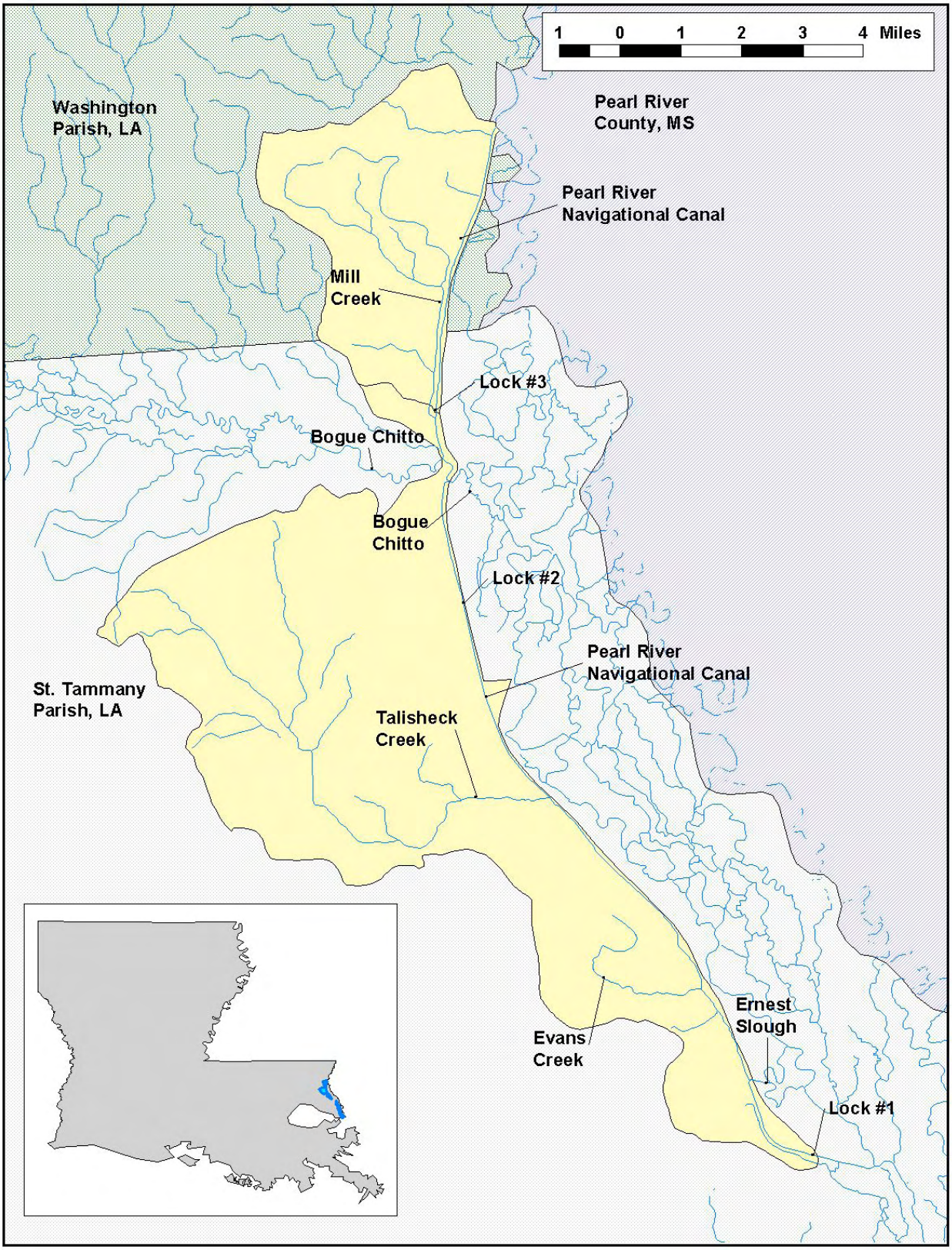

Figure 2-1. Locations of the northern Pearl River Basin subsegments.

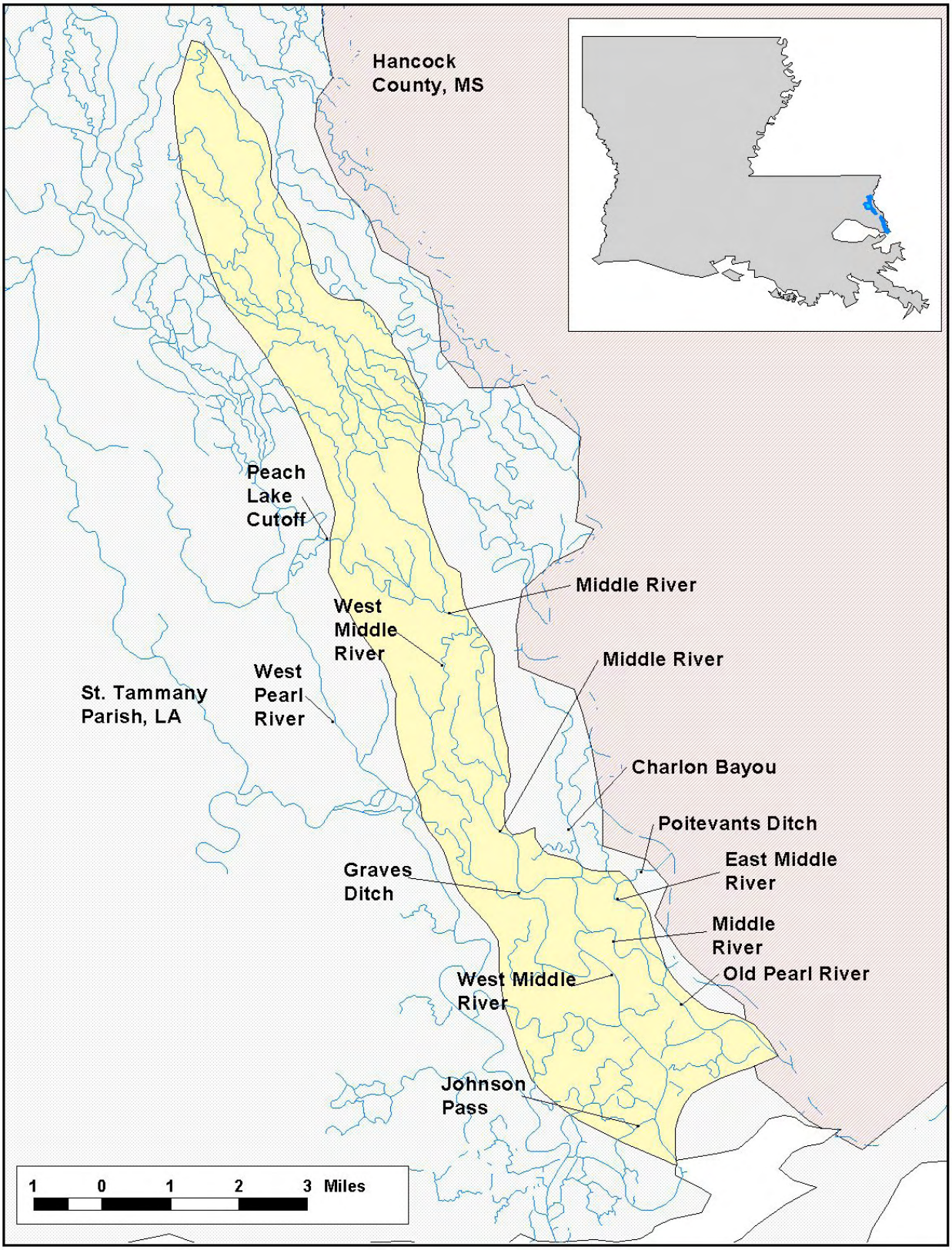

Figure 2-2. Locations of southern Pearl River Basin subsegment.

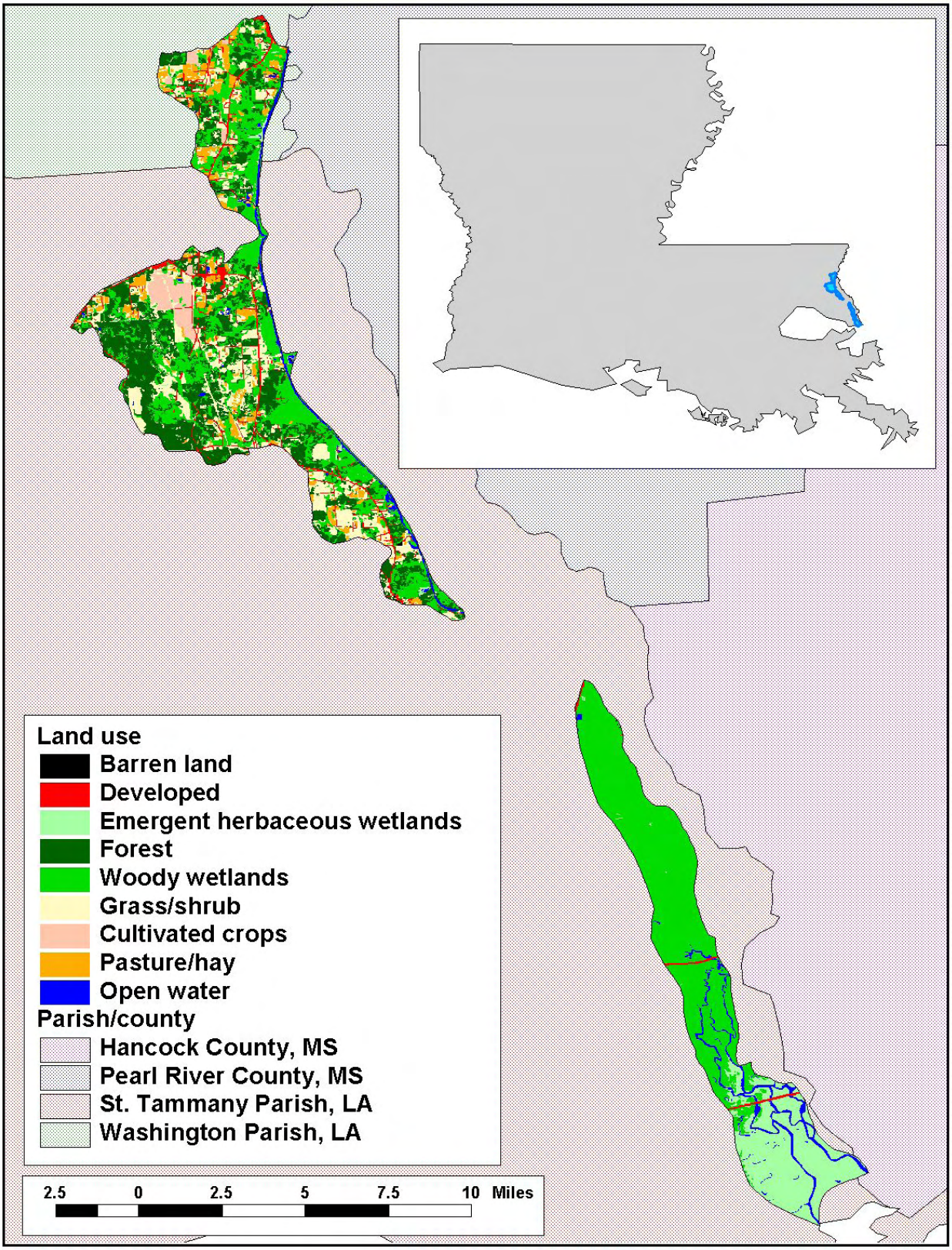

Figure 2-3. Land use in the Pearl River Basin subsegments.

2.3 Hydrologic Setting

The USGS online hydrology database (NWISWeb) does not contain any stations with flow data in the subsegments that are impaired for dissolved oxygen.

The subsegments in this TMDL do not have typical flow patterns. Subsegments 090105 and 090204 are the Pearl River Navigational Canal (PRNC), and subsegment 090207 is the Middle and West Middle rivers.

2.3.1 Pearl River Navigational Canal

The PRNC runs just over 30 kilometers through two subsegments. The subsegments were once part of a canal and lock system, which is no longer operational. The system has three locks. The northernmost lock, Lock 3, acts as the boundary between the two subsegments. The PRNC is a dredged channel that has a fairly uniform depth and width.[1] It is assumed to have a constant water elevation based on shoreline vegetation and fixed-location docks.[2] Most of its shoreline is bounded by levees and piled soils from when the canal was initially dredged.

Even though the locks are no longer operational, small gaps in the gates permit a limited amount of flow though the locks. The northern section of the PRNC is connected to the Pearl River, near Pools Bluff, Louisiana, through only a small channel, through which small boats can pass. However, little flow enters the canal, except during flood conditions.[2]

The canal does not have any major tributaries. Duck Pond, at the northern portion of the canal, is a backwater pond, and no flow enters the canal from the pond.[1] Mill Creek drains portions of subsegment 090105, but the flow from the creek enters a lake and does not enter the canal.[1]

Subsegment 090204 has more tributaries; however, most of them have little associated flow. Evans Creek has negligible flow; Talisheek Creek flows into a swamp, from which a negligible flow enters the PRNC.[1] In addition to these tributaries, there is a spillway from the PRNC to Ernest Slough. This spillway operates mainly during high-flow conditions and is mostly for erosion control.[1]

The major tributary to the PRNC is Bogue Chitto. Bogue Chitto enters the PRNC in subsegment 090204 and exits the canal shortly after entering. Most of the water entering the canal from Bogue Chitto exits the canal with Bogue Chitto.[1] A large amount of sediment has accumulated in the PRNC upstream of its confluence with Bogue Chitto.[2] This sediment bar forms a barrier similar to the one between the Pearl River and the PRNC; like that barrier, it has a narrow channel cutout through which boats can navigate.[2]

The PRNC eventually enters the West Pearl River, shortly before Holmes Bayou enters into the West River.

[1] David Ogé, Louisiana Department of Environmental Quality (Southeast Regional Office), personal communication, February 8, 2007.
[2] Nathan Siria, field sampler for FTN Associates, personal communication, February 9, 2007.

2.3.2 Middle and West Middle Rivers

The Middle and West Middle rivers partly originate in the West Pearl River. The West Pearl River is connected to the Middle River though Peach Lake Cutoff. Only a small amount of flow enters the Middle River during low flows, but a significant amount enters during high flows.[3] Just south of Route 10, the Middle River splits into the Middle and West Middle rivers. A recent field study found that 60 percent of the flow goes to the West Middle River (FTN Associates 2006). The two rivers are connected at Graves Ditch and through several small, unnamed channels. Very little flow goes through Graves Ditch at low flow, and most of the flow is tidally influenced.[3]

During the course of the Middle and West Middle rivers, numerous small bayous and sloughs are connected to the rivers. Many of these bayous and sloughs have become blocked with sediment bars over the years, and flow occurs only during high-flow periods.[3] Most of the flow in the subsegment is tidally influenced, except during winter high flows, when there is significant rain upstream of the subsegment.[3]

The Middle West River flows from its split with the Middle River south to the East Mouth of the West Pearl River. During its course, it connects with several bayous and sloughs, including Mill Bayou, Upper Black Bayou, Lower Black Bayou, and Grassy Bayou. Some flow from the river flows into Johnson Pass, which also discharges into the East Mouth. The East Mouth then joins Little Lake.

The flow pattern of the Middle River is slightly more complicated than that of the West Middle River. After splitting with the West Middle River, the Middle River is joined by Steamboat Bayou and Morgan Bayou. The river then splits into the Middle River and the East Middle River, which later combine after flows from Chalon Bayou and Poitevants Ditch enter the East Middle River. Chalon Bayou and Poitevants Ditch connect the East Middle River with the main stem of the Pearl River. The Middle River and the East Middle River combine to form the Old Pearl River, which joins with the Pearl River and flows to Lake Borgne.

2.4 Designated Uses and Water Quality Criteria

Louisiana's 2004 section 303(d) list indicates that the three listed subsegments—all assigned a use of primary or secondary contact recreation, or fish and wildlife propagation—do not meet applicable water quality standards because of unknown sources. Primary contact recreation involves any recreational or other water contact involving full-body exposure to water and a considerable probability of ingesting water. Examples are swimming and water skiing. Secondary contact recreation involves activities like fishing, wading, or boating, where water contact is accidental or incidental and there is a minimal chance of ingesting appreciable amounts of water. Fish and wildlife propagation includes the use of water for aquatic habitat, food, resting, reproduction, cover, or travel corridors for any indigenous wildlife and aquatic life species associated with the aquatic environment.

[3] David Ogé, Louisiana Department of Environmental Quality (Southeast Regional Office), personal communication, February 28, 2007.

The assessment methodology presented in LDEQ's 305(b) report (LDEQ 2004) specifies that primary contact recreation, secondary contact recreation, and fish and wildlife propagation uses are to be fully supported. The state minimum criterion for the subsegments in this TMDL is 0.5 ppm (5 mg/L).

The Louisiana water quality standards also include an antidegradation policy (*Louisiana Administrative Code* [LAC] Title 33, Part IX, Section 1109.A), which states that state waters exhibiting high water quality should be maintained at that high level of water quality. If that is not possible, water quality of a level that supports the designated uses of the waterbody should be maintained. The designated uses of a waterbody may be changed to allow a lower level of water quality only through a use attainability study.

2.5 Identification of Sources

2.5.1 Point Sources

LDEQ stores permit information using internal databases. A list of permits in the Pearl River Basin was obtained from LDEQ using its TEMPO and PTS databases. Information on point source discharges to the listed subsegments was obtained from the Electronic Document Management System (EDMS) database at LDEQ. Data were pulled from these databases and analyzed for the TMDLs. Each facility was evaluated based on its discharges and the relevant subsegment's 303(d) listing to determine whether the facility would be used in developing the TMDLs. The evaluation yielded seven point source discharges (Table 2-3) that could affect dissolved oxygen levels. Of these, only two were used directly in the model, on the basis of distance to the main model channel. None of the facilities' discharge permits specify dissolved oxygen.

Table 2-3. Point source discharge information for the Pearl River Basin

NPDES permit number	Outfall	Facility name	Receiving water body	Flow (gpd)	BOD_5 limit (mg/L)	Ammonia limit (mg/L)	Used in model?
Subsegment 090105							
LA0106143	001	Double D Meat Co.	ditch – PRNC	5,500 (design)	11.2 lb/d (daily); 5.6 lb/d (monthly)	8 (daily); 4 (monthly)	No – Does not discharge to main channel.
Subsegment 090204							
LA0055638	001	MacKenzie Co LLC	Talisheek Creek – PRNC	3,645 (average)		10 (daily)	No – Does not discharge to main channel.
	002			800 (design)	45 (daily)		
	003			1,080 (average)		10 (daily)	
LAG480357	001	St. Tammany Parish Government – Bush Maintenance	Talisheek Creek – PRNC	2,000 (design)	45 (weekly)		No – Does not discharge to main channel.
	002			200 (average)			
LAG530499		Bellsouth Telecommun-ications J2840	ditch – Little Brushy Branch	5,000 (max)	45 (weekly)		No – Does not discharge to main channel.

Table 2-3. (continued)

NPDES permit number	Outfall	Facility name	Receiving water body	Flow (gpd)	BOD_5 limit (mg/L)	Ammonia limit (mg/L)	Used in model?
LAG530848	001	Highway 21 LLC	Waterhole Branch	5,000 (max)	45 (weekly)		No – Does not discharge to main channel.
LAG531949	001	Hebron Baptist Church of Bush, LA	ditch – Little Brushy Branch – PRNC	1,800 (design); 2,500 (max)	45 (weekly)		Yes
LAG541203	001	Sixth Ward Junior High School	ditch – PRNC	5,240 (design); 10,000 (max)	45 (weekly); 30 (monthly)		Yes

2.5.2 Nonpoint Sources

Louisiana's section 303(d) list does not identify the suspected cause of the dissolved oxygen impairment in the subsegments of the Pearl River Basin. The source is listed as *unknown*. In addition to natural wetlands, land uses in the subsegment include pasture, urban land, and row crops. These land uses could also introduce nutrients and oxygen demand to the subsegment.

3 CHARACTERIZATION OF EXISTING WATER QUALITY

3.1 Water Quality Data

Water quality data were obtained from LDEQ's routine ambient water quality monitoring program (Figures 3-1 and 3-2). Appendix A includes summaries of the data for the 303(d) listed constituents, along with additional constituents used in the TMDL development process. Dissolved oxygen data were available for each of the three listed subsegments, each with 17 or 18 monitoring events. In addition, nutrient data are summarized because they were also used in developing the dissolved oxygen TMDLs.

Water quality monitoring data for each listed subsegment were obtained from LDEQ (Table 3-1). Tables 3-1 through 3-6 provide a summary of the LDEQ water quality data available for three stations in three subsegments (Figure 3-1). The stations had between 14 and 18 data points. Dissolved oxygen concentrations are lower in the summer and early fall months.

Table 3-1. Summary of dissolved oxygen data for the Pearl River Basin

Sub-segment	Station	Station name	Period of record	No. of obs.	DO minimum (mg/L)	DO maximum (mg/L)	DO average (mg/L)
090105	1118	Pearl River Navigation Canal at Lock 3, Louisiana	1/16/2001–6/21/2006	18	3.02	9.17	6.00
090204	1053	Pearl River Navigation Canal at Lock 1	1/2/2001–6/27/2006	18	2.58	10.01	6.63
090207	1055	Middle Pearl River at Hwy 90	1/2/2001–5/22/2006	17	3.95	10.73	6.79

Table 3-2. Summary of total organic carbon data for the Pearl River Basin

Subsegment	Station	Station name	Period of record	No. of obs.	TOC minimum (mg/L)	TOC maximum (mg/L)	TOC average (mg/L)
090105	1118	Pearl River Navigation Canal at Lock 3, Louisiana	1/16/2001–3/29/2006	16	3.10	15.60	9.83
090204	1053	Pearl River Navigation Canal at Lock 1	1/2/2001–3/21/2006	14	5.50	34.60	11.82
090207	1055	Middle Pearl River at Hwy 90	1/2/2001–3/28/2006	15	6.90	12.60	8.76

Table 3-3. Summary of nitrite+nitrate data for the Pearl River Basin

Subsegment	Station	Station name	Period of record	No. of obs.	Total NO_2+NO_3 minimum (mg/L)	Total NO_2+NO_3 maximum (mg/L)	Total NO_2+NO_3 average (mg/L)
090105	1118	Pearl River Navigation Canal at Lock 3, Louisiana	1/16/2001–3/29/2006	16	0.05	0.18	0.09
090204	1053	Pearl River Navigation Canal at Lock 1	1/2/2001–3/21/2006	14	0.05	0.12	0.06
090207	1055	Middle Pearl River at Hwy 90	1/2/2001–3/28/2006	15	0.05	0.23	0.12

Table 3-4. Summary of ammonia data for the Pearl River Basin

Subsegment	Station	Station name	Period of record	No. of obs.	Ammonia minimum (mg/L)	Ammonia maximum (mg/L)	Ammonia average (mg/L)
090105	1118	Pearl River Navigation Canal at Lock 3, Louisiana	1/16/2001–3/29/2006	16	0.10	0.28	0.12
090204	1053	Pearl River Navigation Canal at Lock 1	1/2/2001–3/21/2006	14	0.10	0.56	0.14
090207	1055	Middle Pearl River at Hwy 90	1/2/2001–3/28/2006	15	0.10	0.56	0.14

Table 3-5. Summary of total organic nitrogen data for the Pearl River Basin

Subsegment	Station	Station name	Period of record	No. of obs.	TKN minimum (mg/L)	TKN maximum (mg/L)	TKN average (mg/L)
090105	1118	Pearl River Navigation Canal at Lock 3, Louisiana	1/16/2001–3/29/2006	16	0.21	1.04	0.58
090204	1053	Pearl River Navigation Canal at Lock 1	1/2/2001–3/21/2006	14	0.31	0.73	0.54
090207	1055	Middle Pearl River at Hwy 90	1/2/2001–3/28/2006	15	0.10	1.50	0.69

Table 3-6. Summary of total phosphorus data for the Pearl River Basin

Subsegment	Station	Station name	Period of record	No. of obs.	Total phos. minimum (mg/L)	Total phos. maximum (mg/L)	Total phos. average (mg/L)
090105	1118	Pearl River Navigation Canal at Lock 3, Louisiana	1/16/2001–3/29/2006	16	0.05	0.12	0.08
090204	1053	Pearl River Navigation Canal at Lock 1	1/2/2001–3/21/2006	14	0.05	0.08	0.06
090207	1055	Middle Pearl River at Hwy 90	1/2/2001–3/28/2006	15	0.05	0.21	0.11

Additional environmental data were obtained from a recent monitoring event, conducted August 14, 2006, though August 18, 2006. Water quality data were collected at 18 locations for total phosphorus, chlorophyll a, 25-day carbonaceous biochemical oxygen demand (CBOD), ammonia, total Kjeldahl nitrogen (TKN), nitrate plus nitrite nitrogen, and total organic carbon (TOC). In addition, these 18 locations, along with 14 other locations, were monitored for in situ measurements of temperature, dissolved oxygen, pH, and conductivity; 3 of the locations were continuously monitored in situ for 24 to 48 hours.

The results of the data compilation and review include the following:

- In situ data collected throughout each subsegment
- Continuous in situ data
- Laboratory analyses of water samples
- Continuous water level data

Figure 3-1. Locations of monitoring stations in the northern Pearl River Basin.

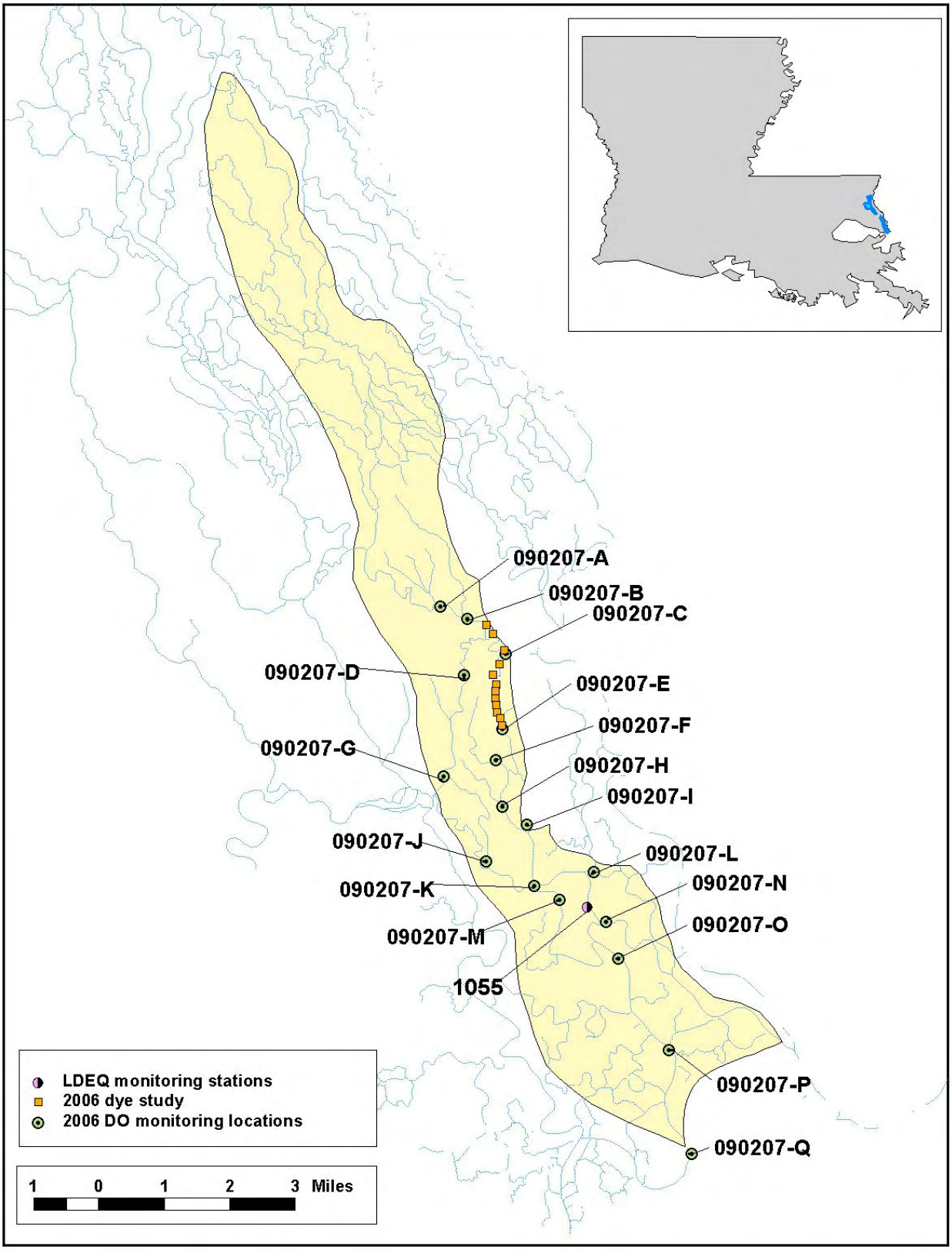

Figure 3-2. Locations of monitoring stations in the southern Pearl River Basin.

- Cross section and flow data from the acoustic Doppler current profiler (ADCP)
- Dye study data (time of travel).

These data were collected during an intensive 4-day field survey in August 2006. There were no large storms or other atypical weather during or immediately prior to the field survey (FTN Associates 2006).

3.1.1 In Situ Data

The in situ measurements of water temperature, dissolved oxygen, specific conductivity, and pH are presented in Appendix A (Table A-1). These data were collected at 16 stations in the PRNC system (subsegments 090105 and 090204) and 16 stations in the Middle River/West Middle River system (subsegment 090207). At the a depth of 3 feet, the only two stations in the PRNC system that had dissolved oxygen values below the water quality standard of 5.0 mg/L were 090105-C (main stem) and 090204-F (stagnant embayment at confluence with Talisheek Creek). For the Middle River/West Middle River system, all the dissolved oxygen values at 3 feet were below the water quality standard of 5.0 mg/L except at station 090207-Q (at the entrance to Little Lake).

3.1.2 Continuous In Situ Monitoring

Continuous in situ data were collected at two stations in the PRNC system and two stations in the Middle River/West Middle River system. Each continuous monitor recorded measurements of pH, temperature, specific conductivity, and dissolved oxygen at 30-minute intervals. Data for the northern part of the PRNC (station 090105-D) show there was minimal diurnal variation in temperature, specific conductivity, and pH (Figures A-1 through A-4 in Appendix A). The dissolved oxygen varied from 3.8 mg/L to 6.3 mg/L (Figure 3-3). Data for the southern part of the PRNC (station 090204-E) show there was minimal diurnal variation in temperature, specific conductivity, and pH (Figures A-5 through A-8 in Appendix A). The dissolved oxygen varied from 5.6 mg/L to 7.0 mg/L (Figure 3-4).

Data for the Middle River at Interstate 10 (station 090207-B) show the following results (Figures A-9 through A-12 in Appendix A). The temperature varied from 29.5 °C to 32.0 °C. The conductivity showed minimal diurnal fluctuation even though the tides have a significant impact on diurnal fluctuations of water levels at this station. The dissolved oxygen varied from less than 3 mg/L to afternoon peaks of 4.5 mg/L to 4.9 mg/L (Figure 3-5). All the continuous dissolved oxygen values at this station were below the water quality standard of 5.0 mg/L. The pH and dissolved oxygen data at this station indicate relatively low algal productivity.

Data for the West Middle River at Highway 90 (station 090207-M) show the following results (Figures A-13 through A-16 in Appendix A). The conductivity varied from 6,000 µmhos in the afternoon to 700 µmhos the next morning. The timing of the fluctuations was unexpected. Normally, the higher conductivity values would be expected to occur near the time of the maximum water level (i.e., near the end of the incoming tide) and the lower conductivity values would be expected to occur near the time of the minimum water level (i.e., near the end of the outgoing tide). The data at station 090207-M, though, did not follow the expected pattern. The highest conductivity value occurred near the middle of the outgoing tide and the lowest conductivity value occurred just after the end of the incoming tide. One possible explanation for

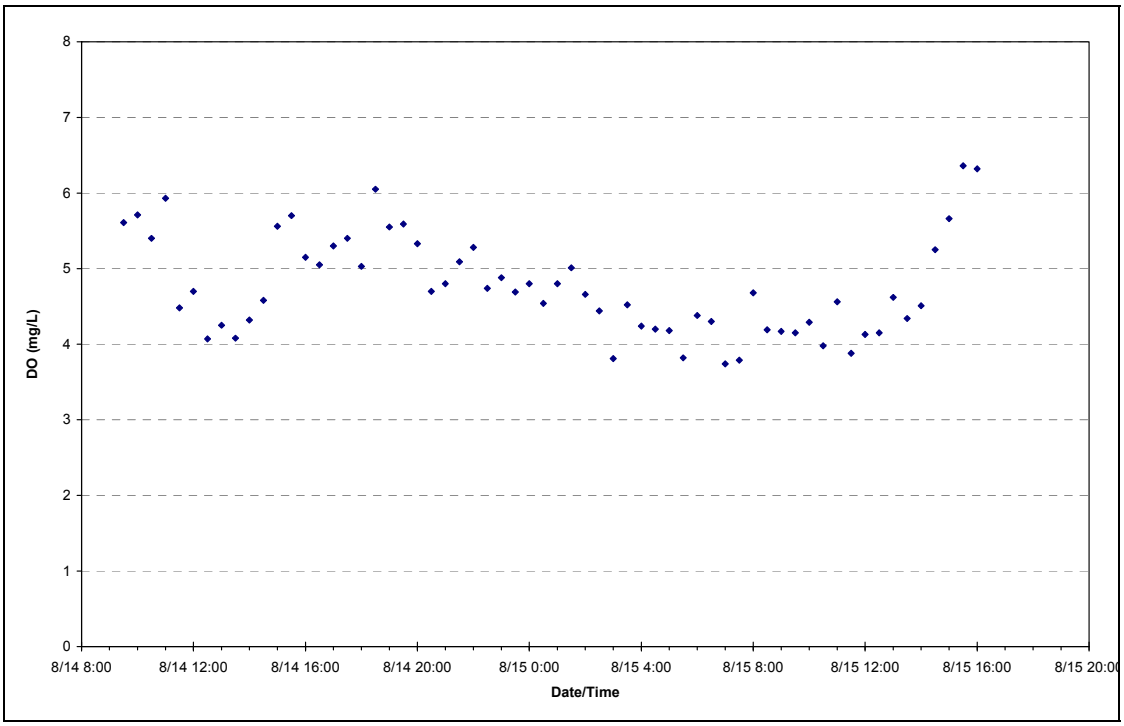

Figure 3-3 Continuous dissolved oxygen for PRNC at station 090105-D.

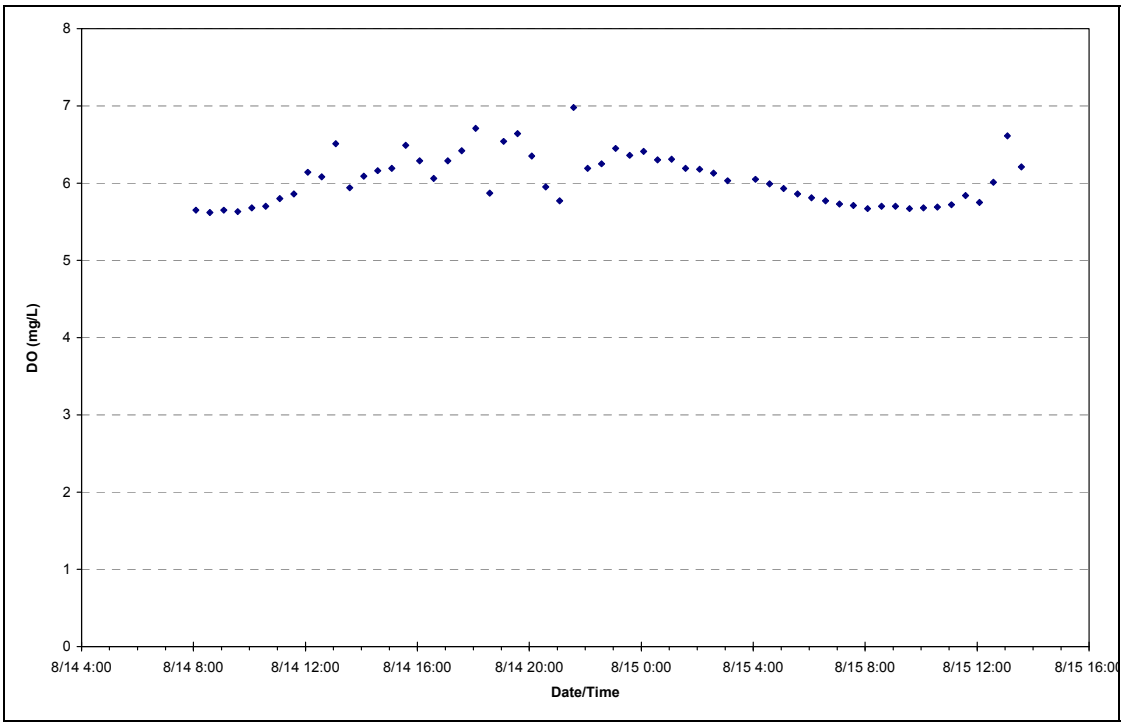

Figure 3-4 Continuous dissolved oxygen for PRNC at station 090204-E.

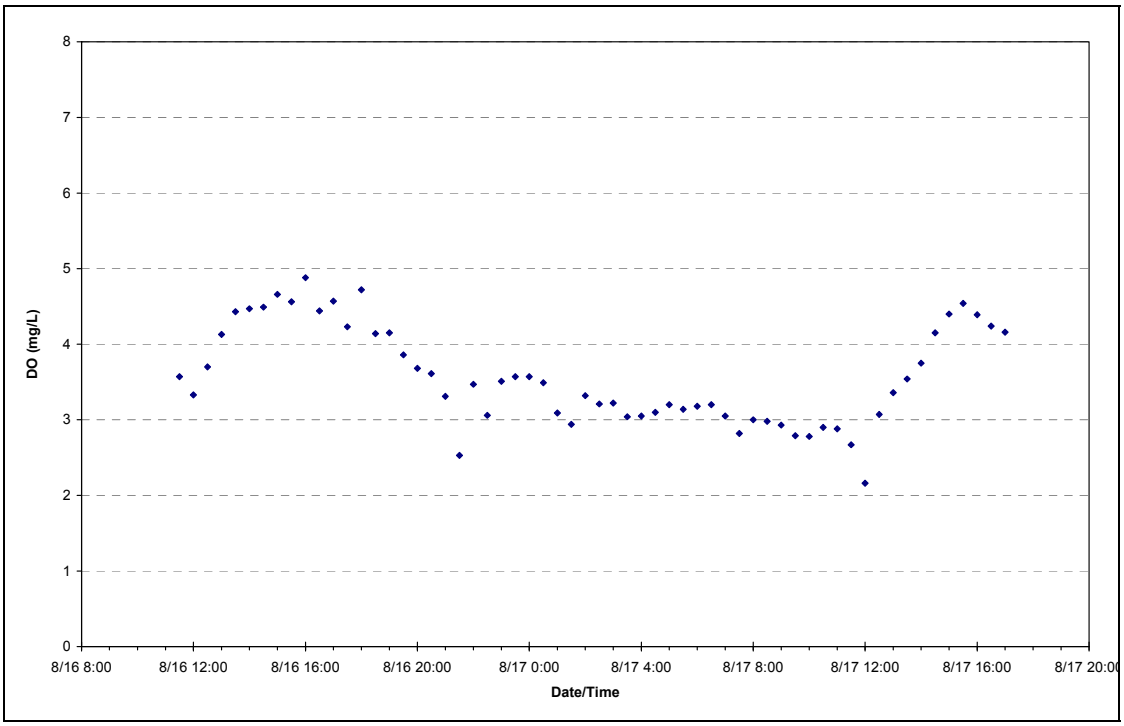

Figure 3-5 Continuous dissolved oxygen for Middle River at station 090207-B.

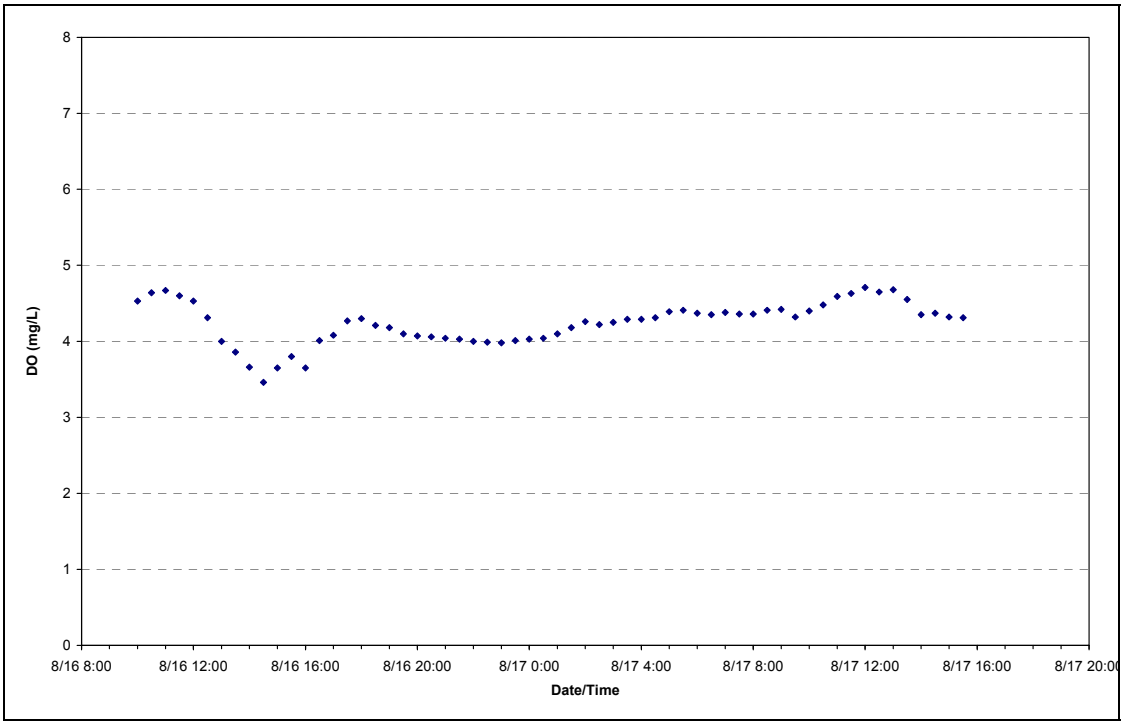

Figure 3-6 Continuous dissolved oxygen for West Middle River at station 090207-M.

this would be fluctuations in the vertical distribution of conductivity at station 090207-M. The in situ data in Appendix A (Table A-1) show that the conductivity values at station 090207-M were 2,130 µmhos at a depth of 3 feet and 20,130 µmhos at depth of 20 feet. The peak conductivity measured by the continuous recorder might have been due to a mixing phenomenon, which could have been caused by wind or boat traffic. The pH and dissolved oxygen data for station 090207-M show minimal diurnal fluctuations. All the continuous dissolved oxygen values at this station were below the water quality standard of 5.0 mg/L (Figure 3-6). The pH and dissolved oxygen data at station 090207-M indicate low algal productivity.

3.1.3 Sample Data

Data from laboratory analyses of water samples are presented in Appendix A (Table A-2). Samples were collected at nine stations in the PRNC system and nine stations in the Middle River/West Middle River system. Three samples were collected as quality assurance/quality control (QA/QC) duplicates.

In general, the measured concentrations were reasonable and within expected ranges of values for waterbodies in southern Louisiana. The CBOD values, however, were lower than expected. At the end of the 25-day CBOD time series analysis, all the CBOD values were less than 5 mg/L and seven of them were below the detection level of 2 mg/L. Although the 25-day CBOD values are expected to be somewhat lower than ultimate CBOD values, this comparison suggests that further investigation is needed to determine appropriate CBOD values for model calibration.

3.1.4 Continuous Water Levels

Water levels were recorded at 15-minute intervals at three stations in the Middle River/West Middle River system. The data show a diurnal water level fluctuation of about 2 feet at all three stations. The diurnal fluctuation at the northernmost station (090207-B) was expected to be significantly smaller and slightly delayed compared to the diurnal fluctuations at the two southern stations (090207-M and 090207-Q); however, all three showed nearly the same magnitude and timing of fluctuations.

3.1.5 Flow Measurements

Acoustic Doppler Data

An acoustic Doppler current profiler (ADCP) instrument was used to measure cross-sectional widths, depths, and flows at 14 stations in the PRNC system and 15 stations in the Middle River/ West Middle River system.

In subsegment 090105 (the portion of the PRNC north of Lock 3), only about 4–5 cfs of water was flowing, based on the flow measurements at 090105-B and 090105-F. The measured inflow from the Bogue Chitto River (station 090204-A; south of Lock 3) was 625 cfs, which was similar to the provisional mean daily flow of 641 cfs that had been reported for the USGS flow gauge on the Bogue Chitto River a few miles upstream of station 090204-A. Most of the inflow from the Bogue Chitto River flows out of the PRNC near station 090204-B, where the Bogue Chitto River continues flowing eastward. There was no accessible location for measuring the amount of water flowing eastward out of the PRNC into Bogue Chitto River because of a weir along the eastern edge of the PRNC where the Bogue Chitto River flows eastward.

South of the Bogue Chitto River confluence, about 60 to 70 cfs was flowing south in the PRNC, on the basis of the flow measurements at stations 090204-D, 090204-G, and 090204-K. The water level was at least 10 feet higher on the upstream side of Lock 1 than on the downstream side, and water was leaking through the gates at Lock 1. There is a spillway along the eastern side of the PRNC about 0.5 mile downstream (south) of station 090204-J. A small amount of flow was leaving the PRNC at that location, but the flow could not be measured.

In the Middle River/West Middle River system, the diurnal flow reversals did not allow a flow balance to be established using only the ADCP flows. One of the purposes of the ADCP flow measurements for this system was to estimate how flow splits at the confluence of the West Middle River and Middle River just south of Interstate 10. Flow measurements at stations 090207-C and 090207-D show that 60 percent of the flow moving south at this confluence flows to the West Middle River (715 cfs) and 40 percent flows to the Middle River (527 cfs). The measured inflows to the Middle River at stations 090207-F and 090207-I (606 cfs and 750 cfs) show that significant amounts of flow are exchanged between the main stem and numerous side channels. The flows measured at stations 090207-N and 090207-O were unexpected because the water at station 090207-N was flowing inland and the water at station 090207-O was flowing toward the Gulf of Mexico, even though the measurements at both stations were taken within a period of about 50 minutes. The difference in direction might be partly due to the fact that measurements at both stations were taken near the time at which high tide occurred.

Dye Study

A dye study was conducted to measure tidally averaged velocity in the Middle River/West Middle River system. The measured velocity was needed to estimate tidally averaged flow.

A slug of dye was injected in the Middle River between the Interstate 10 bridge and the Middle River/West Middle River split. The dye was injected at 4:50 p.m. on August 16, 2006. Based on tide predictions obtained before the field study, the dye was expected to move north during the evening and overnight and then return southward to the vicinity of the injection location during the next day. Dye concentrations in the river were measured after an elapsed time of approximately 25 hours, and the center of the mass of the dye slug was 3,288 meters downstream of the injection point. This resulted in an average velocity of 0.12 ft/s over a full tidal cycle.

The average velocity was used to estimate a tidally averaged flow for the Middle River/West Middle River system. The average of the cross-sectional areas at stations 090207-C and 090207-E (958 ft^2) was multiplied by the average velocity (0.12 ft/s) to obtain a tidally averaged flow rate of 115 cfs in the Middle River. The tidally averaged flow in the West Middle River was then estimated by assuming that the ratio of tidally averaged flows for the Middle River and West Middle River is the same as the ratio of the ADCP flows at stations 090207-C and 090207-D (527 cfs and 715 cfs, respectively). This calculation yielded a tidally averaged flow rate of 155 cfs for the West Middle River, which resulted in a tidally averaged flow rate of 270 cfs for both the Middle River and West Middle River combined.

A dye study was not conducted in the PRNC system because there are no diurnal fluctuations in flows due to tides. The acoustic Doppler flow measurements are sufficient for developing a flow balance in the PRNC system.

3.1.6 Additional Data

Data searches of additional databases were conducted. The USGS water quality database had data for some stations in the TMDL areas, but the data were older than 1996 or were not for the parameters of interest. A search of STORET returned only data supplied by LDEQ. Therefore, only data obtained from LDEQ were used in developing these TMDLs.

3.2 Comparison of Observed Data to Criteria

Water quality monitoring data for each listed subsegment were obtained from LDEQ (Table 3-1). Table 3-7 provides a summary of the LDEQ dissolved oxygen data compared to criteria. All three stations had dissolved oxygen observations below the water quality criterion of 5 mg/L.

Table 3-7. Summary of dissolved oxygen data for the Pearl River Basin

Sub-segment	Station	Period of record	No. of obs.	Minimum (mg/L)	Maximum (mg/L)	Average (mg/L)	No. of obs. < 5.0 mg/L	Percent samples < 5 mg/L
090105	1118	1/16/2001–6/21/2006	18	3.02	9.17	6.00	6	33
6090204	1053	1/2/2001–6/27/2006	18	2.58	10.01	6.63	4	22
090207	1055	1/2/2001–5/22/2006	17	3.95	10.73	6.79	2	12

4 WATER QUALITY MODEL SETUP AND CALIBRATION

4.1 Model Setup

LA-QUAL (Version 8.00) was chosen to simulate dissolved oxygen in the TMDL subsegments. LA-QUAL is a steady-state model that was developed by LDEQ based on the QUAL-TX (Version 3.4) model. Several modifications were made to the QUAL-TX model, including the addition of new aeration equations that better represent conditions in Louisiana.

LA-QUAL evaluates the relationships between pollutant sources and water quality. Model configuration involved setting up the model segments, setting initial conditions, boundary conditions, and hydraulic and kinetic parameters. This section describes key components of the model by their associated data type, which are groupings of model parameters.

A separate model and segmentation were used for each subsegment. Only the main stem of the systems was explicitly simulated and thus segmented for modeling purposes. Segmentation refers to separating a waterbody into smaller computational units. Segmentation occurred around major hydrological features, such as tributaries. Tributaries were represented through boundary condition designation. Appendix B contains diagrams of the model segmentations and stream kilometers.

4.2 Calibration Period

The calibration period was selected to coincide with the intensive field monitoring that had occurred in August 2006. The data used for calibration are the averages of the samples taken during the measurement period from August 14 through August 16, 2006. These dates were selected for calibration because they were the only dates for which data were available. This period is considered the critical period because high temperatures decrease dissolved oxygen saturation values and increase rates for oxygen-demanding processes, such as BOD decay, nitrification, and SOD. In addition, lower flow rates do not cause strong reaeration, so the exchange of oxygen between air and water is low.

4.3 Model Options (Data Type 2)

Data type 2 is used to identify the constituents being modeled to achieve calibration—for this TMDL, dissolved oxygen, BOD, and a nitrogen series (ammonia, and nitrate+nitrite).

4.4 Program Constants (Data Type 3)

LA-QUAL is programmed with certain default program constants. Data type 3 is used to override the default constants and is optional; that is, values need to be entered only if values other than the default values are desired. Table 4-1 lists the constants that were changed from their default values. Default values were used for all other program constants. Refer to the LA-QUAL user manual for descriptions of the constants and their default values (Wiland Consulting 2005).

Table 4-1. Program constants used for modeling TMDL subsegments

Program constant	090105	090204	090207	Default
Maximum iteration limit	5,000	5,000	5,000	100
Hydraulic calculation method	2	2	2	1
Non-conservative material (NCM) oxygen uptake rate	1.0	1.0	1.0	0.0
Inhibition control value	3.0	3.0	3.0	4
K_2 (reparation rate) maximum	25.0	25.0	25.0	10.0
Dispersion equation	--	--	2	1
Tide height	--	--	0.6	0.0

4.5 Temperature Correction of Kinetics (Data Type 4)

Data type 4 contains factors that are used for temperature correction in rate equations. The temperature correction factors used in the model were consistent with the *Standard Operating Procedure for Louisiana TMDL Technical Procedures* (LTP) when these factors were available (LDEQ 2005). The correction factors were:

- Correction for BOD decay: 1.047 (LTP and model default)
- Correction for SOD: 1.065 (LTP and model default)
- Correction for ammonia N decay: 1.083 (model default)
- Correction for organic N decay: 1.020 (model default)
- Correction for reaeration: 1.024 (LTP and model default)

4.6 Hydraulics and Dispersion (Data Types 9 and 10)

These data types describe the hydraulic and dispersion characteristics of the model reaches. Typically dispersion is used only in tidal environments, such as subsegment 090207.

The stream hydraulics were specified in the input file for the model using the following power functions:

$$width = a \times Q^b + c$$
$$depth = d \times Q^e + f$$

where:

a = width coefficient = 0.0
b = width exponent = 0.0
c = width constant = average width of segment
d = depth coefficient = 0.0
e = depth exponent = 0.0
f = depth constant = average depth of segment

The hydraulic data type also contains information on slope and Manning's "n." For these models, the slope was set to 0.0001 and Manning's "n" was set to 0.025 for all segments. The average width and depth for each segment were derived from observed measurements in August 2006; they are shown in Table 4-2.

The dispersion data type was used only for subsegment 090207, where tidal fluctuations occur. For all segments the tidal range was 1.0. Tidal dispersion is calculated from the following:

$$E = aD^b \times Q^c V_T^d$$

where:

a = dispersion coefficient = 1.0
b = dispersion exponent = 0.0
c = dispersion exponent = 0.0
d = dispersion exponent = 0.0
D = depth
Q = flow
V_T = tidal velocity

Table 4-2. Average channel widths and depths for each model segment

Model reach	090105		090204		090207	
	Width (m)	Depth (m)	Width (m)	Depth (m)	Width (m)	Depth (m)
1	44.70	0.99	55.1	2.21	52.60	1.71
2	44.70	0.99	55.1	2.21	45.20	4.92
3	44.70	0.99	55.1	2.21	63.00	2.48
4	44.70	0.99	59.3	2.11	103.50	4.05
5	43.75	1.18	62.9	1.91	116.50	5.47
6	62.75	2.07	62.9	1.91	116.50	5.47
7	82.70	2.77	69.5	3.75	116.50	5.47
8	67.70	2.29	49.6	1.64	224.75	6.65
9	58.90	2.08	98.1	2.25	224.75	6.65
10	65.10	2.34	98.1	2.25	260.20	4.33
11	--	--	98.1	2.25	236.94	5.70
12	--	--	58.9	1.81	236.94	5.70
13	--	--	85.7	2.26	236.94	5.70
14	--	--	--	--	110.00	5.70
15	--	--	--	--	110.00	5.70
16	--	--	--	--	110.00	5.70

4.7 Initial Conditions (Data Type 11)

Initial conditions were set for temperature, dissolved oxygen, ammonia, nitrate+nitrite nitrogen, total phosphorus, and chlorophyll a using observed water quality data observed data for all three subsegments. For subsegments 090105 and 090207, the remaining parameters were set to constants; for subsegment 090204, these parameters varied with the model reach on the basis of observed data. Because LAQUAL is a steady-state model, the initial conditions affect only the number of iterations to reach steady-state conditions. Setting initial conditions on the basis of observed data reduces the amount of iterations the model must perform to reach steady-state.

Salinity, phosphorus, phytoplankton, and macrophytes were the parameters not simulated in the model. Their initial conditions were set to zero so that the model would not assume a fixed concentration and include their effects.

4.8 Water Quality Kinetics (Data Types 12 and 13)

Several kinetic rates were used in the model, including reaeration, SOD, CBOD decay, nitrification, and mineralization (organic nitrogen decay) rates. Data types 12 and 13 focus on different rates used by the model. Data type 12 is needed only if BOD or dissolved oxygen is

being simulated, and data type 13 is needed only if nitrogen or phosphorus is being simulated. For this TMDL, both data types were included.

The model calculates the reaeration rate by using one of a standard set of equations. For this TMDL, the O'Conner-Dobbins equation was used. This equation is applicable to moderately deep to deep channels (1 ft to 30 ft with flow between 0.5 ft/s and 12.2 ft/d). The equation is

$$K_2 = \frac{3.932 \times V^{0.969}}{D^{1.5}}$$

where:

V = stream velocity (meters per second)
D = stream depth (meters)

The input files that list these values are provided in Appendix C. Table 4-3 summarizes these rates. The CBOD decay rate varied per subsegment and was computed from the measured $CBOD_3$, $CBOD_5$, $CBOD_{12}$, $CBOD_{20}$, and $CBOD_{25}$ data. The SOD was calibrated in the model and varied per subsegment reach. SOD was calibrated after the CBOD levels were finalized. The SOD rates changed iteratively until modeled dissolved oxygen concentrations agreed well with measured water column dissolved oxygen concentrations.

Table 4-3. Water quality kinetics rates

Program constant	090105	090204	090207
Background SOD ($g/m^2/d$)	0.15–1.0	0–3.2	0.1–4.0
BOD #1 decay rate (aerobic) (1/d)	0.065–0.072	0.06	0.04
BOD #1 settling rate (m/d)	0.01	0.01	0.01
Settled BOD #1 conversion to SOD	1.0	1.0	1.0
Anaerobic BOD #1 decay rate (1/d)	0.001	0.001	0.001
Ammonia nitrogen oxidation rate (1/d)	0.1	0.1	0.1

4.9 Incremental Data (Data Types 16, 17, and 18)

These data types include information on inflows and outflows from the model reaches. For this TMDL incremental information was included for flow, temperature, dissolved oxygen, BOD, organic nitrogen, ammonia, and nitrate/nitrite. Appendix C contains the input files with these values. Incremental flow was determined from flow measurements obtained during the August 2006 monitoring. As stated in Section 2.3, most tributary flows are negligible.

4.10 Nonpoint Source Loads (Data Type 19)

This data type accounts for nonpoint source loads not associated with incremental and tributary flows. Because of the lack of available information, this data type was kept blank. SOD, from data type 12, is influenced by nonpoint source loads from sediment entering the waterbody system.

4.11 Headwater Flow, Water Quality, and Junction Data (Data Types 20, 21, 22, and 23)

These data types account for flow and water quality from upstream of the modeled subsegment. For each modeled subsegment, only one headwater was represented in the model; therefore, data type 23 (Junction Data) was left blank.
Headwater flow data were derived from ADCP flow measurements. In general, the flow measured at the most upstream station was taken as the headwater flow. Water quality data (mainly CBOD and dissolved oxygen) were estimated from the monitoring data at the most upstream stations.

4.12 Wasteload Flow and Water Quality Data (Data Types 24, 25, and 26)

These data types account for flow and water quality from point sources discharging into the listed waterbodies. Only subsegment 090204 contained point sources. Subsegment 090207 did not contain any permitted facilities. Subsegment 090105 contained discharge from the Double D Meat Company (LA0106143); however, the flow was discharged to an unnamed ditch that flowed approximately 1.3 miles to the PRNC. It was assumed that the oxygen demand of this discharge would significantly change during the course of its flow to the PRNC, and therefore it was not included in the model.

Subsegment 090204 contains two modeled point sources: 6th Ward Junior High School (LAG541203) and the Hebron Baptist Church (LAG531949). The flow for these point sources was taken from their permitted flow. The CBOD concentration in the effluent was estimated using the Discharge Monitoring Report data for station LAG541203. The estimated CBOD was also assigned to LAG531949. For ammonia, the available data for all the point sources were averaged and the average ammonia was assigned to these two point sources.

4.13 Lower Boundary Condition (Data Type 27)

Data type 27 is required only if the model contains high dispersion in the most downstream reach. All of subsegment 090207 is tidally influenced, and the dispersion is weak based on the longitudinal profile of dissolved oxygen and CBOD data. The impacts of lower boundary conditions are not significant. The final values of boundary dissolved oxygen and CBOD were taken as similar to the average of the measured dissolved oxygen and CBOD inside subsegment 090207.

4.14 Calibration and Model Results

Model calibration entailed calibrating using ammonia, CBOD, and SOD concentrations. The ammonia loads were first adjusted so that the predicted ammonia concentrations would match observed concentrations. Ammonia was calibrated first because impact from ammonia on dissolved oxygen is minimal. In addition, dissolved oxygen is not low enough to impact ammonia nitrification. After ammonia was calibrated the CBOD loads were adjusted until the predicted CBOD concentrations were similar to the observed concentrations. Finally, SOD was adjusted until the predicted dissolved oxygen concentrations were similar to the observed concentrations.

Plots of observed and calibration water quality are presented in Appendix D. Table 4-4 lists the oxygen demand loadings for existing conditions. Overall, the model did well in predicting the observed values for temperature, ammonia, BOD, and dissolved oxygen, and the model was considered adequately calibrated based on the data available.

Table 4-4. Existing oxygen demand

Subsegment	Oxygen demand (kg/d)				
	SOD	CBOD	Ammonia	Nitrate	Total
090105	271.10	1,162.50	83.14	329.08	1,845.82
090204	1,958.10	1,804.03	547.99	86.60	4,396.72
090207	11,298.50	14,927.10	124.27	2,273.25	28,623.12

5 WATER QUALITY MODEL PROJECTION

EPA's regulations at 40 CFR 130.7 require the determination of TMDLs to take into account critical conditions for stream flow, loading, and water quality parameters. The calibrated model was used to project water quality for critical conditions. The identification of critical conditions and the model input data used for critical conditions are discussed below. Appendix E contains the input files for the three subsegments in this TMDL.

5.1 Identification of Critical Conditions

The LDEQ LTP defines critical conditions in terms of flow and temperature. Critical flow conditions are simulated by using the annual 7Q10[4] flow or 0.1 cfs for non-tidal systems, whichever is higher. Since 7Q10s are not available, a headwater flow of 0.1 cfs was used in subsegments 090105 and 090204. Since subsegment 090207 is tidally influenced, one-third the average or typical flow averaged over one tidal cycle was used as the critical flow as per the LTP. In addition, all point sources are assumed to be discharging at design capacity.

The LTP specifies that the critical temperature should be determined by calculating the 90th percentile seasonal temperature for the waterbody being modeled, if data are available. Otherwise 30 ºC for summer months and 20 ºC for winter months are used.

Ambient water quality data from LDEQ show that low dissolved oxygen concentrations occur during the summer months. (See Appendix A for data plots.)

5.2 Temperature Inputs

Because of the limited amount of data available, the measured temperature used in calibration was used as the critical condition in the summer months. The measured temperatures were slightly higher than 30 ºC for all three segments. Using water temperature slightly higher than the suggested 30 ºC results in conservative TMDLs. Because this subsegment has a year-round standard for dissolved oxygen, a winter projection simulation was not performed. As discussed above, the most critical time of year for meeting a constant dissolved oxygen standard is the period of high temperatures and low flows.

5.3 Headwater and Tributary Inputs

The inputs for the headwater and tributaries for the projection simulation were based on guidance in the LTP. According to the LTP, the critical flow rates for summer should be set to either the 7Q10 flow or 0.1 cfs, whichever is higher. Because 7Q10 values for the waterbodies are not available, the headwater and tributary flows used in model calibration were used since all flows were higher than 0.1 cfs. CBOD from headwater and tributaries were reduced until modeled dissolved oxygen met the criteria. Dissolved oxygen from headwater and tributaries were set to the water quality criteria 5 mg/L. The ammonia levels were low from both the headwaters and tributaries. Therefore, the ammonia inputs were not changed from calibration.

[4] The 7Q10 is the lowest seven day flow that would be expected to occur once every 10 years.

5.4 Point Source Inputs

Wastewater inputs in the TMDL model are based on the available flow levels and limits. When permit limits were not available, BOD limits were obtained from the Louisiana general permit for facilities with similar discharge volumes and ammonia concentrations were determined using the method outlined in the LTP. Dischargers were assumed to have secondary treatment in mechanical plants. The flows from the point sources were very low compared to the flows in the segments and did not impact the dissolved oxygen significantly.

5.5 Downstream Values

Modeling parameters for downstream boundary conditions were the same as the calibration parameters except for temperature and dissolved oxygen. The temperature was set to the critical condition. The dissolved oxygen value was set to the water quality standard of 5.0 mg/L.

5.6 Model Results for Projection

Several steps were used to develop the reduction percentages for oxygen demand. The TMDL was calculated by first iteratively reducing SOD. After meeting the dissolved oxygen criteria by reducing SOD, the CBOD reduction rate was calculated by the SOD/CBOD relationship ($SOD=a\times\sqrt{CBOD}$). Slight adjustments were made to the SOD reduction rate and an updated CBOD reduction rate was calculated. This process was repeated until the optimal reduction rates were determined.

To meet the dissolved oxygen standard of 5.0 mg/L, oxygen demand needs to be reduced between 23 and 67 percent. This percentage reduction for nonpoint source loads represents a percentage of the entire nonpoint source loading, not a percentage of the manmade nonpoint source loading. The nonpoint source loads in this report were not divided between natural and manmade because there is currently insufficient data to estimate natural nonpoint source loads. Plots of predicted water quality for the projection are presented in Appendix F.

6 TMDL DEVELOPMENT

A TMDL is the total amount of a pollutant that can be assimilated by the receiving waterbody while still achieving water quality standards. In TMDL development, allowable loadings from all pollutant sources that cumulatively amount to no more than the TMDL must be established, thereby providing the basis for establishing water quality-based controls.

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody and may include a future growth (FG) component. The TMDL components are illustrated using the following equation:

$$TMDL = \Sigma\, WLAs + \Sigma\, LAs + MOS + FG$$

6.1 TMDL Analytical Approach

A TMDL for dissolved oxygen has been calculated for the Pearl River Basin subsegments based on the results of the projection simulation. The dissolved oxygen TMDL is presented as oxygen demand from CBOD, ammonia, and SOD. A summary of the loads is presented in Table 6-1. The TMDL calculations are included in Appendix C.

6.2 TMDLs

Table 6-1 presents the TMDLs and allocations for the subsegments in this report. Appendix G contains the TMDL calculations. Table 6-2 presents a summary of the percent reductions for LAs; there were no reductions for WLAs. The reduction percentages for total oxygen demand ranged from 23 to 67 percent.

The WLA portion of the TMDL equation is the total loading of a pollutant that is assigned to point sources (Table 6-3). WLAs include loads from all permitted facilities in the subsegment, including those not included in the model. No municipal separate storm sewer systems (MS4s) were identified. The WLAs are based on the available flow levels and limits. When permit limits were not available, BOD limits were obtained from the Louisiana general permit for facilities with similar discharge volumes and ammonia concentrations were determined using the method outlined in the LTP. Facilities were assumed to have secondary treatment in mechanical plants.

The LA is the portion of the TMDL assigned to nonpoint sources such as natural background loadings. For this TMDL, the LA was calculated by subtracting the WLA, MOS, and FG from the total TMDL allocation. LAs were not allocated to separate nonpoint sources because of the lack of available source characterization data.

Both section 303(d) of the Clean Water Act and the regulations at 40 CFR 130.7 require that TMDLs include an MOS to account for uncertainty in available data or in the actual effect that controls will have on the loading reductions and receiving water quality. The MOS may be expressed explicitly as unallocated assimilative capacity or implicitly using conservative

assumptions in establishing the TMDL. In addition to the MOS, an FG component may be added to account specifically for future growth in the TMDL area.

Table 6-1. Summary of dissolved oxygen TMDLs, WLAs, LAs, MOSs, and FGs for the Pearl River Basin

Subsegment	Oxygen demand (kg/d)				
090105	SOD	CBOD	Ammonia[a]	Nitrate[a]	Total
WLA	0.00	4.48	13.86	0.00	18.34
MOS for WLA	0.00	0.56	1.73	0.00	2.29
FG for WLA	0.00	0.56	1.73	0.00	2.29
LA	178.00	646.40	49.54	248.72	1,122.65
MOS for LA	22.25	80.80	6.19	31.09	140.33
FG for LA	22.25	80.80	6.19	31.09	140.33
TMDL	222.50	813.60	79.24	310.89	1,426.23
Subsegment	Oxygen demand (kg/d)				
090204	SOD	CBOD	Ammonia[a]	Nitrate[a]	Total
WLA	0.00	6.92	3.21	0.00	10.13
MOS for WLA	0.00	0.86	0.40	0.00	1.27
FG for WLA	0.00	0.86	0.40	0.00	1.27
LA	984.80	561.20	393.86	60.97	2,000.82
MOS for LA	123.10	70.15	49.23	7.62	250.10
FG for LA	123.10	70.15	49.23	7.62	250.10
TMDL	1,231.00	710.14	496.33	76.21	2,513.69
Subsegment	Oxygen demand (kg/d)				
090207	SOD	CBOD	Ammonia[a]	Nitrate[a]	Total
WLA	0.00	0.00	0.00	0.00	0.00
MOS for WLA	0.00	0.00	0.00	0.00	0.00
FG for WLA	0.00	0.00	0.00	0.00	0.00
LA	2,940.40	2,811.04	33.25	1,752.44	7,537.13
MOS for LA	367.55	351.38	4.16	219.05	942.14
FG for LA	367.55	351.38	4.16	219.05	942.14
TMDL	3,675.50	3,513.80	41.57	2,190.55	9,421.42

[a] Converted to oxygen demand. (concentration × 4.33 [conversion factor])

Table 6-2. Summary of percent reductions for LAs in the Pearl River Basin

Subsegment	Percent reduction				
	SOD	CBOD	Ammonia	Nitrate	Total
090105	17.93	30.01	4.69	5.53	22.73
090204	37.13	60.64	9.43	12.00	42.83
090207	67.47	76.46	66.55	3.64	67.08

There are two ways to incorporate the MOS (USEPA 1991). One way is to implicitly incorporate it by using conservative model assumptions to develop allocations, including the following:

- *Using slightly higher water temperatures than the suggested water temperature.* If dissolved oxygen meets the criteria with higher water temperature, it will meet the criteria with lower water temperature when other factors remain unchanged.

- *Using dissolved oxygen water quality criteria for model inflows.* Dissolved oxygen from headwaters and tributaries was set to the water quality criterion, which is lower than the 90 percent saturation level of dissolved oxygen at 30 ºC.

Table 6-3. Summary of WLAs for the Pearl River Basin

Sub-segment	Permit #	Outfall	Facility Name	Flow (gpd)	BOD_5 Limit (mg/L)	Ammonia Limit (mg/L)	BOD_5 (lb/d)	Ammonia (lb/d)
090105	LA0106143	001	Double D Meat Co.	5,500			5.600	4.000
090204	LA0055638	001	MacKenzie Co LLC	3,645	45[a]	10.00	1.369	0.304
		002		800	45	3.49[b]	0.300	0.023
		003		1,080	45[a]	10.00	0.406	0.090
090204	LAG480357	001	St. Tammany Parish Government-Bush Maintenance	2,000	45	3.49[b]	0.751	0.058
		002		200	45[a]	3.49[b]	0.075	0.006
090204	LAG530499		Bellsouth Telecommunications J2840	5,000	45	3.49[b]	1.878	0.146
090204	LAG530848	001	Highway 21 LLC	5,000	45	3.49[b]	1.878	0.146
090204	LAG531949	001	Hebron Baptist Church of Bush La - Hebron B	1,800	45	3.49[b]	0.676	0.052
090204	LAG541203	001	Sixth Ward Junior High School	5,240	30	2.33[b]	1.312	0.102

[a] Concentration obtained from Louisiana general sanitary permit with similar flow.
[b] Concentration calculated as described in LTP assuming secondary treatment and mechanical plants.

The other way is to explicitly specify a portion of the TMDL as the MOS and use the remainder for allocations. For this analysis, the MOS is explicit: 10 percent of each targeted TMDL was reserved as the MOS to account for any uncertainty in the TMDL. Using 10 percent of the TMDL load provides an additional level of protection to the designated uses of the subsegments of concern. The MOSs for the subsegments are listed in Table 6-1.

The MOS is an allocation for scientific uncertainly, while the FG is an allocation for growth. Ten percent of the load was allocated for future growth in the area covered by the TMDL. This growth includes future urban development, including point sources, MS4 areas, agriculture, and other nonpoint sources. The FG could also be used for sources not accounted for or unknown and therefore not otherwise included in the TMDL. The FGs for the subsegments are listed in Table 6-1.

6.3 Seasonal Variation

Critical conditions for dissolved oxygen have been determined to be the following: negligible nonpoint runoff and low stream flow combined with high water temperatures. Oxygen-demanding substances can enter a water system during higher flows and settle to the bottom, where they exert a large oxygen demand during the high-temperature/low-flow seasons. Water temperature is one of the leading factors that affect dissolved oxygen in the three segments. High water temperatures lower the dissolved oxygen saturation concentration, decreasing the amount of dissolved oxygen that the stream can contain. In addition, high temperature increases CBOD decay and SOD. Therefore, it is most important to develop a TMDL to address the high-water-

temperature conditions. Ambient water quality data from LDEQ show that low dissolved oxygen concentrations occur during the summer months. (See Appendix A for data plots.)

6.4 Sensitivity Analysis

A sensitivity analysis was performed on the model parameters using the sensitivity function built into LA-QUAL. LA-QUAL automatically changed the requested parameters by a set amount while keeping all other parameters constant. The calibration scenario was used as the baseline for the sensitivity analysis. For the sensitivity analysis, all parameters were varied by ±30 percent. The results for dissolved oxygen and BOD are shown in Table 6-4. Result plots are shown in Appendix H. Changes to the stream reaeration, stream velocity, and background SOD had the largest influence on dissolved oxygen levels. Stream dispersion had no effect on dissolved oxygen.

Table 6-4. Results of sensitivity analysis

		090105			090204			090207		
		-30%	base	+30%	-30%	base	+30%	-30%	base	+30%
BOD (mg/L)	BOD aerobic decay rate	3.45	2.98	2.32	0.09	0.06	0.04	1.47	1.44	1.42
	BOD settling rate	3.01	2.98	2.94	0.07	0.06	0.04	1.46	1.44	1.43
	Stream dispersion	2.98	2.98	2.98	0.06	0.06	0.06	1.44	1.44	1.45
	Stream reaeration	2.98	2.98	2.98	0.06	0.06	0.06	1.44	1.44	1.44
	Background SOD	2.98	2.98	2.98	0.06	0.06	0.06	1.44	1.44	1.44
	Steam velocity	2.04	2.98	3.39	0.02	0.06	0.10	1.40	1.44	1.47
DO (mg/L)	BOD aerobic decay rate	3.74	3.58	3.43	3.54	3.47	3.42	2.50	2.41	2.27
	BOD settling rate	3.59	3.58	3.57	3.51	3.47	3.43	2.47	2.41	2.36
	Stream dispersion	3.58	3.58	3.58	3.47	3.47	3.47	2.41	2.41	2.41
	Stream reaeration	3.00	3.58	4.01	2.84	3.47	3.94	1.48	2.41	2.50
	Background SOD	3.66	3.58	3.50	4.56	3.47	2.38	2.50	2.41	1.60
	Stream velocity	3.93	3.58	3.35	2.86	3.47	3.92	2.16	2.41	2.50

6.7 Ammonia Toxicity Analysis

An analysis was performed on the model input and modeled results to determine whether the modeled ammonia concentrations exceeded USEPA criteria for ammonia toxicity (USEPA 1999). The USEPA criteria are dependent on temperature and pH. Temperature was taken from the model output. Because pH is not included in the model, it was obtained from levels observed during the August 2006 monitoring event. The resulting criteria ranged from 0.81 to 2.82 milligrams of nitrogen per liter. The predicted ammonia concentrations ranged from 0.00 to 0.34 milligrams of nitrogen per liter. These concentrations were below the USEPA ammonia toxicity criteria and show that the criteria will not be exceeded during critical conditions. The ammonia toxicity calculations are included in Appendix I.

7 FUTURE ACTIVITIES

7.1 TMDL Implementation Strategies

Reasonable assurance is needed that the water quality criterion will be attained. WLAs will be implemented through Louisiana Pollutant Discharge Elimination System (LPDES) permit procedures. Part of the LAs might be implemented through the LDEQ 305(b) program and set priorities for the section 319 program. BMPs from the implementation plan will be implemented throughout the subsegment. This approach will reduce the loadings and improve dissolved oxygen levels in the subsegment and subsequent downstream subsegments.

Hurricane Katrina made landfall on Monday, August 29, 2005, as a Category 4 hurricane. The storm brought heavy winds and rain to southeast Louisiana. Floodwaters breached several levees, flooding large areas of coastal Louisiana. The hurricane caused a change in sedimentation and water quality in southern Louisiana. Several federal and state agencies, including USEPA and LDEQ, are engaged in collecting environmental data and assessing the recovery of the Gulf of Mexico waters. The proposed TMDLs in this report were developed on the basis of pre- and post-hurricane conditions. Therefore, some post-hurricane conditions and other factors could delay implementation of these proposed TMDLs, render some proposed TMDLs obsolete, or require modifications of the TMDLs. Hurricane effects might be a valid justification for some TMDL modification; however, any deviation from the TMDLs should be justified using site-specific data or information.

7.2 Environmental Monitoring Activities

LDEQ uses funds provided under section 106 of the Clean Water Act and under the authority of the Louisiana Environmental Quality Act to run a program for monitoring the quality of the state's surface waters. The LDEQ Surveillance Section collects surface water samples at various locations, using appropriate sampling methods and procedures to ensure the quality of the data collected. The objectives of the surface water monitoring program are to determine the quality of the state's surface waters, to develop a long-term database for water quality trend analysis, and to monitor the effectiveness of pollution controls. The data obtained through the surface water monitoring program are used to develop the state's biennial section 305(b) report (*Water Quality Inventory*) and section 303(d) list of impaired waters.

LDEQ has implemented a watershed approach to surface water quality monitoring. Through the approach, the entire state is sampled on a 4-year cycle. Long-term trend monitoring sites at various locations on the larger rivers and Lake Pontchartrain are sampled throughout the 4-year cycle. Sampling is conducted monthly to yield approximately 12 samples per site during each year the site is monitored. Sampling sites are located where they are considered representative of the waterbody. Under the current monitoring schedule, approximately one-half of the state's waters are newly assessed for section 305(b) and section 303(d) listing purposes during each biennial cycle, with sampling occurring statewide each year. The 4-year cycle follows an initial 5-year rotation that covered all basins in the state according to the TMDL priorities. Monitoring will allow LDEQ to determine whether there has been any improvement in water quality following TMDL implementation. As the monitoring results are evaluated at the end of each year, waterbodies might be added to or removed from the section 303(d) list of impaired waterbodies.

8 PUBLIC PARTICIPATION

Federal regulations require USEPA to notify the public and seek comments concerning TMDLs that the Agency prepares. These TMDLs were developed under contract to USEPA, and USEPA held a public review period seeking comments, information, and data from the public and any other interested parties. The notice for the public review period was published in the *Federal Register* on XXX XX, XXXX, and the review period closed on XXX XX, XXXX.

Comments were received from XXX and were used to inform or revise this TMDL document. The comments and responses to these TMDLs will be included in a separate report, which will include comments on similar TMDLs with the same public review period.

EPA will submit the final TMDLs to LDEQ for implementation and incorporation into LDEQ's current water quality management plan.

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Table A-1. In situ data collected during the August 2006 monitoring event

Site ID	Date	Time	Station Depth	Measurement Depth (ft)	Temp (°C)	Conductivity (µmhos)	DO (mg/L)	pH (su)	Chl a from in situ probe (µg/L)[a]
				3	31.6	126	5.1	6.9	15.0
090105-A	8/14/06	11:28	?	8	31.6	126	4.9	6.9	19.0
090105-B	8/14/06	12:05	4.5	2.5	32.1	120	5.8	6.9	21.0
				2.75	31.7	104	4.4	6.7	12.0
090105-C	8/14/06	11:12	6.5	5.5	31.6	103	3.8	6.7	8.0
				1	31.4	115	6.5	7.1	12.5
				4	31.3	115	6.1	7.1	11.4
090105-D	8/14/06	9:10	14	6	30.4	116	0.4	6.6	8.7
				3	32.1	113	6.7	7.3	6.3
				5	31.3	112	6.5	7.1	8.4
090105-E	8/14/06	10:43	9	8	30.9	113	2.6	6.8	9.3
				3	32.1	108	8.6	8.5	3.7
				5	31.6	108	1.2	8.3	5.8
090105-F	8/14/06	10:15	10	9	30.8	107	4.5	7.2	9.0
				3	31.9	37	6.7	6.7	0.0
				9	31.9	36	6.6	6.7	0.0
090204-A	8/14/06	14:20	10	3 (Duplicate)	31.9	37	6.7	6.7	0.0
				3	33.0	40	6.4	6.8	1.5
090204-C	8/14/06	14:00	9.5	8.5	31.1	43	6.2	6.7	1.5
				3	32.1	41	7.0	6.7	0.5
090204-D	8/14/06	13:25	8	7	31.2	36	6.6	6.7	1.0
				3	32.3	41	7.0	6.5	6.2
090204-E	8/15/06	14:20	7	6	31.3	39	5.9	6.4	0.9
090204-F	8/15/06	14:37	4.5	2.25	30.4	39	2.9	6.0	NA
				3	31.4	38	6.7	6.5	1.5
090204-G	8/15/06	13:30	19	9.5	28.2	36	0.2	5.6	0.0
				3	31.1	39	5.9	6.4	6.7
090204-H	8/15/06	13:19	8	7	30.7	40	4.5	6.3	1.7
				3	31.1	39	6.1	6.3	10.1
090204-I	8/15/06	12:50	11	10	30.4	39	3.6	6.2	4.5
				3	31.5	38	6.6	6.5	12.4
090204-J	8/15/06	12:35	10.5	9	30.6	38	4.6	6.4	7.1
				3	32.1	36	7.0	6.8	2.3
090204-K	8/15/06	12:05	11	9	31.1	37	6.4	6.7	NA
090207-A	8/16/06	14:48	10.75	3	27.8	99	2.4	6.4	0.0
				3	30.6	121	4.3	6.3	1.1
				12	28.9	112	2.8	6.3	0.1
090207-B	8/16/06	15:31	25	19	26.3	171	0.2	6.1	0.0
090207-C	8/16/06	13:41	7.5	3	30.5	180	3.9	6.6	1.6
				3	30.7	140	3.6	6.4	1.5
090207-D	8/16/06	14:10	14	13	30.5	142	3.5	6.3	0.7
				3	30.0	4,300	2.5	6.2	0.6
090207-E	8/16/06	13:23	11	10	29.8	8,400	1.6	6.2	0.3
				3	30.3	6,020	2.9	6.3	0.5
090207-F	8/16/06	13:08	17	12	30.2	6,640	2.6	6.3	0.7
				3	30.7	654	4.6	6.1	0.0
090207-G	8/16/06	10:45	25	15	31.0	2,297	4.3	6.4	0.0

Table A-1. (continued)

Site ID	Date	Time	Station Depth	Measurement Depth (ft)	Temp (°C)	Conductivity (µmhos)	DO (mg/L)	pH (su)	Chl a from in situ probe (µg/L)[a]
				24	30.5	16,290	0.9	6.4	0.0
				3	30.7	5,600	4.4	6.5	1.1
090207-H	8/16/06	11:46	25	12.5	30.2	19,840	0.4	6.5	NA
				3	30.9	6,500	3.9	6.3	0.8
090207-I	8/16/06	12:05	14	13	30.4	15,500	1.3	6.4	NA
				3	31.6	720	4.7	6.5	0.0
090207-J	8/16/06	10:20	30	15	30.3	20,260	0.2	6.5	0.0
				3	30.8	5,038	4.1	6.7	1.0
090207-K	8/16/06	10:05	20	19	30.6	20,840	1.1	6.5	0.0
				3	31.0	2,130	4.9	6.7	0.0
				20	30.3	20,130	2.0	6.4	0.0
090207-M	8/17/06	9:50	40	40	30.2	20,900	0.3	6.4	0.0
				3	30.4	9,150	3.4	6.6	1.8
				19	30.6	21,080	2.5	6.9	0.0
090207-N	8/17/06	7:16	38	37	30.5	21,700	2.2	6.9	5.3
				3	30.6	4,070	4.0	6.6	1.5
090207-O	8/17/06	7:53	18	9	30.4	19,260	0.6	6.7	0.0
				3	31.2	6,400	3.8	6.6	2.1
				15	30.6	20,600	4.9	7.2	5.7
090207-P	8/17/06	8:30	29	28	30.4	22,980	4.5	7.2	5.2
				3	30.6	22,080	5.3	7.3	8.0
090207-Q	8/17/06	8:48	9	6	30.4	24,200	NA	7.4	7.8

[a] Chlorophyll a probe was not calibrated.

Table A-2. CBOD monitoring results from August 2006 monitoring event

Site ID	Date	Time	CBOD 3-day (mg/L)	CBOD 5-day (mg/L)	CBOD 12-day (mg/L)	CBOD 20-day (mg/L)	CBOD 25-day (mg/L)
090105-A	8/14/06	11:28	<2	<2	3.2	4.0	4.6
090105-D	8/14/06	9:30	<2	2.3	3.4	3.9	4.5
090105-F	8/14/06	10:30	<2	<2	2.7	3.3	3.9
		14:30	<2	<2	<2	<2	<2
090204-A	8/14/06	14:32	<2	<2	<2	<2	<2
090204-D	8/14/06	13:27	<2	<2	<2	<2	<2
090204-F	8/15/06	14:37	<2	<2	<2	<2	<2
090204-G	8/15/06	13:45	<2	<2	<2	<2	<2
090204-I	8/15/06	12:50	<2	<2	2.1	2.5	2.8
090204-K	8/15/06	12:20	<2	<2	<2	2.0	2.4
090207-A	8/16/06	15:53	<2	<2	3.0	3.9	4.2
090207-C	8/16/06	13:47	<2	<2	<2	<2	<2
090207-D	8/16/06	14:18	<2	<2	<2	2.1	2.0
090207-H	8/16/06	11:50	<2	<2	<2	2.1	2.1
090207-I	8/16/06	12:15	<2	<2	<2	2.3	2.3
090207-J	8/16/06	10:30	<2	<2	<2	<2	<2

Table A-2. (continued)

Site ID	Date	Time	CBOD 3-day (mg/L)	CBOD 5-day (mg/L)	CBOD 12-day (mg/L)	CBOD 20-day (mg/L)	CBOD 25-day (mg/L)
090207-N	8/17/06	7:32	<2	<2	<2	2.2	3.3
		7:34	<2	<2	<2	<2	3.0
090207-O	8/17/06	8:10	<2	<2	<2	2.0	3.1
090207-Q	8/17/06	8:50	<2	<2	2.4	3.1	3.8
		8:53	<2	<2	<2	2.3	3.3

Table A-3. Water quality results from August 2006 monitoring event

Site ID	Date	Time	TSS (mg/L)	TOC (mg/L)	Chl a (mg/L)	Total Phos. (mg/L)	TKN (mg/L)	Ammonia Nitrogen (mg/L)	NO3+NO2 Nitrogen (mg/L)
090105-A	8/14/06	11:28	35	15.0	0.04	0.13	1.30	<0.1	<0.04
090105-D	8/14/06	9:30	6.8	16.0	0.04	0.06	0.84	<0.1	<0.04
090105-F	8/14/06	10:30	8.0	14.0	<0.02	0.04	0.86	<0.1	<0.04
090204-A	8/14/06	14:30	9.0	8.9	<0.02	0.07	0.63	<0.1	0.23
		14:32	9.4	13.0	<0.02	0.08	0.84	<0.1	0.22
090204-D	8/14/06	13:27	4.9	8.2	<0.02	0.07	0.66	<0.1	0.32
090204-F	8/15/06	14:37	17	8.2	0.03	0.06	0.60	<0.1	0.11
090204-G	8/15/06	13:45	5.0	3.0	<0.02	0.06	0.51	<0.1	0.09
090204-I	8/15/06	12:50	4.3	4.4	0.03	0.06	0.53	0.11	0.06
090204-K	8/15/06	12:20	4.0	3.8	<0.02	0.03	0.66	<0.1	<0.04
090207-A	8/16/06	15:53	14	7.5	<0.02	0.17	0.55	<0.1	0.04
090207-C	8/16/06	13:47	14	5.4	<0.02	0.14	0.56	<0.1	0.08
090207-D	8/16/06	14:18	12	5.6	<0.02	0.13	0.56	<0.1	0.13
090207-H	8/16/06	11:50	9.4	5.5	<0.02	0.09	0.72	<0.1	0.09
090207-I	8/16/06	12:15	7.6	4.8	<0.02	0.09	0.64	0.11	0.09
090207-J	8/16/06	10:30	8.4	5.2	<0.02	0.10	0.58	<0.1	0.22
090207-N	8/17/06	7:32	6.1	7.9	<0.02	0.09	0.69	<0.1	0.09
		7:34	8.3	8.9	<0.02	0.09	0.67	<0.1	0.11
090207-O	8/17/06	8:10	8.0	10.0	<0.02	0.09	0.78	<0.1	0.15
090207-Q	8/17/06	8:50	12	9.5	<0.02	0.09	0.62	<0.1	0.05
		8:53	12	9.4	<0.02	0.06	0.68	<0.1	0.07

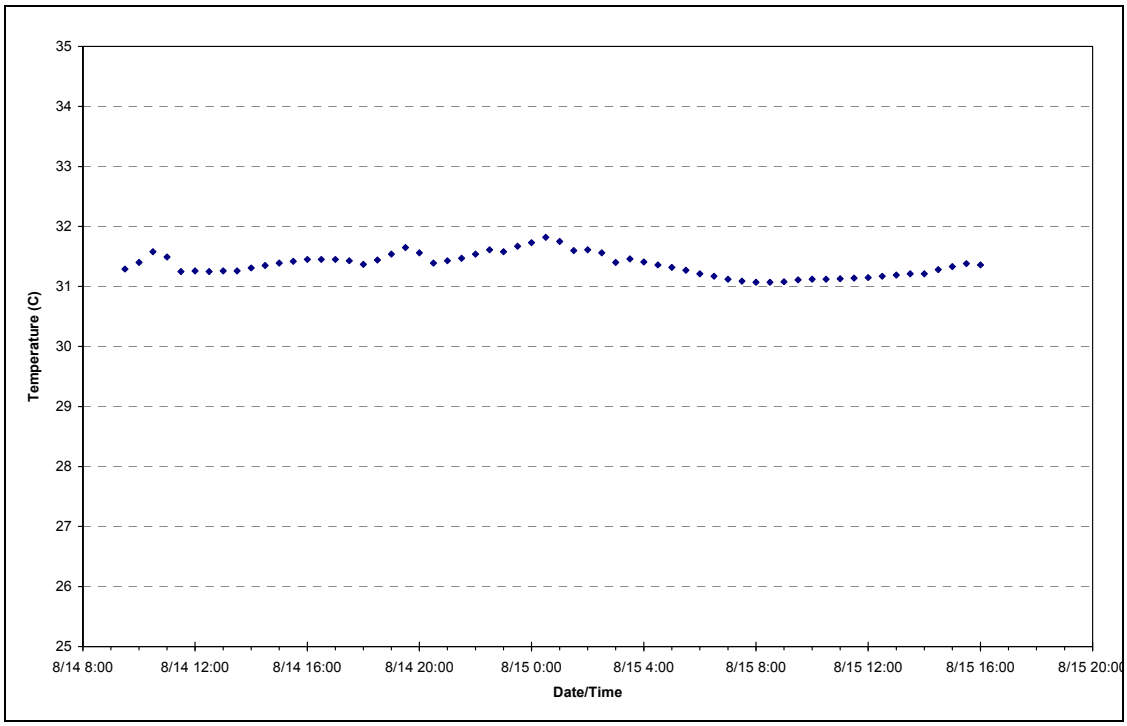

Figure A-1. Continuous temperature for PRNC at station 090105-D

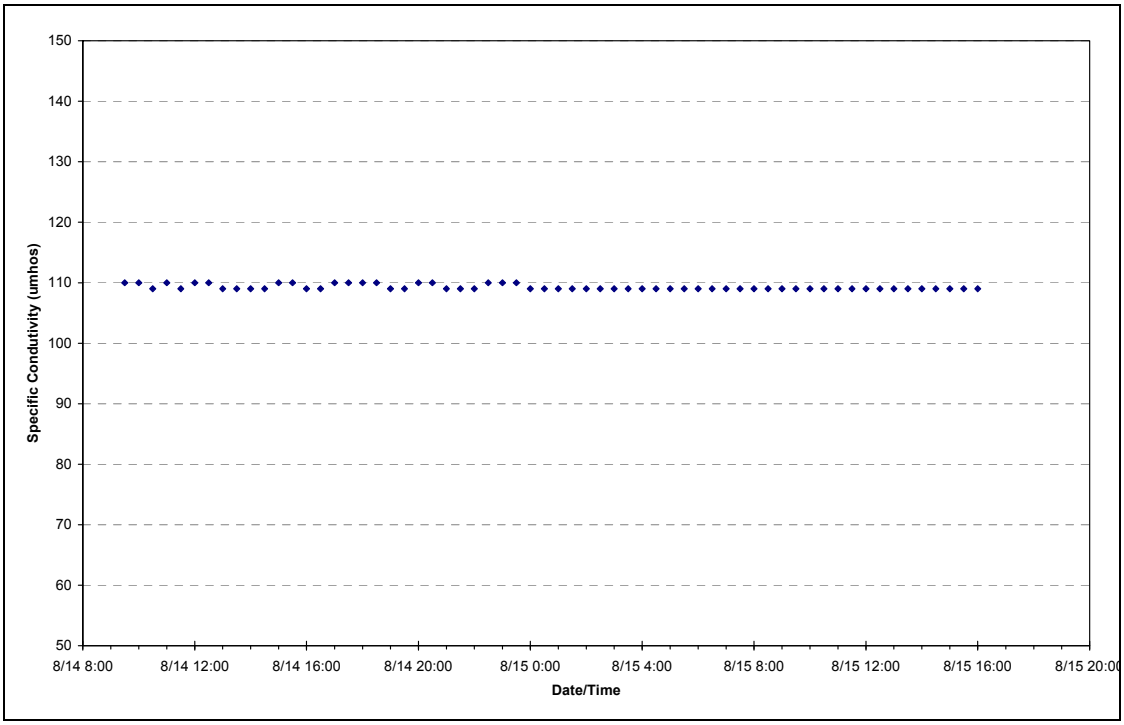

Figure A-2. Continuous specific conductivity for PRNC at station 090105-D

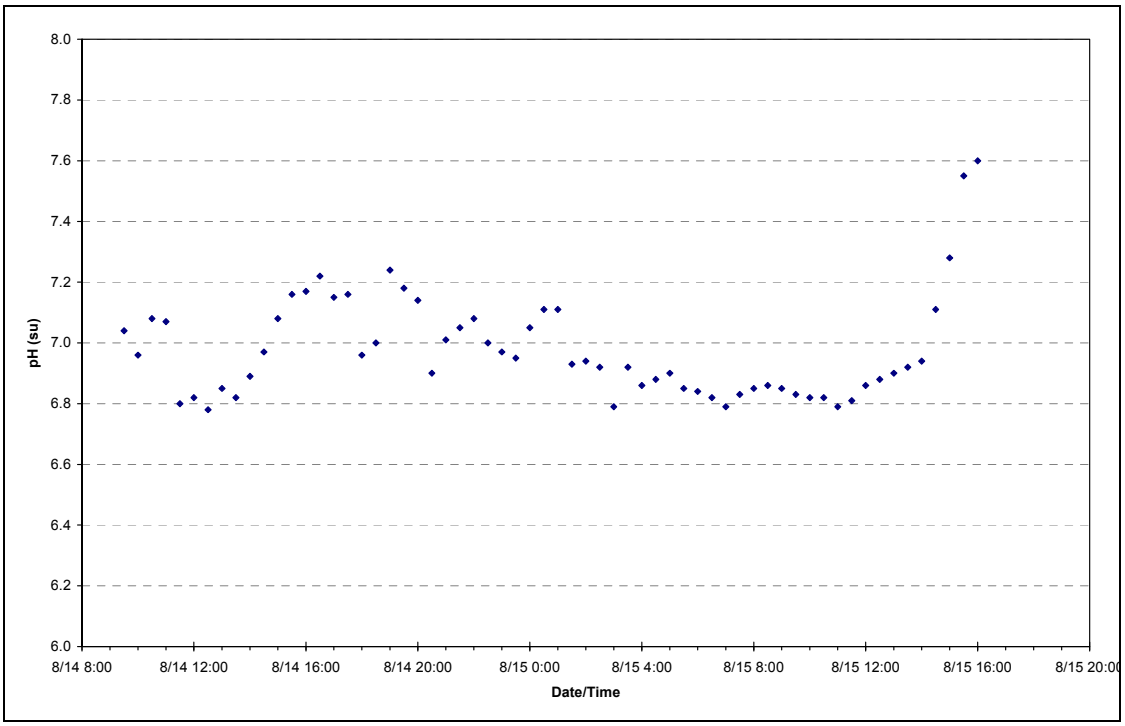

Figure A-3. Continuous pH for PRNC at station 090105-D

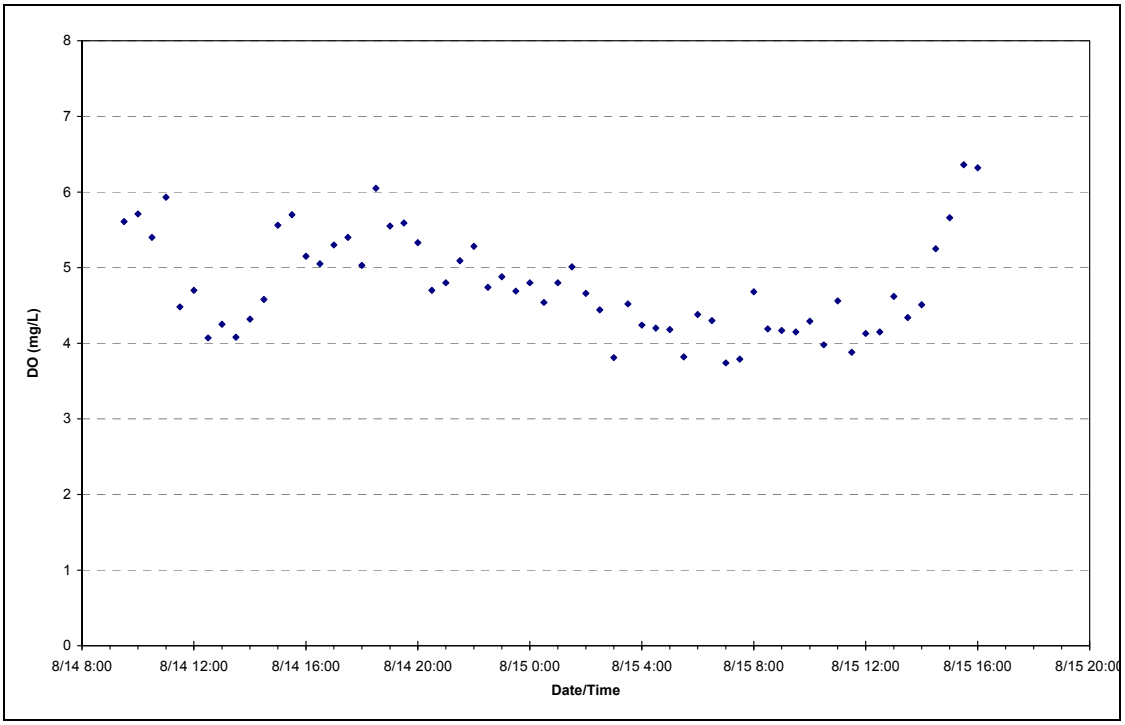

Figure A-4. Continuous DO concentrations for PRNC at station 090105-D

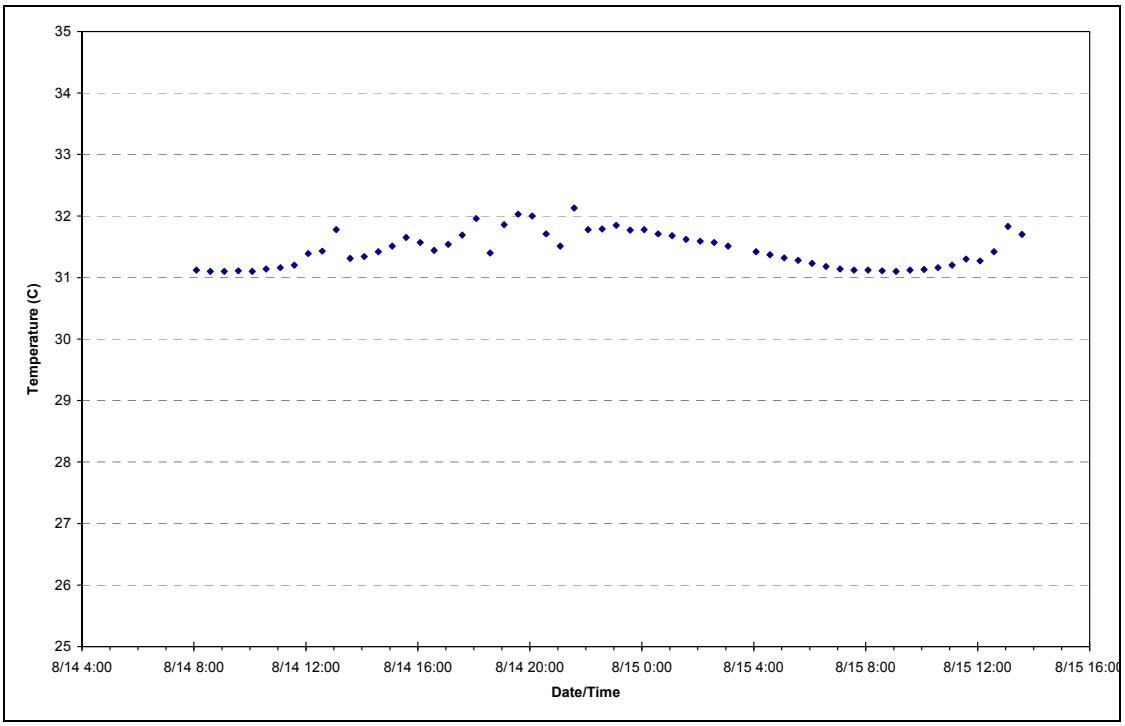

Figure A-5. Continuous temperature for PRNC at station 090204-E

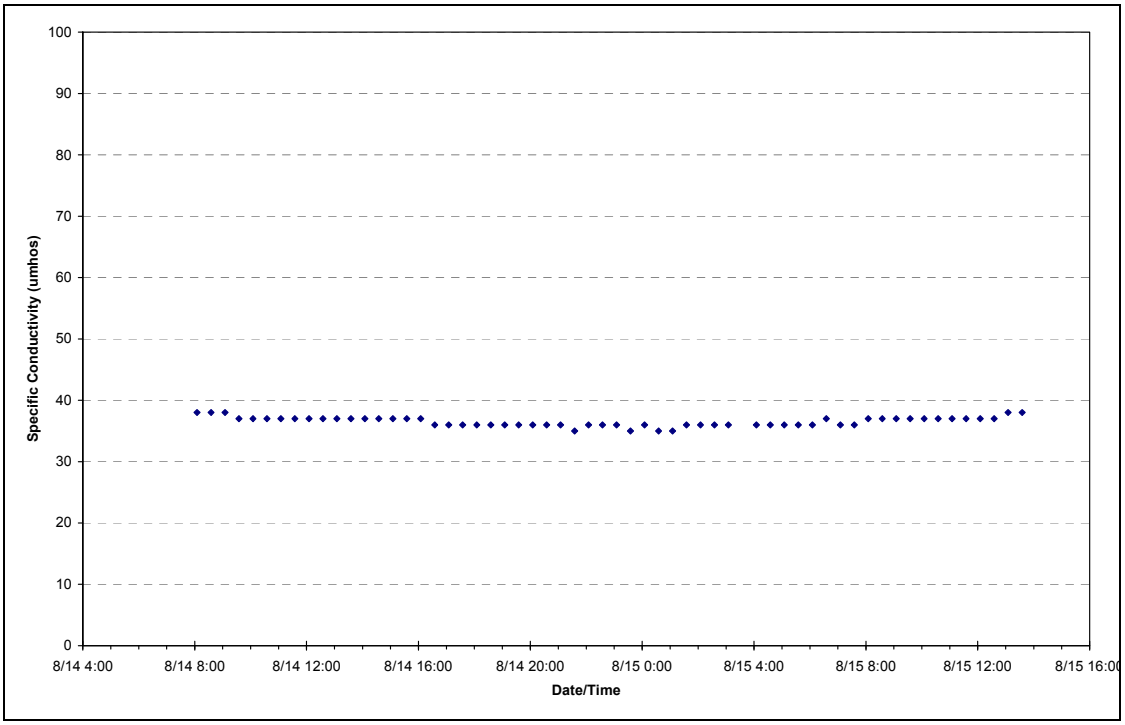

Figure A-6. Continuous specific conductivity for PRNC at station 090204-E

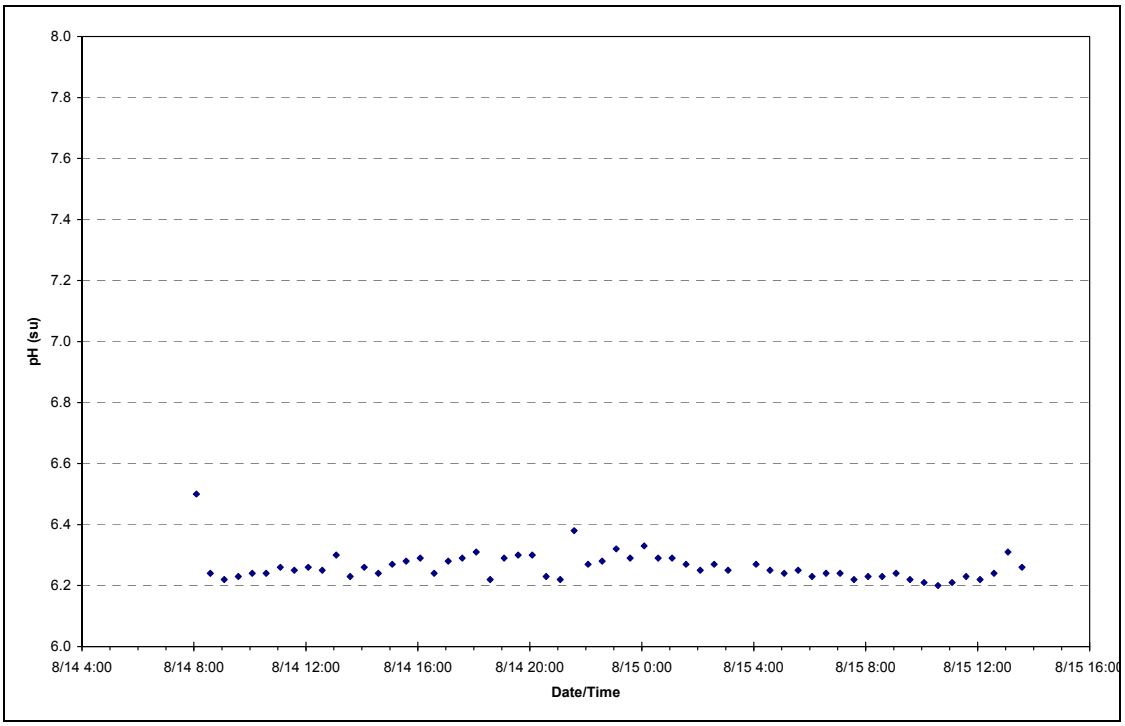

Figure A-7. Continuous pH for PRNC at station 090204-E

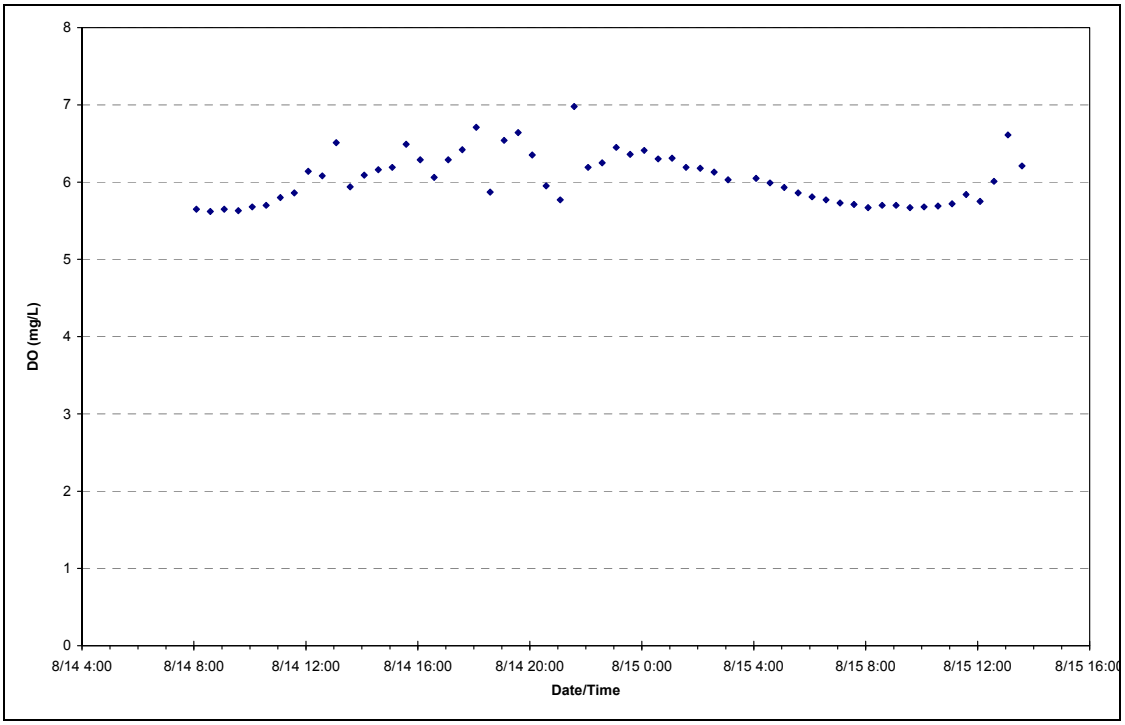

Figure A-8. Continuous DO concentrations for PRNC at station 090204-E

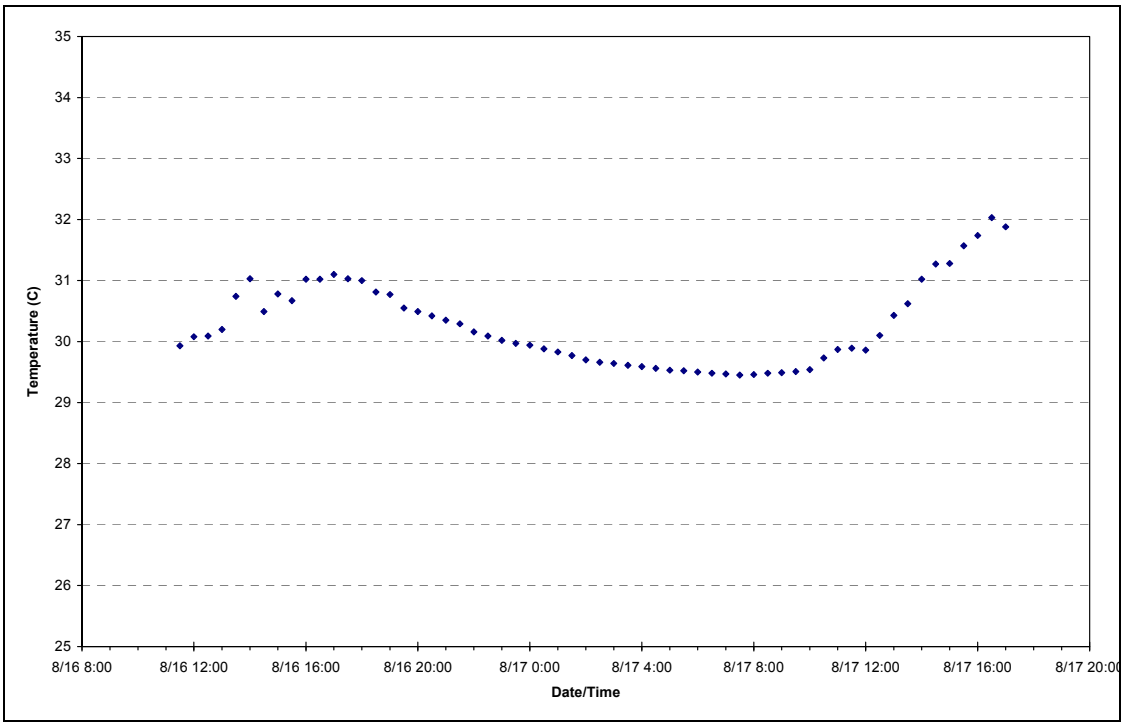

Figure A-9. Continuous temperature for the Middle River at station 090207-B

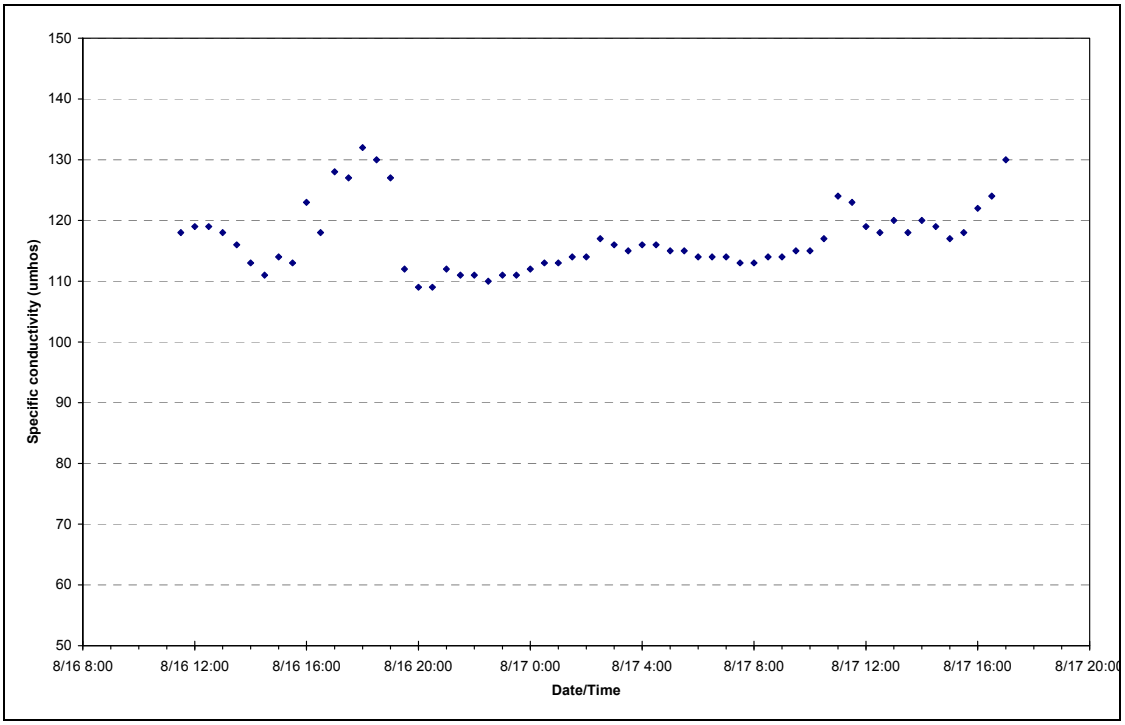

Figure A-10. Continuous specific conductivity for the Middle River at station 090207-B

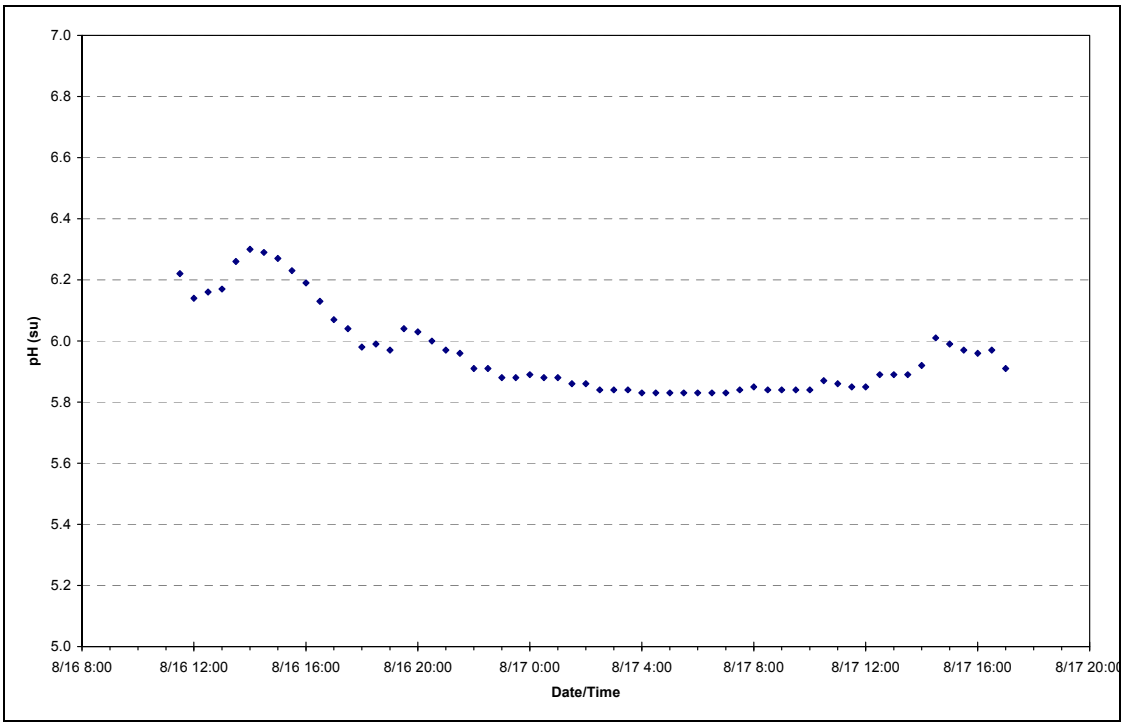

Figure A-11. Continuous pH for the Middle River at station 090207-B

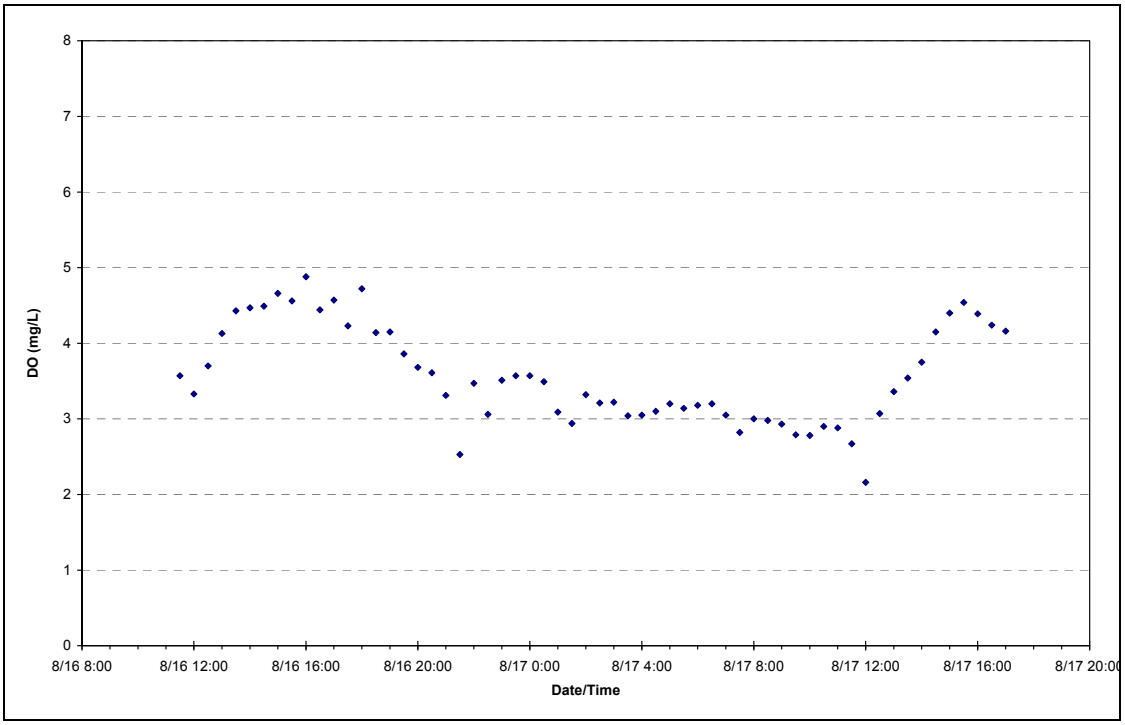

Figure A-12. Continuous DO concentrations for the Middle River at station 090207-B

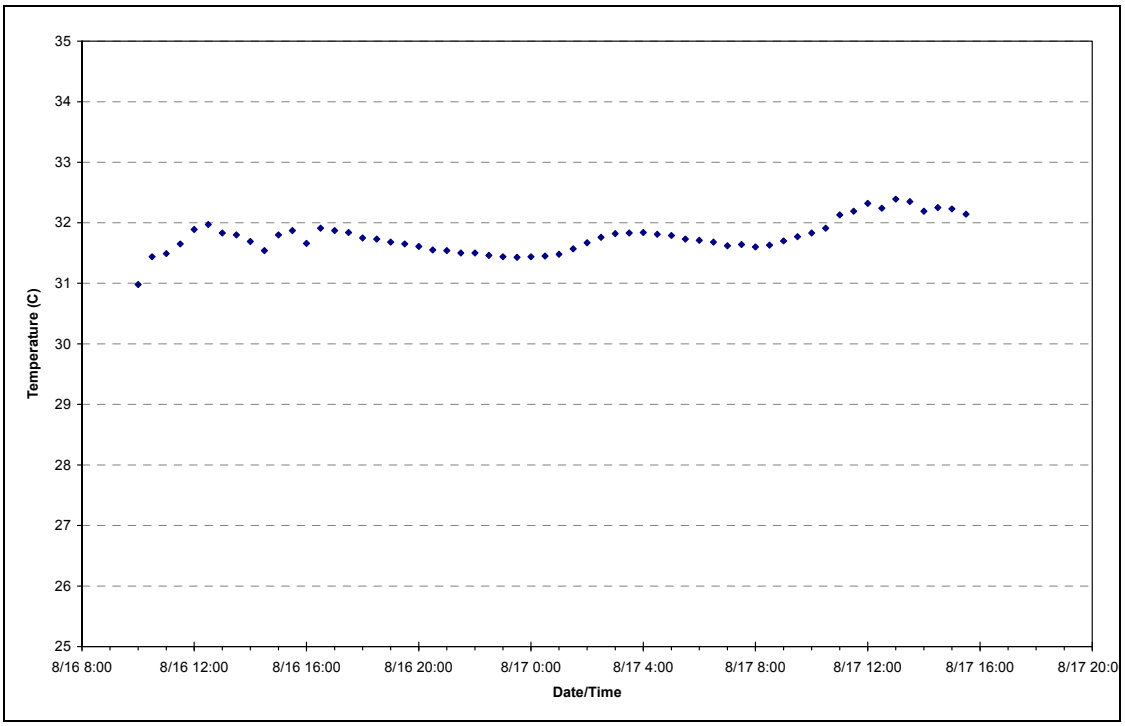

Figure A-13. Continuous temperature for the West Middle River at station 090207-M

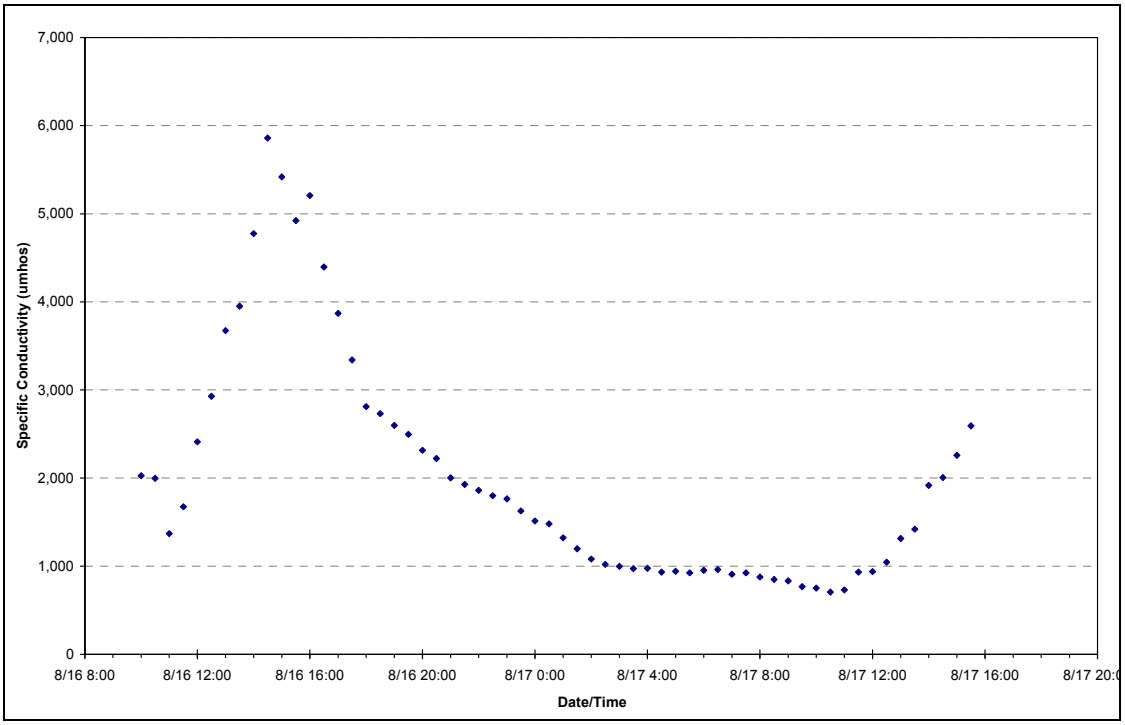

Figure A-14. Continuous specific conductivity for the West Middle River at station 090207-M

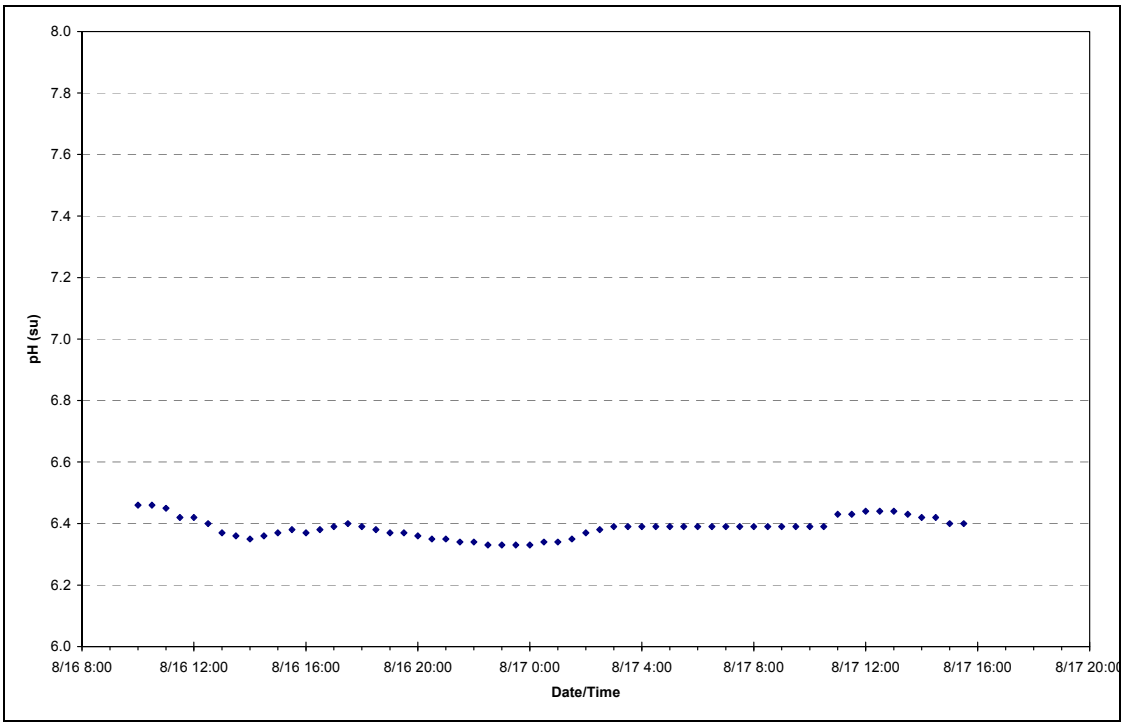

Figure A-15. Continuous pH for the West Middle River at station 090207-M

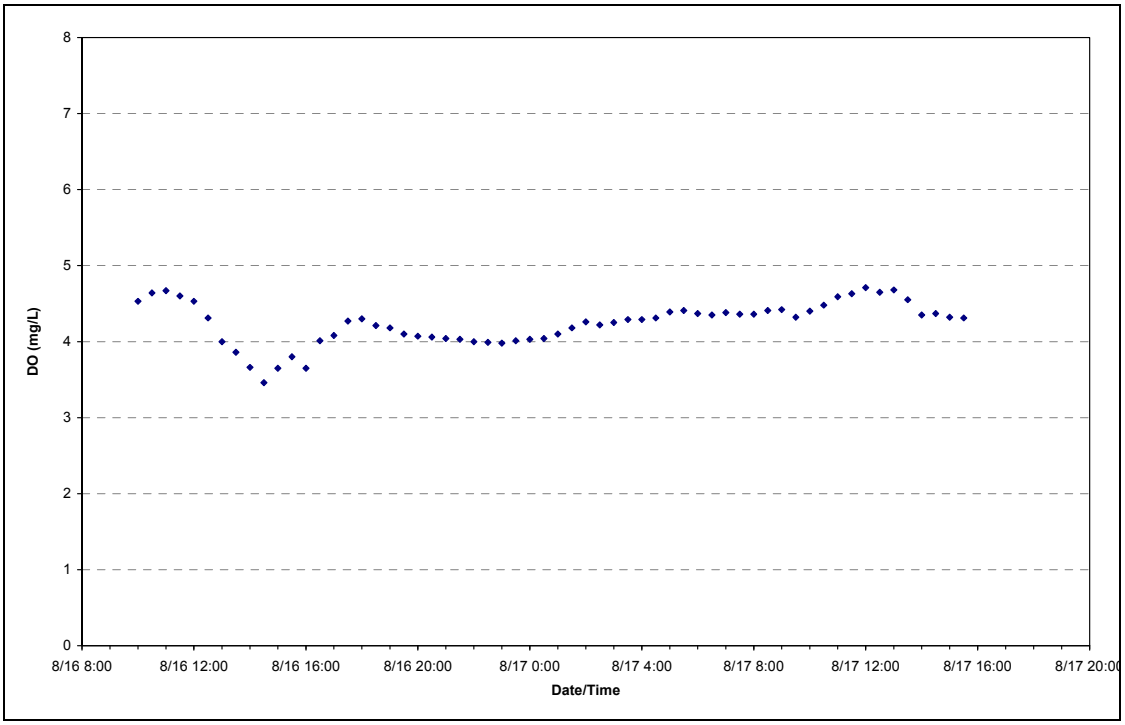

Figure A-16. Continuous DO concentrations for the West Middle River at station 090207-M

Table A-4. Cross section and flow measurements from August 2006 monitoring event

Station	Cross sectional area (m^2)						River width (m)						Average depth (m)						Total flow (m^3/s)					
	Run 1	Run 2	Run 3	Run 4	Run 5	Avg	Run 1	Run 2	Run 3	Run 4	Run 5	Avg	Run 1	Run 2	Run 3	Run 4	Run 5	Avg	Run 1	Run 2	Run 3	Run 4	Run 5	Avg
090105-B	0	45	44	44	0	44	0	44	45	45	0	45	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.1	0.2	0.1	0.0	0.2
090105-C	59	0	0	0	0	59	43	0	0	0	0	43	1.4	0.0	0.0	0.0	0.0	1.4	0.3	0.0	0.0	0.0	0.0	0.0
090105-D	229	0	0	0	0	229	83	0	0	0	0	83	2.8	0.0	0.0	0.0	0.0	2.8	1.4	0.0	0.0	0.0	0.0	0.0
090105-E	95	0	0	0	0	95	53	0	0	0	0	53	1.8	0.0	0.0	0.0	0.0	1.8	1.2	0.0	0.0	0.0	0.0	0.0
090105-F	151	155	150	0	0	152	65	66	65	0	0	65	2.3	2.3	2.3	0.0	0.0	2.3	0.3	0.1	-0.1	0.0	0.0	0.1
090204-A	85	81	83	84	0	83	40	38	38	40	0	39	2.1	2.1	2.2	2.1	0.0	2.1	18.1	17.6	16.9	18.3	0.0	17.7
090204-C	122	0	0	0	0	122	55	0	0	0	0	55	2.2	0.0	0.0	0.0	0.0	2.2	2.4	0.0	0.0	0.0	0.0	0.0
090204-D	125	119	120	0	0	121	59	56	56	0	0	57	2.1	2.1	2.1	0.0	0.0	2.1	1.6	1.5	1.5	0.0	0.0	1.5
090204-E	120	0	0	0	0	120	63	0	0	0	0	63	1.9	0.0	0.0	0.0	0.0	1.9	3.2	0.0	0.0	0.0	0.0	0.0
090204-G	261	0	297	295	294	287	70	0	73	75	75	73	3.8	0.0	4.1	3.9	3.9	3.9	3.5	0.0	0.9	1.9	2.1	2.1
090204-H	81	0	0	0	0	81	50	0	0	0	0	50	1.6	0.0	0.0	0.0	0.0	1.6	3.6	0.0	0.0	0.0	0.0	0.0
090204-I	221	0	0	0	0	221	98	0	0	0	0	98	2.2	0.0	0.0	0.0	0.0	2.2	1.7	0.0	0.0	0.0	0.0	0.0
090204-J	106	0	0	0	0	106	59	0	0	0	0	59	1.8	0.0	0.0	0.0	0.0	1.8	3.4	0.0	0.0	0.0	0.0	0.0
090204-K	194	188	195	0	0	192	86	81	89	0	0	85	2.3	2.3	2.2	0.0	0.0	2.3	1.9	2.7	1.1	0.0	0.0	1.9
090207-A	90	88	90	0	0	90	55	51	52	0	0	53	1.6	1.7	1.7	0.0	0.0	1.7	3.6	3.2	3.1	0.0	0.0	3.3
090207-B	0	225	0	0	0	225	0	45	0	0	0	45	0.0	5.0	0.0	0.0	0.0	5.0	0.0	10.3	0.0	0.0	0.0	0.0
090207-C	58	58	57	0	0	58	28	28	28	0	0	28	2.1	2.1	2.1	0.0	0.0	2.1	14.7	14.7	15.4	0.0	0.0	14.9
090207-D	99	104	100	0	0	101	33	37	35	0	0	35	3.0	2.8	2.9	0.0	0.0	2.9	20.5	20.5	19.7	0.0	0.0	20.2
090207-E	120	0	0	0	0	120	41	0	0	0	0	41	2.9	0.0	0.0	0.0	0.0	2.9	31.6	0.0	0.0	0.0	0.0	0.0
090207-F	109	94	106	0	0	103	40	30	40	0	0	37	2.7	3.1	2.6	0.0	0.0	2.8	18.1	16.8	16.6	0.0	0.0	17.2
090207-G	323	0	0	0	0	323	62	0	0	0	0	62	5.2	0.0	0.0	0.0	0.0	5.2	16.4	0.0	0.0	0.0	0.0	0.0
090207-H	269	0	0	0	0	269	57	0	0	0	0	57	4.7	0.0	0.0	0.0	0.0	4.7	62.5	0.0	0.0	0.0	0.0	0.0
090207-I	108	99	102	101	0	103	41	37	36	36	0	38	2.6	2.7	2.8	2.8	0.0	2.7	23.7	15.4	23.0	22.9	0.0	21.2
090207-J	0	0	369	0	0	369	0	0	59	0	0	59	0.0	0.0	6.2	0.0	0.0	6.2	0.0	0.0	24.1	0.0	0.0	0.0
090207-K	127	127	130	0	0	128	31	30	30	0	0	30	4.1	4.2	4.3	0.0	0.0	4.2	2.9	6.4	2.3	0.0	0.0	3.9
090207-M	0	0	534	0	0	534	0	0	80	0	0	80	0.0	0.0	6.7	0.0	0.0	6.7	0.0	0.0	9.3	0.0	0.0	0.0
090207-N	464	481	0	445	456	462	69	70	0	68	74	70	6.7	6.9	0.0	6.5	6.2	6.6	54.7	64.6	0.0	68.3	68.5	64.1
090207-O	566	568	569	0	0	568	131	129	134	0	0	131	4.3	4.4	4.2	0.0	0.0	4.3	20.7	25.3	24.7	0.0	0.0	23.6
090207-P	610	0	0	0	0	610	107	0	0	0	0	107	5.7	0.0	0.0	0.0	0.0	5.7	6.7	0.0	0.0	0.0	0.0	0.0

Table A-5. Dye study measurements from August 2006 monitoring event

Station	UTM easting	UTM northing	Date/time	Measured dye conc. (ppb)	Increm. distance from injection (m)	Cumul. distance from injection (m)	Width under curve (m)	Area under curve (m × ppb)	Horizontal centroid (m)	Horizontal moment (m^2 × ppb)
DD3	244,539	3,354,061	8/17/06 17:33	2	1,930	1,930	257	515	2,058	1,059,927
DD4	244,375	3,353,727	8/17/06 17:39	4	515	2,444	547	2,189	2,461	5,385,199
DD5	244,211	3,353,486	8/17/06 17:44	6	579	3,024	443	2,655	2,955	7,847,481
DD6	244,269	3,353,227	8/17/06 17:49	7.5	306	3,330	230	1,724	3,292	5,675,478
DD7	244,223	3,353,080	8/17/06 17:52	8	154	3,484	167	1,337	3,490	4,664,600
DD8	244,217	3,352,900	8/17/06 17:56	8.4	180	3,664	177	1,488	3,662	5,447,590
DD9	244,222	3,352,726	8/17/06 18:01	8.3	174	3,838	169	1,403	3,835	5,382,093
DD10	244,227	3,352,562	8/17/06 18:04	7	164	4,002	167	1,168	4,003	4,677,085
DD11	244,289	3,352,404	8/17/06 18:10	5	170	4,172	171	853	4,172	3,560,704
DD12	244,304	3,352,233	8/17/06 18:14	1.6	172	4,343	86	137	4,300	590,543
		MEDIAN =	8/17/06 17:54				Sum =	13,470		44,290,700

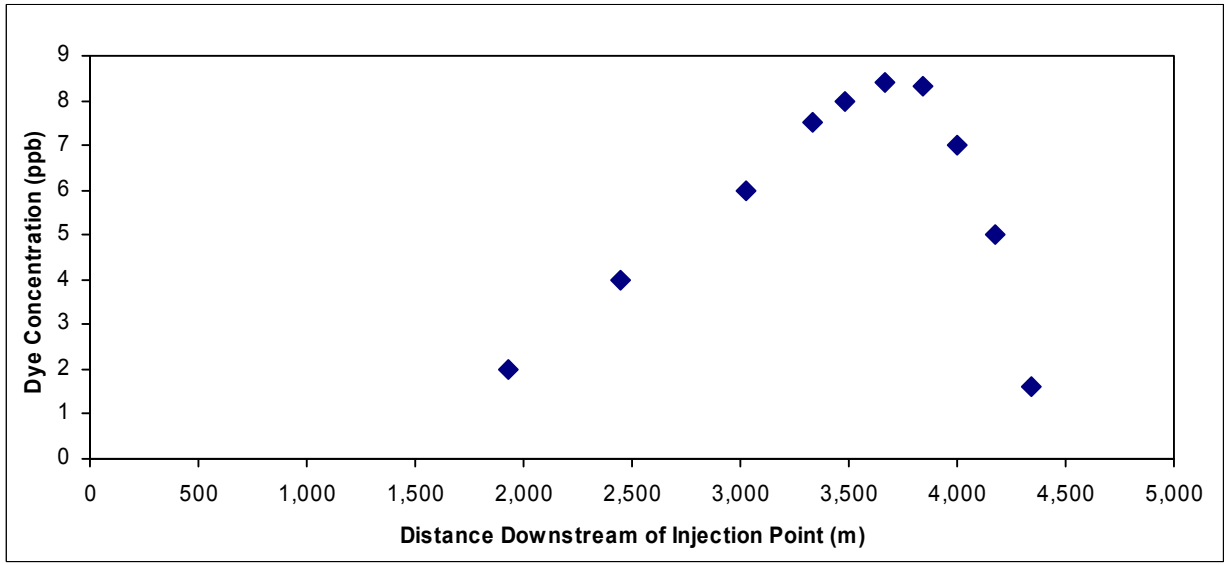

Figure A-17. Dye concentrations versus distance

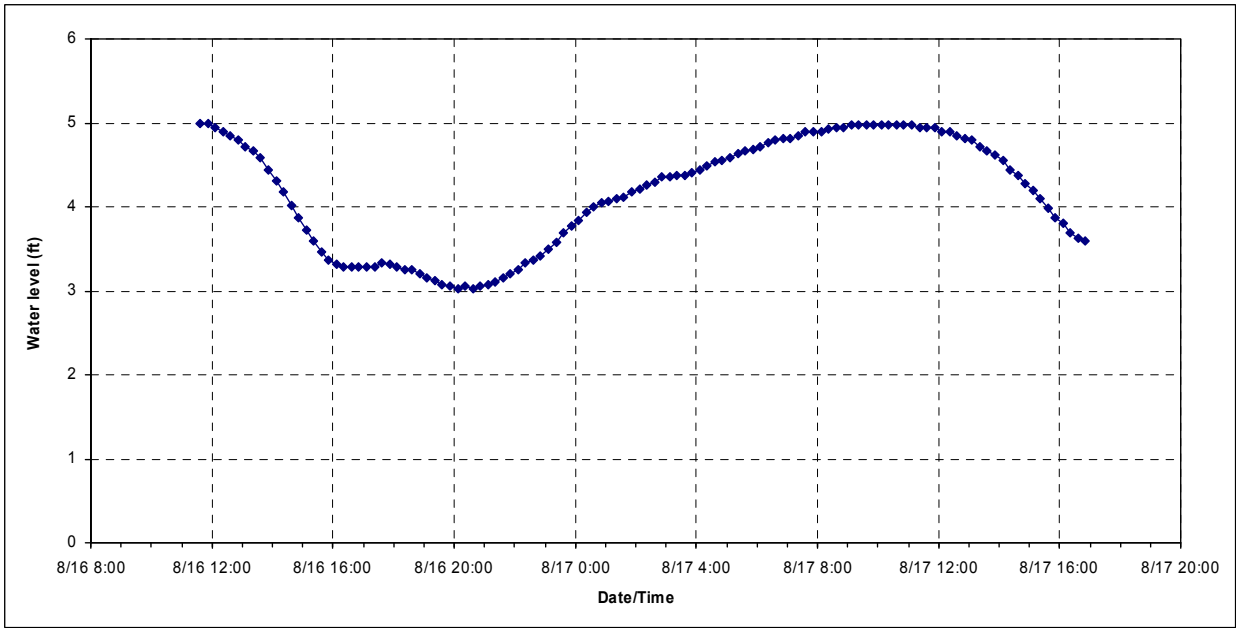

Figure A-18. Water levels measured at Middle River at I-10 Bridge (090207-B)

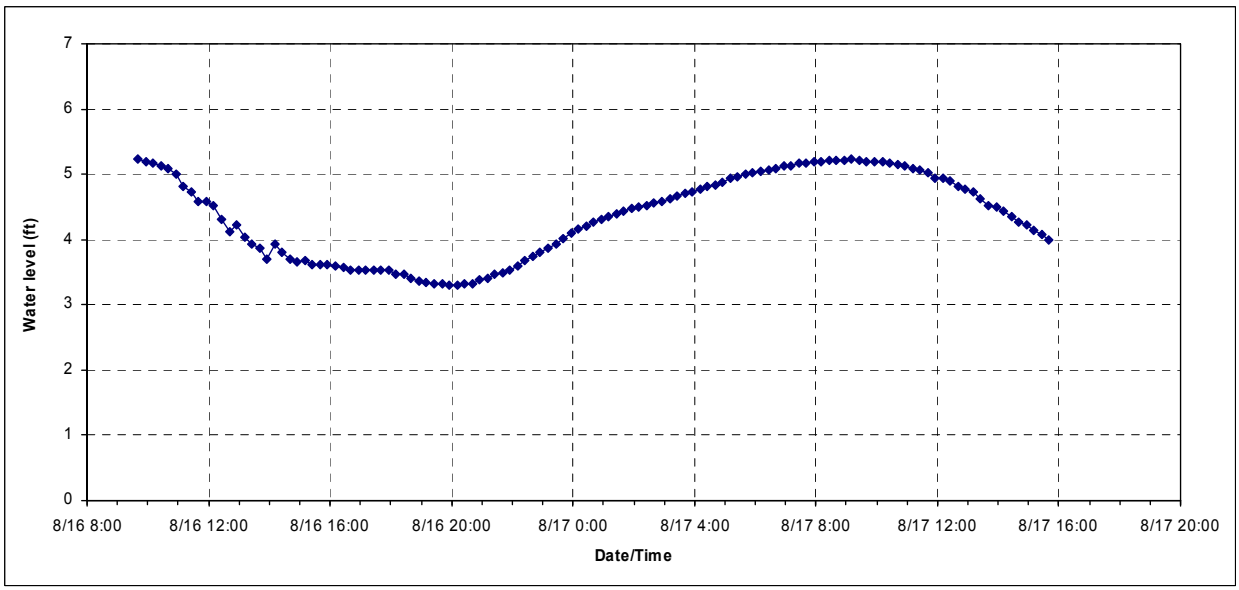

Figure A-19. Water levels measured in West Middle River at Hwy 90 Bridge (090207-M)

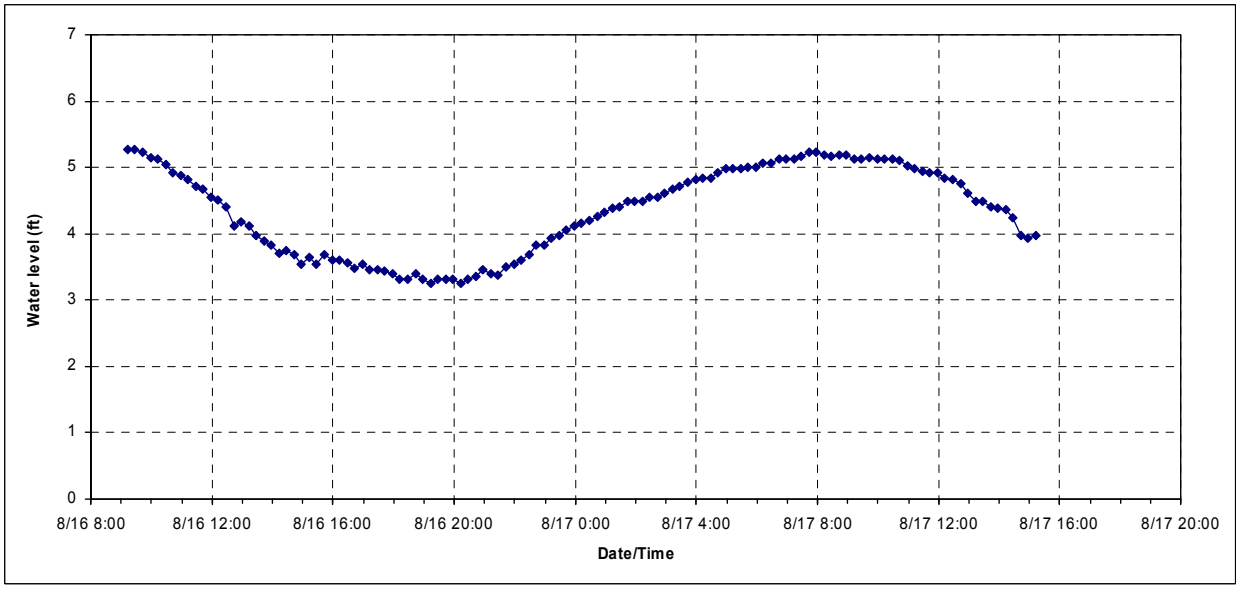

Figure A-20. Water levels at mouth of West Middle River near Little Lake (090207-Q)

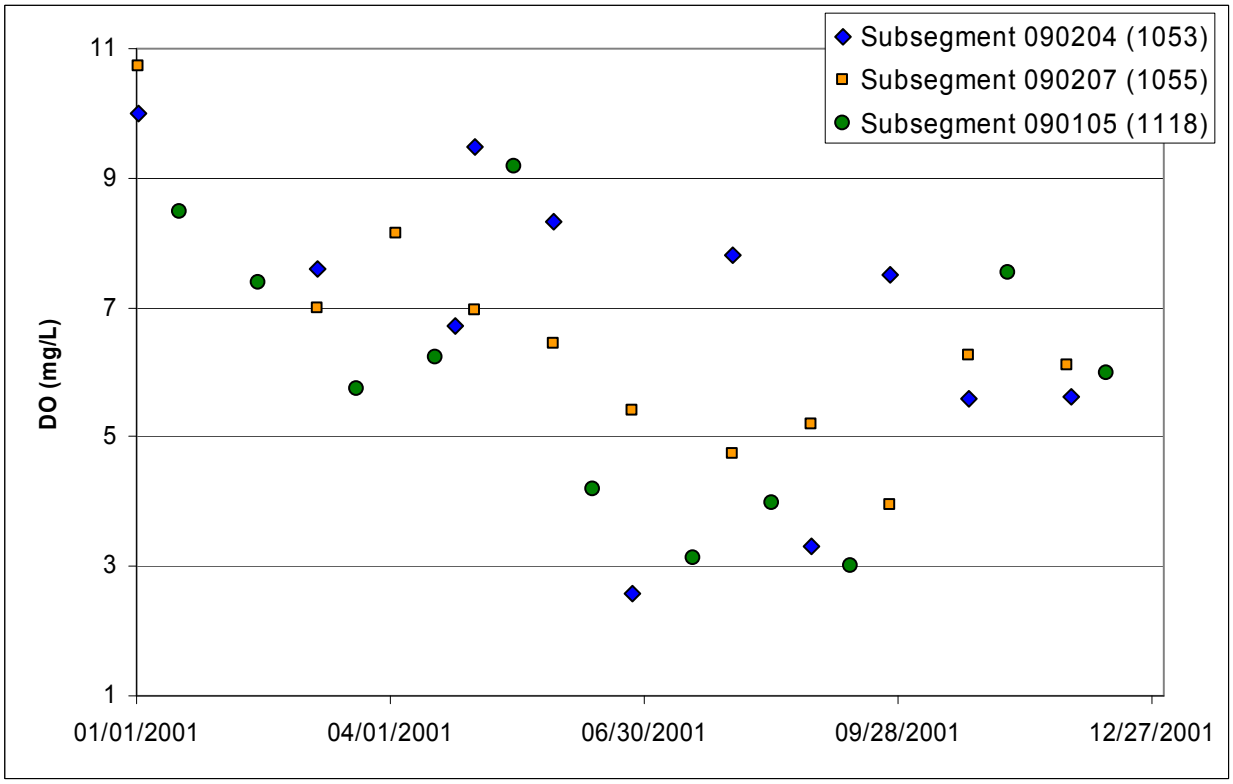

Figure A-21. Dissolved oxygen at LDEQ monitoring stations in 2001

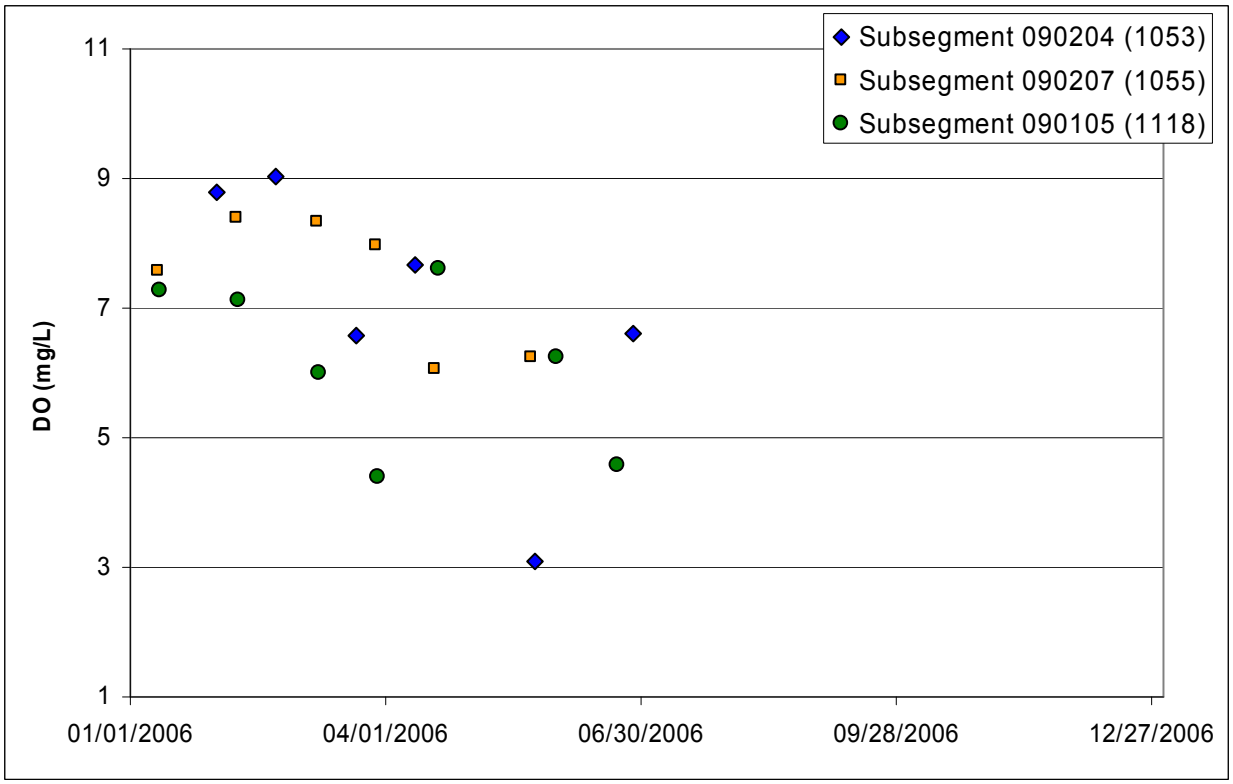

Figure A-22. Dissolved oxygen at LDEQ monitoring stations in 2006

APPENDIX B:
MODEL VECTOR DIAGRAMS

Figure B-1. Vector diagram for subsegment 090105..... 1
Figure B-2. Vector diagram for subsegment 090204..... 2
Figure B-3. Vector diagram for subsegment 090207..... 3

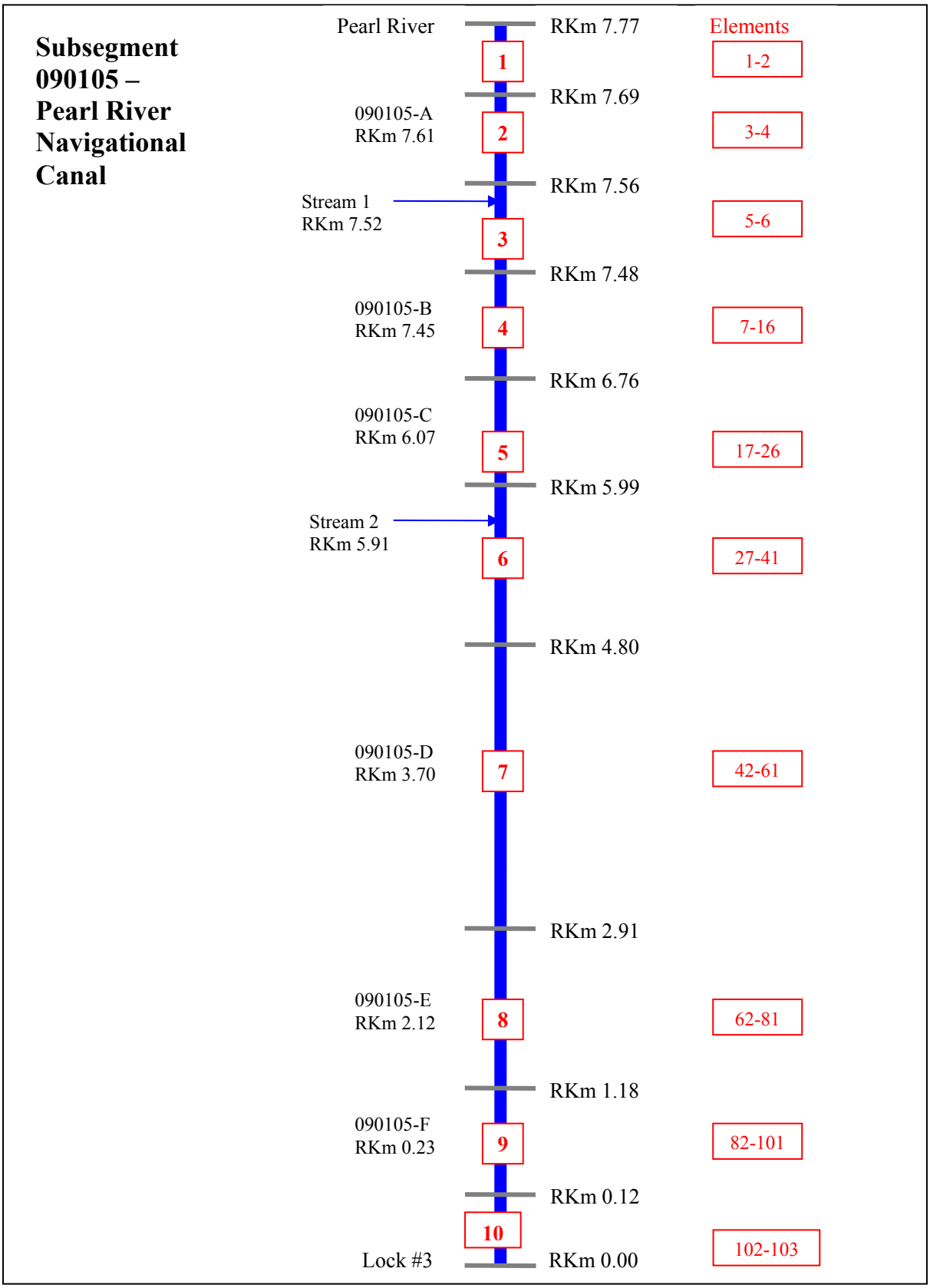

Figure B-1. Vector diagram for subsegment 090105

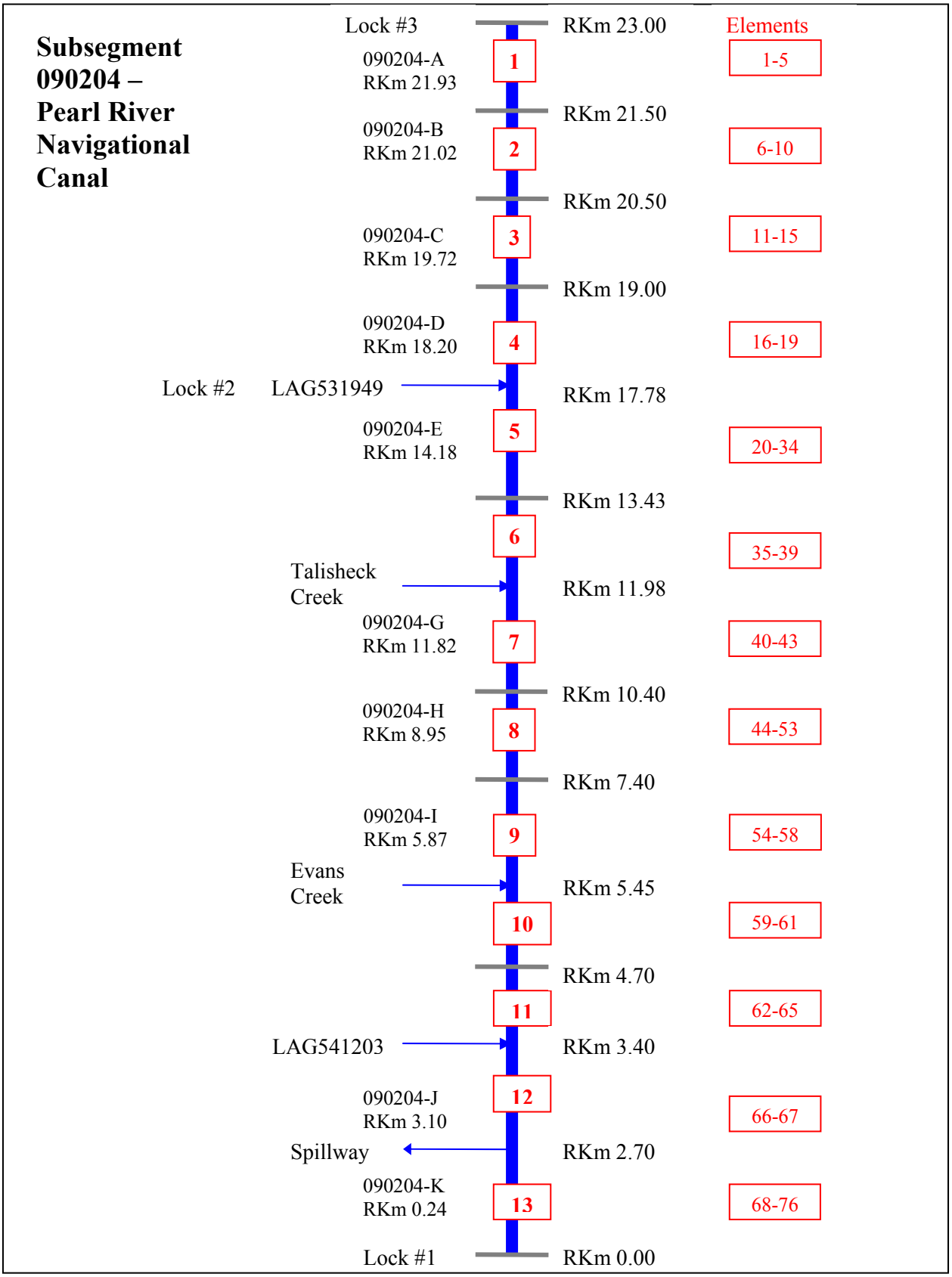

Figure B-2. Vector diagram for subsegment 090204

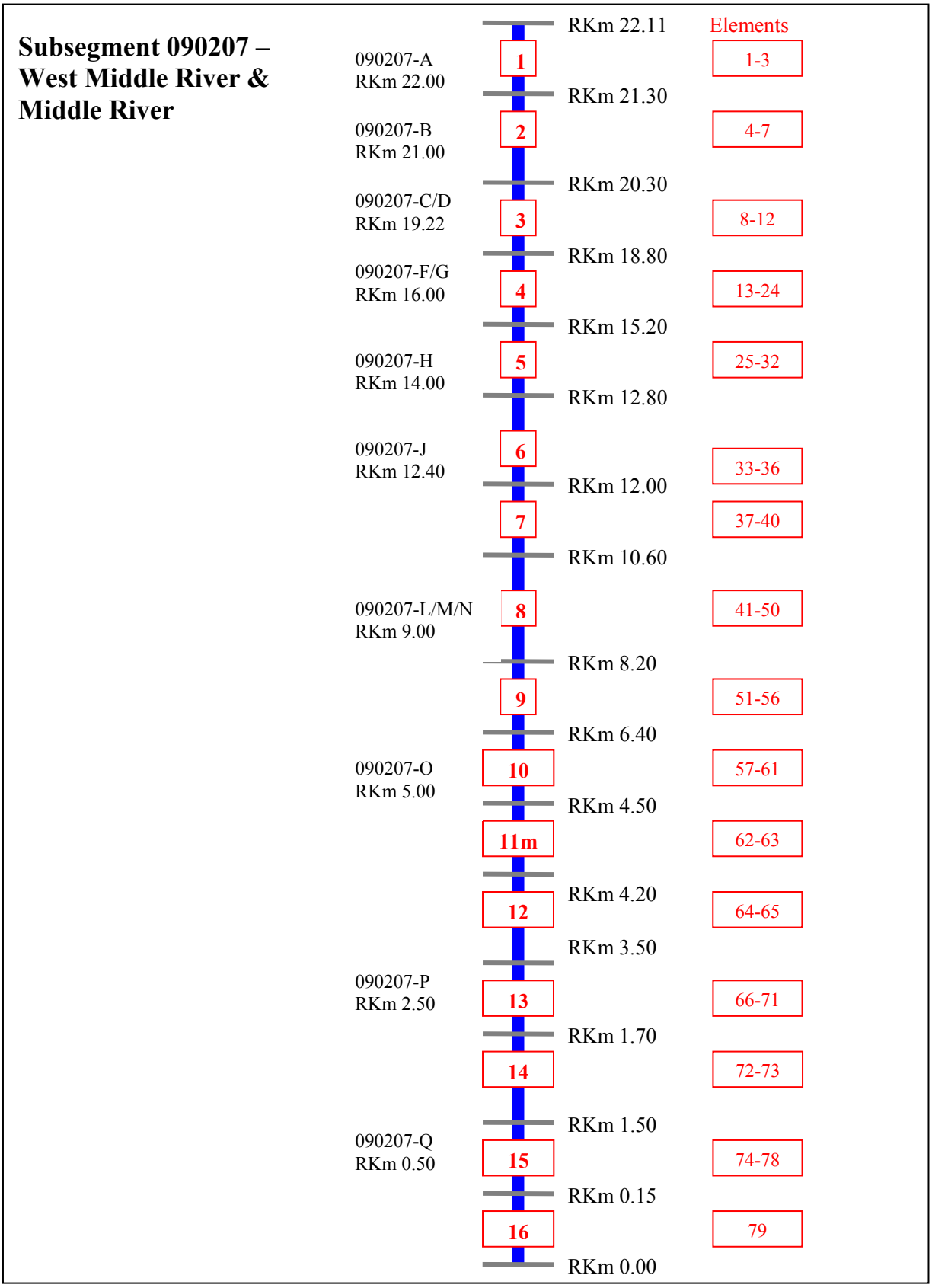

Figure B-3. Vector diagram for subsegment 090207

APPENDIX C:
MODEL OUTPUT FOR CALIBRATION

Calibration output file for subsegment 090105 1
Calibration output file for subsegment 090204 47
Calibration output file for subsegment 090207 91

Calibration output file for subsegment 090105

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

Input file is D:\Pearl\LAQUAL\S090105\Seg090105.txt
Output produced at 18:14 on 06/28/2007

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

CARD TYPE      CONTROL TITLES

TITLE01        Pearl River DO Modeling 090105
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01

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

CARD TYPE      MODEL OPTION

MODOPT     NO   TEMPERATURE
MODOPT     NO   SALINITY
MODOPT     NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT     NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT    YES   DISSOLVED OXYGEN
MODOPT    YES   BOD1
MODOPT     NO   BOD2
MODOPT    YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT     NO   PHOSPHORUS
MODOPT     NO   CHLOROPHYLL A
MODOPT     NO   MACROPHYTES
MODOPT     NO   COLIFORM
MODOPT     NO   NONCONSERVATIVE MATERIAL
ENDATA02

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

CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE

PROGRAM        MAXImum Iteration Limit          =     5000.00000
PROGRAM        HYDRaulic calculation method      =        2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE            =        1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE            =        1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                        =        0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE          =        3.00000 (inhibit all rates but SOD)
PROGRAM        K2 MAXIMUM                        =       25.00000 per day
PROGRAM        SOD                               =       10.00000 gm/sq m/day
```

ENDATA03

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

CARD TYPE RATE CODE THETA VALUE

ENDATA04

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA05

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA06

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA07

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

```
                                        BEGIN      END    ELEM   REACH    ELEMS  BEGIN   END
CARD TYPE  REACH  ID  NAME                          REACH     REACH  LENGTH  LENGTH   PER RCH  ELEM  ELEM
                                          km        km     km     km            NUM    NUM

REACH ID    1  PA  Pearl River to Above  A          7.77  TO   7.69  0.0400    0.08     2      1     2
REACH ID    2  IA  Include A                      7.69  TO   7.57  0.0625    0.12     2      3     4
REACH ID    3  I1  Include Stream 1                 7.57  TO   7.49  0.0400    0.08     2      5     6
REACH ID    4  IB  Include B                      7.49  TO   6.76  0.0725    0.72    10      7    16
REACH ID    5  IC  Include C                      6.76  TO   5.99  0.0770    0.77    10     17    26
REACH ID    6  I2  Include Stream 2                 5.99  TO   4.80  0.0790    1.18    15     27    41
REACH ID    7  ID  Include D                      4.80  TO   2.91  0.0948    1.89    20     42    61
REACH ID    8  IE  Include E                      2.91  TO   1.17  0.0868    1.74    20     62    81
REACH ID    9  IF  Include F                      1.17  TO   0.12  0.0530    1.06    20     82   101
REACH ID   10  TL  To Lock 3                       0.12  TO   0.00  0.0575    0.12     2    102   103
ENDATA08
```

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

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

HYDRO-1     1  PA      0.000      0.000     44.700      0.000      0.000      0.990   0.00010   0.025
HYDRO-1     2  IA      0.000      0.000     44.700      0.000      0.000      0.990   0.00010   0.025
```

```
HYDRO-1     3  I1     0.000     0.000     44.700     0.000     0.000     0.990    0.00010  0.025
HYDRO-1     4  IB     0.000     0.000     44.700     0.000     0.000     0.990    0.00010  0.025
HYDRO-1     5  IC     0.000     0.000     43.750     0.000     0.000     1.180    0.00010  0.025
HYDRO-1     6  I2     0.000     0.000     62.750     0.000     0.000     2.070    0.00010  0.025
HYDRO-1     7  ID     0.000     0.000     82.700     0.000     0.000     2.770    0.00010  0.025
HYDRO-1     8  IE     0.000     0.000     67.700     0.000     0.000     2.290    0.00010  0.025
HYDRO-1     9  IF     0.000     0.000     58.900     0.000     0.000     2.080    0.00010  0.025
HYDRO-1    10  TL     0.000     0.000     65.100     0.000     0.000     2.340    0.00010  0.025
ENDATA09

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

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

ENDATA10

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

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

INITIAL         1  PA     31.60     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         2  IA     31.60     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         3  I1     31.60     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         4  IB     32.10     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         5  IC     31.70     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         6  I2     31.70     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         7  ID     31.00     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         8  IE     31.40     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL         9  IF     31.50     0.00     5.00     0.10     0.04     0.05     1.00     0.00
INITIAL        10  TL     31.50     0.00     5.00     0.10     0.04     0.05     1.00     0.00
ENDATA11

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

COEF-1    1  PA   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    2  IA   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    3  I1   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    4  IB   3 OCONNER-DOBB    0.000    0.000    0.000    1.000    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    5  IC   3 OCONNER-DOBB    0.000    0.000    0.000    1.000    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    6  I2   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    7  ID   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    8  IE   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.065    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    9  IF   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.072    0.010    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   10  TL   3 OCONNER-DOBB    0.000    0.000    0.000    0.150    0.072    0.010    1.000    0.001    0.010    0.000    0.000    0.000
ENDATA12
```

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

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

COEF-2          1  PA      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          2  IA      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          3  I1      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          4  IB      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          5  IC      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          6  I2      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          7  ID      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          8  IE      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          9  IF      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2         10  TL      0.050    0.010    1.000     0.100    0.000    0.000    0.001
ENDATA13

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

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

COEF-3          1  PA      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          2  IA      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          3  I1      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          4  IB      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          5  IC      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          6  I2      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          7  ID      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          8  IE      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          9  IF      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         10  TL      3.00    0.000     0.00     0.00     0.00     0.00     0.00     0.00
ENDATA14

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

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

COEF-4          1  PA      3.000    0.000    0.000    0.000
COEF-4          2  IA      3.000    0.000    0.000    0.000
COEF-4          3  I1      3.000    0.000    0.000    0.000
COEF-4          4  IB      3.000    0.000    0.000    0.000
COEF-4          5  IC      3.000    0.000    0.000    0.000
COEF-4          6  I2      3.000    0.000    0.000    0.000
COEF-4          7  ID      3.000    0.000    0.000    0.000
COEF-4          8  IE      3.000    0.000    0.000    0.000
COEF-4          9  IF      3.000    0.000    0.000    0.000
COEF-4         10  TL      3.000    0.000    0.000    0.000
```

ENDATA15

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

CARD TYPE	REACH	ID	OUTFLOW	INFLOW	TEMP	SALIN	CM-I	CM-II	IN/DIST	OUT/DIST
INCR-1	1	PA	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	2	IA	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	3	I1	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	4	IB	0.00000	0.13000	30.00	0.00	0.00	0.00	0.17931	0.00000
INCR-1	5	IC	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	6	I2	0.00000	1.03000	30.00	0.00	0.00	0.00	0.86920	0.00000
INCR-1	7	ID	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	8	IE	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	9	IF	0.00000	0.50000	30.00	0.00	0.00	0.00	0.47170	0.00000
INCR-1	10	TL	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3-N	NO3-N	BOD#2
INCR-2	1	PA	2.00	0.00	0.00	0.00	0.00	0.00
INCR-2	2	IA	2.00	0.00	0.00	0.00	0.00	0.00
INCR-2	3	I1	2.00	0.00	0.00	0.00	0.00	0.00
INCR-2	4	IB	2.00	5.00	0.00	0.10	0.50	0.00
INCR-2	5	IC	2.00	0.00	0.00	0.00	0.00	0.00
INCR-2	6	I2	2.00	8.00	0.00	0.10	0.50	0.00
INCR-2	7	ID	2.00	0.00	0.00	0.00	0.00	0.00
INCR-2	8	IE	2.00	0.00	0.00	0.00	0.00	0.00
INCR-2	9	IF	2.00	8.00	0.00	0.10	0.50	0.00
INCR-2	10	TL	2.00	0.00	0.00	0.00	0.00	0.00

ENDATA17

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

CARD TYPE	REACH	ID	PHOS	CHL A	COLI	NCM
INCR-3	1	PA	0.00	0.00	0.00	0.00
INCR-3	2	IA	0.00	0.00	0.00	0.00
INCR-3	3	I1	0.00	0.00	0.00	0.00
INCR-3	4	IB	0.00	0.00	0.00	0.00
INCR-3	5	IC	0.00	0.00	0.00	0.00
INCR-3	6	I2	0.00	0.00	0.00	0.00
INCR-3	7	ID	0.00	0.00	0.00	0.00
INCR-3	8	IE	0.00	0.00	0.00	0.00
INCR-3	9	IF	0.00	0.00	0.00	0.00
INCR-3	10	TL	0.00	0.00	0.00	0.00

ENDATA18

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

CARD TYPE     REACH  ID      BOD#1    ORG-N     COLI      NCM       DO     BOD#2

ENDATA19

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

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

HDWTR-1         1            Headwater    0   0.10000    3.531   30.00     0.00     0.000     0.000
ENDATA20

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

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

HDWTR-2         1            Headwater       5.00     5.00     0.00     0.10     0.50     0.00
ENDATA21

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

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

HDWTR-3         1            Headwater       0.00     0.00     0.00     0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM    RIVER    NAME
         ELEMENT  ELEMENT    KILOM

ENDATA23

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

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

WSTLD-1       1      7.77  test              0.00000    0.00000    0.000   20.00     0.00     0.000     0.000
ENDATA24

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

```
WSTLD-2        1    test                  0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
ENDATA25

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

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

WSTLD-3        1    test                  0.00     0.00     0.00     0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                CONCENTRATION

ENDATA27

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

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

ENDATA28

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

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

SENSITIV       VELOCITY     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       DISPERSI     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       REAERATI     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD DECA     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD SETT     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BENTHAL      -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
ENDATA29

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

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

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

OVERLAY 1     s1.OVL                 :S090105
OVERLAY 2     s2.OVL                 :S090105
ENDATA31
```

```
.....NO ERRORS DETECTED IN INPUT DATA
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN   5 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
```

INTERMEDIATE REPORT
Dissolved Oxygen — Pearl River DO Modeling 090105
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	5.19	5.36								
IA	2	3	5.58	5.75								
I1	3	5	5.84	5.91								
IB	4	7	5.20	4.75	4.46	4.26	4.13	4.03	3.97	3.92	3.88	3.85
IC	5	17	3.92	3.97	4.02	4.07	4.12	4.16	4.19	4.23	4.26	4.29
I2	6	27	4.07	3.94	3.84	3.77	3.72	3.68	3.65	3.62	3.60	3.58
I2	6	37	3.56	3.55	3.54	3.53	3.52					
ID	7	42	3.60	3.68	3.76	3.84	3.92	3.99	4.06	4.14	4.21	4.27
ID	7	52	4.34	4.40	4.47	4.53	4.59	4.65	4.71	4.77	4.82	4.87
IE	8	62	4.92	4.97	5.02	5.06	5.11	5.15	5.19	5.23	5.27	5.31
IE	8	72	5.34	5.38	5.42	5.45	5.48	5.52	5.55	5.58	5.61	5.64
IF	9	82	5.58	5.53	5.48	5.43	5.39	5.34	5.30	5.26	5.23	5.19
IF	9	92	5.16	5.12	5.09	5.06	5.03	5.00	4.98	4.95	4.93	4.90
TL	10	102	4.92	4.94								

INTERMEDIATE REPORT
Effective BOD — Pearl River DO Modeling 090105
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	4.88	4.76								
IA	2	3	4.58	4.40								
I1	3	5	4.29	4.18								
IB	4	7	4.11	4.05	4.00	3.97	3.94	3.91	3.89	3.87	3.86	3.84
IC	5	17	3.75	3.66	3.58	3.49	3.41	3.33	3.25	3.17	3.09	3.03
I2	6	27	3.98	4.56	4.95	5.22	5.42	5.58	5.70	5.80	5.88	5.95
I2	6	37	6.01	6.06	6.11	6.15	6.18					
ID	7	42	6.04	5.91	5.78	5.65	5.53	5.41	5.29	5.17	5.06	4.95
ID	7	52	4.84	4.73	4.62	4.52	4.42	4.32	4.23	4.13	4.04	3.95
IE	8	62	3.90	3.84	3.79	3.73	3.68	3.63	3.58	3.53	3.48	3.43
IE	8	72	3.38	3.33	3.29	3.24	3.19	3.15	3.10	3.06	3.02	2.98
IF	9	82	3.05	3.12	3.19	3.26	3.32	3.38	3.44	3.49	3.54	3.59
IF	9	92	3.64	3.69	3.74	3.78	3.82	3.86	3.90	3.94	3.97	4.01
TL	10	102	3.98	3.83								

INTERMEDIATE REPORT
Biochemical Oxygen Demand — Pearl River DO Modeling 090105

mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	4.88	4.76								
IA	2	3	4.58	4.40								
I1	3	5	4.29	4.18								
IB	4	7	4.11	4.05	4.00	3.97	3.94	3.91	3.89	3.87	3.86	3.84
IC	5	17	3.75	3.66	3.58	3.49	3.41	3.33	3.25	3.17	3.09	3.03
I2	6	27	3.98	4.56	4.95	5.22	5.42	5.58	5.70	5.80	5.88	5.95
I2	6	37	6.01	6.06	6.11	6.15	6.18					
ID	7	42	6.04	5.91	5.78	5.65	5.53	5.41	5.29	5.17	5.06	4.95
ID	7	52	4.84	4.73	4.62	4.52	4.42	4.32	4.23	4.13	4.04	3.95
IE	8	62	3.90	3.84	3.79	3.73	3.68	3.63	3.58	3.53	3.48	3.43
IE	8	72	3.38	3.33	3.29	3.24	3.19	3.15	3.10	3.06	3.02	2.98
IF	9	82	3.05	3.12	3.19	3.26	3.32	3.38	3.44	3.49	3.54	3.59
IF	9	92	3.64	3.69	3.74	3.78	3.82	3.86	3.90	3.94	3.97	4.01
TL	10	102	3.98	3.83								

INTERMEDIATE REPORT
Organic Nitrogen Pearl River DO Modeling 090105
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.00	0.00								
IA	2	3	0.00	0.00								
I1	3	5	0.00	0.00								
IB	4	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IC	5	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2	6	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2	6	37	0.00	0.00	0.00	0.00	0.00					
ID	7	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ID	7	52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IF	9	82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IF	9	92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TL	10	102	0.00	0.00								

INTERMEDIATE REPORT
Ammonia Nitrogen Pearl River DO Modeling 090105
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.10	0.09								
IA	2	3	0.08	0.08								
I1	3	5	0.08	0.07								
IB	4	7	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06

IC	5	17	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.04
I2	6	27	0.05	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
I2	6	37	0.07	0.07	0.07	0.07	0.07					
ID	7	42	0.07	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05
ID	7	52	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
IE	8	62	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
IE	8	72	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
IF	9	82	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
IF	9	92	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04
TL	10	102	0.03	0.04								

INTERMEDIATE REPORT
Nitrate+Nitrite Nitrogen — Pearl River DO Modeling 090105
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.50	0.51								
IA	2	3	0.51	0.52								
I1	3	5	0.52	0.52								
IB	4	7	0.52	0.52	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
IC	5	17	0.53	0.53	0.53	0.53	0.53	0.54	0.54	0.54	0.54	0.54
I2	6	27	0.53	0.53	0.53	0.53	0.53	0.52	0.52	0.52	0.52	0.52
I2	6	37	0.52	0.52	0.52	0.52	0.52					
ID	7	42	0.52	0.52	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.54
ID	7	52	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
IE	8	62	0.54	0.54	0.54	0.55	0.55	0.55	0.55	0.55	0.55	0.55
IE	8	72	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
IF	9	82	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
IF	9	92	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
TL	10	102	0.54	0.52								

INTERMEDIATE REPORT
Total Nitrogen — Pearl River DO Modeling 090105
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.60	0.60								
IA	2	3	0.60	0.60								
I1	3	5	0.59	0.59								
IB	4	7	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
IC	5	17	0.59	0.59	0.59	0.59	0.59	0.59	0.58	0.58	0.58	0.58
I2	6	27	0.58	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
I2	6	37	0.59	0.59	0.59	0.59	0.59					
ID	7	42	0.59	0.59	0.59	0.59	0.59	0.59	0.58	0.58	0.58	0.58
ID	7	52	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.57	0.57
IE	8	62	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
IE	8	72	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.56	0.56	0.56
IF	9	82	0.56	0.56	0.56	0.57	0.57	0.57	0.57	0.57	0.57	0.57

IF	9	92	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
TL	10	102	0.57	0.56								

INTERMEDIATE REPORT
Chlorophyll a — Pearl River DO Modeling 090105
µg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	1.00	1.00								
IA	2	3	1.00	1.00								
I1	3	5	1.00	1.00								
IB	4	7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IC	5	17	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
I2	6	27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
I2	6	37	1.00	1.00	1.00	1.00	1.00					
ID	7	42	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ID	7	52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IE	8	62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IE	8	72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IF	9	82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IF	9	92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
TL	10	102	1.00	1.00								

INTERMEDIATE REPORT
Temperature — Pearl River DO Modeling 090105
deg C — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	31.60	31.60								
IA	2	3	31.60	31.60								
I1	3	5	31.85	32.10								
IB	4	7	32.06	32.02	31.98	31.94	31.90	31.86	31.82	31.78	31.74	31.70
IC	5	17	31.70	31.70	31.70	31.70	31.70	31.70	31.70	31.70	31.70	31.70
I2	6	27	31.65	31.61	31.56	31.51	31.47	31.42	31.37	31.33	31.28	31.23
I2	6	37	31.19	31.14	31.09	31.05	31.00					
ID	7	42	31.02	31.04	31.06	31.08	31.10	31.12	31.14	31.16	31.18	31.20
ID	7	52	31.22	31.24	31.26	31.28	31.30	31.32	31.34	31.36	31.38	31.40
IE	8	62	31.40	31.41	31.41	31.42	31.42	31.43	31.43	31.44	31.44	31.45
IE	8	72	31.45	31.46	31.47	31.47	31.48	31.48	31.49	31.49	31.50	31.50
IF	9	82	31.50	31.50	31.50	31.50	31.50	31.50	31.50	31.50	31.50	31.50
IF	9	92	31.50	31.50	31.50	31.50	31.50	31.50	31.50	31.50	31.50	31.50
TL	10	102	31.50	31.50								

INTERMEDIATE REPORT
Salinity — Pearl River DO Modeling 090105
ppt — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9

PA	1	1	0.00	0.00							
IA	2	3	0.00	0.00							
I1	3	5	0.00	0.00							
IB	4	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IC	5	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2	6	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2	6	37	0.00	0.00	0.00	0.00	0.00					
ID	7	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ID	7	52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IF	9	82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IF	9	92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TL	10	102	0.00	0.00								

INTERMEDIATE REPORT
River Distance — Pearl River DO Modeling 090105
km — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	8.	8.								
IA	2	3	8.	8.								
I1	3	5	8.	7.								
IB	4	7	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.
IC	5	17	7.	7.	7.	6.	6.	6.	6.	6.	6.	6.
I2	6	27	6.	6.	6.	6.	6.	6.	5.	5.	5.	5.
I2	6	37	5.	5.	5.	5.	5.					
ID	7	42	5.	5.	5.	4.	4.	4.	4.	4.	4.	4.
ID	7	52	4.	4.	4.	3.	3.	3.	3.	3.	3.	3.
IE	8	62	3.	3.	3.	3.	2.	2.	2.	2.	2.	2.
IE	8	72	2.	2.	2.	2.	2.	2.	1.	1.	1.	1.
IF	9	82	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
IF	9	92	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.
TL	10	102	0.	0.								

INTERMEDIATE REPORT
Flow — Pearl River DO Modeling 090105
m^3/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.1	0.1								
IA	2	3	0.1	0.1								
I1	3	5	0.1	0.1								
IB	4	7	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IC	5	17	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
I2	6	27	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.9
I2	6	37	1.0	1.1	1.1	1.2	1.3					

ID	7	42	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
ID	7	52	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
IE	8	62	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
IE	8	72	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
IF	9	82	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5
IF	9	92	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.8
TL	10	102	1.8	1.8								

INTERMEDIATE REPORT
Dispersion Pearl River DO Modeling 090105
m^2/s COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.0	0.0								
IA	2	3	0.0	0.0								
I1	3	5	0.0	0.0								
IB	4	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IC	5	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	37	0.0	0.0	0.0	0.0	0.0					
ID	7	42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ID	7	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TL	10	102	0.0	0.0								

INTERMEDIATE REPORT
Advective Velocity Pearl River DO Modeling 090105
m/s COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.0	0.0								
IA	2	3	0.0	0.0								
I1	3	5	0.0	0.0								
IB	4	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IC	5	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	37	0.0	0.0	0.0	0.0	0.0					
ID	7	42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ID	7	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TL	10	102	0.0	0.0								

INTERMEDIATE REPORT
Depth
m

Pearl River DO Modeling 090105
COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	1.0	1.0								
IA	2	3	1.0	1.0								
I1	3	5	1.0	1.0								
IB	4	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
IC	5	17	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
I2	6	27	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
I2	6	37	2.1	2.1	2.1	2.1	2.1					
ID	7	42	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
ID	7	52	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
IE	8	62	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
IE	8	72	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
IF	9	82	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
IF	9	92	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
TL	10	102	2.3	2.3								

INTERMEDIATE REPORT
Width
m

Pearl River DO Modeling 090105
COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	44.7	44.7								
IA	2	3	44.7	44.7								
I1	3	5	44.7	44.7								
IB	4	7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
IC	5	17	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8
I2	6	27	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8
I2	6	37	62.8	62.8	62.8	62.8	62.8					
ID	7	42	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
ID	7	52	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
IE	8	62	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
IE	8	72	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
IF	9	82	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
IF	9	92	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
TL	10	102	65.1	65.1								

INTERMEDIATE REPORT
Cross-Sectional Area
m^2

Pearl River DO Modeling 090105
COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	44.3	44.3								
IA	2	3	44.3	44.3								

I1	3	5	44.3	44.3								
IB	4	7	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
IC	5	17	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
I2	6	27	129.9	129.9	129.9	129.9	129.9	129.9	129.9	129.9	129.9	129.9
I2	6	37	129.9	129.9	129.9	129.9	129.9					
ID	7	42	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1
ID	7	52	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1
IE	8	62	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0
IE	8	72	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0
IF	9	82	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5
IF	9	92	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5
TL	10	102	152.3	152.3								

INTERMEDIATE REPORT
Reaeration Rate — Pearl River DO Modeling 090105
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.874	0.874								
IA	2	3	0.874	0.874								
I1	3	5	0.878	0.882								
IB	4	7	0.881	0.880	0.880	0.879	0.879	0.878	0.877	0.877	0.876	0.876
IC	5	17	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
I2	6	27	0.418	0.418	0.418	0.417	0.417	0.417	0.416	0.416	0.416	0.415
I2	6	37	0.415	0.415	0.414	0.414	0.414					
ID	7	42	0.309	0.309	0.310	0.310	0.310	0.310	0.310	0.310	0.310	0.310
ID	7	52	0.310	0.311	0.311	0.311	0.311	0.311	0.311	0.311	0.311	0.311
IE	8	62	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377
IE	8	72	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377
IF	9	82	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415
IF	9	92	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415
TL	10	102	0.369	0.369								

INTERMEDIATE REPORT
BOD Decay Rate — Pearl River DO Modeling 090105
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.11	0.11								
IA	2	3	0.11	0.11								
I1	3	5	0.11	0.11								
IB	4	7	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IC	5	17	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I2	6	27	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I2	6	37	0.11	0.11	0.11	0.11	0.11					
ID	7	42	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
ID	7	52	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IE	8	62	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

IE	8	72	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IF	9	82	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
IF	9	92	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
TL	10	102	0.12	0.12								

INTERMEDIATE REPORT
BOD Settling Rate — Pearl River DO Modeling 090105
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.01	0.01								
IA	2	3	0.01	0.01								
I1	3	5	0.01	0.01								
IB	4	7	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IC	5	17	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
I2	6	27	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
I2	6	37	0.01	0.01	0.01	0.01	0.01					
ID	7	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ID	7	52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	62	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IE	8	72	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IF	9	82	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IF	9	92	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TL	10	102	0.01	0.01								

INTERMEDIATE REPORT
Ammonia Decay Rate — Pearl River DO Modeling 090105
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.23	0.23								
IA	2	3	0.24	0.24								
I1	3	5	0.24	0.25								
IB	4	7	0.24	0.24	0.23	0.23	0.23	0.22	0.22	0.22	0.22	0.22
IC	5	17	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.23
I2	6	27	0.22	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.21
I2	6	37	0.21	0.21	0.20	0.20	0.20					
ID	7	42	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.22
ID	7	52	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.23
IE	8	62	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
IE	8	72	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
IF	9	82	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
IF	9	92	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
TL	10	102	0.23	0.23								

INTERMEDIATE REPORT
Sediment Oxygen Demand — Pearl River DO Modeling 090105
$g/m^2/d$ — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.38	0.37								
IA	2	3	0.37	0.37								
I1	3	5	0.37	0.38								
IB	4	7	2.19	2.19	2.18	2.17	2.17	2.16	2.16	2.15	2.15	2.14
IC	5	17	2.14	2.14	2.14	2.14	2.13	2.13	2.13	2.13	2.13	2.13
I2	6	27	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
I2	6	37	0.38	0.38	0.38	0.38	0.38					
ID	7	42	0.38	0.38	0.38	0.37	0.37	0.37	0.37	0.37	0.37	0.37
ID	7	52	0.37	0.37	0.37	0.36	0.36	0.36	0.36	0.36	0.36	0.36
IE	8	62	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.35	0.35	0.35
IE	8	72	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
IF	9	82	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.36	0.36	0.36
IF	9	92	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
TL	10	102	0.36	0.36								

CONDENSED CAPSULE SUMMARY FOR Headwater

DIST	FLOW	TEMP	SALN	DO	REAER EBOD1	BOD1 EBOD2	BOD2 ORGN	NH3	CHLA	RATE	DECA	SETT	DECA	SETT	DECA	SOD
km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	µg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
HDWTR	0.10000	30.00	0.00	5.00	5.00	0.00	0.00	0.10	1.00							
7.73	0.10000	31.60	0.00	5.19	4.88	0.00	0.00	0.10	1.00	0.87	0.11	0.01	0.01	0.00	0.23	0.38
7.69	0.10000	31.60	0.00	5.36	4.76	0.00	0.00	0.09	1.00	0.87	0.11	0.01	0.01	0.00	0.23	0.37
7.63	0.10000	31.60	0.00	5.58	4.58	0.00	0.00	0.08	1.00	0.87	0.11	0.01	0.01	0.00	0.24	0.37
7.57	0.10000	31.60	0.00	5.75	4.40	0.00	0.00	0.08	1.00	0.87	0.11	0.01	0.01	0.00	0.24	0.37
7.53	0.10000	31.85	0.00	5.84	4.29	0.00	0.00	0.08	1.00	0.88	0.11	0.01	0.01	0.00	0.24	0.37
7.49	0.10000	32.10	0.00	5.91	4.18	0.00	0.00	0.07	1.00	0.88	0.11	0.01	0.01	0.00	0.25	0.38
7.41	0.11300	32.06	0.00	5.20	4.11	0.00	0.00	0.07	1.00	0.88	0.11	0.01	0.01	0.00	0.24	2.19
7.34	0.12600	32.02	0.00	4.75	4.05	0.00	0.00	0.07	1.00	0.88	0.11	0.01	0.01	0.00	0.24	2.19
7.27	0.13900	31.98	0.00	4.46	4.00	0.00	0.00	0.07	1.00	0.88	0.11	0.01	0.01	0.00	0.23	2.18
7.19	0.15200	31.94	0.00	4.26	3.97	0.00	0.00	0.07	1.00	0.88	0.11	0.01	0.01	0.00	0.23	2.17
7.12	0.16500	31.90	0.00	4.13	3.94	0.00	0.00	0.07	1.00	0.88	0.11	0.01	0.01	0.00	0.23	2.17
7.05	0.17800	31.86	0.00	4.03	3.91	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.22	2.16
6.98	0.19100	31.82	0.00	3.97	3.89	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.22	2.16
6.90	0.20400	31.78	0.00	3.92	3.87	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.22	2.15
6.83	0.21700	31.74	0.00	3.88	3.86	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.22	2.15
6.76	0.23000	31.70	0.00	3.85	3.84	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.22	2.14
6.68	0.23000	31.70	0.00	3.92	3.75	0.00	0.00	0.06	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.14
6.61	0.23000	31.70	0.00	3.97	3.66	0.00	0.00	0.06	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.14
6.53	0.23000	31.70	0.00	4.02	3.58	0.00	0.00	0.06	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.14
6.45	0.23000	31.70	0.00	4.07	3.49	0.00	0.00	0.05	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.14
6.37	0.23000	31.70	0.00	4.12	3.41	0.00	0.00	0.05	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.13
6.30	0.23000	31.70	0.00	4.16	3.33	0.00	0.00	0.05	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.13
6.22	0.23000	31.70	0.00	4.19	3.25	0.00	0.00	0.05	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.13
6.14	0.23000	31.70	0.00	4.23	3.17	0.00	0.00	0.04	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.13
6.07	0.23000	31.70	0.00	4.26	3.09	0.00	0.00	0.04	1.00	0.73	0.11	0.01	0.01	0.00	0.22	2.13

5.99	0.23000	31.70	0.00	4.29	3.03	0.00	0.00	0.04	1.00	0.73	0.11	0.01	0.01	0.00	0.23	2.13
5.91	0.29867	31.65	0.00	4.07	3.98	0.00	0.00	0.05	1.00	0.42	0.11	0.01	0.01	0.00	0.22	0.37
5.83	0.36733	31.61	0.00	3.94	4.56	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.22	0.37
5.75	0.43600	31.56	0.00	3.84	4.95	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.22	0.38
5.67	0.50467	31.51	0.00	3.77	5.22	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.22	0.38
5.59	0.57333	31.47	0.00	3.72	5.42	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.21	0.38
5.52	0.64200	31.42	0.00	3.68	5.58	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.21	0.38
5.44	0.71067	31.37	0.00	3.65	5.70	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.21	0.38
5.36	0.77933	31.33	0.00	3.62	5.80	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.21	0.38
5.28	0.84800	31.28	0.00	3.60	5.88	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.21	0.38
5.20	0.91667	31.23	0.00	3.58	5.95	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.21	0.38
5.12	0.98533	31.19	0.00	3.56	6.01	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.21	0.38
5.04	1.05400	31.14	0.00	3.55	6.06	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.21	0.38
4.96	1.12267	31.09	0.00	3.54	6.11	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.20	0.38
4.88	1.19133	31.05	0.00	3.53	6.15	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.20	0.38
4.80	1.26000	31.00	0.00	3.52	6.18	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.20	0.38
4.71	1.26000	31.02	0.00	3.60	6.04	0.00	0.00	0.07	1.00	0.31	0.11	0.00	0.01	0.00	0.20	0.38
4.62	1.26000	31.04	0.00	3.68	5.91	0.00	0.00	0.06	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.38
4.52	1.26000	31.06	0.00	3.76	5.78	0.00	0.00	0.06	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.38
4.43	1.26000	31.08	0.00	3.84	5.65	0.00	0.00	0.06	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.37
4.33	1.26000	31.10	0.00	3.92	5.53	0.00	0.00	0.06	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.37
4.24	1.26000	31.12	0.00	3.99	5.41	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.37
4.14	1.26000	31.14	0.00	4.06	5.29	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.37
4.05	1.26000	31.16	0.00	4.14	5.17	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.37
3.95	1.26000	31.18	0.00	4.21	5.06	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.21	0.37
3.86	1.26000	31.20	0.00	4.27	4.95	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.37
3.76	1.26000	31.22	0.00	4.34	4.84	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.37
3.67	1.26000	31.24	0.00	4.40	4.73	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.37
3.57	1.26000	31.26	0.00	4.47	4.62	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.37
3.48	1.26000	31.28	0.00	4.53	4.52	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.36
3.38	1.26000	31.30	0.00	4.59	4.42	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.36
3.29	1.26000	31.32	0.00	4.65	4.32	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.36
3.19	1.26000	31.34	0.00	4.71	4.23	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.36
3.10	1.26000	31.36	0.00	4.77	4.13	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.36
3.00	1.26000	31.38	0.00	4.82	4.04	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.36
2.91	1.26000	31.40	0.00	4.87	3.95	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.36
2.82	1.26000	31.40	0.00	4.92	3.90	0.00	0.00	0.03	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.36
2.74	1.26000	31.41	0.00	4.97	3.84	0.00	0.00	0.03	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.36
2.65	1.26000	31.41	0.00	5.02	3.79	0.00	0.00	0.03	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.36
2.56	1.26000	31.42	0.00	5.06	3.73	0.00	0.00	0.03	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.36
2.48	1.26000	31.42	0.00	5.11	3.68	0.00	0.00	0.03	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.36
2.39	1.26000	31.43	0.00	5.15	3.63	0.00	0.00	0.03	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.36
2.30	1.26000	31.43	0.00	5.19	3.58	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.36
2.22	1.26000	31.44	0.00	5.23	3.53	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
2.13	1.26000	31.44	0.00	5.27	3.48	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
2.04	1.26000	31.45	0.00	5.31	3.43	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.96	1.26000	31.45	0.00	5.34	3.38	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.87	1.26000	31.46	0.00	5.38	3.33	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.78	1.26000	31.47	0.00	5.42	3.29	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.70	1.26000	31.47	0.00	5.45	3.24	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35

1.61	1.26000	31.48	0.00	5.48	3.19	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.52	1.26000	31.48	0.00	5.52	3.15	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.44	1.26000	31.49	0.00	5.55	3.10	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.35	1.26000	31.49	0.00	5.58	3.06	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.26	1.26000	31.50	0.00	5.61	3.02	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.17	1.26000	31.50	0.00	5.64	2.98	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.35
1.12	1.28500	31.50	0.00	5.58	3.05	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.35
1.07	1.31000	31.50	0.00	5.53	3.12	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.35
1.02	1.33500	31.50	0.00	5.48	3.19	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.35
0.96	1.36000	31.50	0.00	5.43	3.26	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.35
0.91	1.38500	31.50	0.00	5.39	3.32	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.35
0.86	1.41000	31.50	0.00	5.34	3.38	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.35
0.80	1.43500	31.50	0.00	5.30	3.44	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.35
0.75	1.46000	31.50	0.00	5.26	3.49	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.70	1.48500	31.50	0.00	5.23	3.54	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.65	1.51000	31.50	0.00	5.19	3.59	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.59	1.53500	31.50	0.00	5.16	3.64	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.54	1.56000	31.50	0.00	5.12	3.69	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.49	1.58500	31.50	0.00	5.09	3.74	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.43	1.61000	31.50	0.00	5.06	3.78	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.38	1.63500	31.50	0.00	5.03	3.82	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.33	1.66000	31.50	0.00	5.00	3.86	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.27	1.68500	31.50	0.00	4.98	3.90	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.22	1.71000	31.50	0.00	4.95	3.94	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.17	1.73500	31.50	0.00	4.93	3.97	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.12	1.76000	31.50	0.00	4.90	4.01	0.00	0.00	0.04	1.00	0.42	0.12	0.01	0.01	0.00	0.23	0.36
0.06	1.76000	31.50	0.00	4.92	3.98	0.00	0.00	0.03	1.00	0.37	0.12	0.01	0.01	0.00	0.23	0.36
0.00	1.76000	31.50	0.00	4.94	3.83	0.00	0.00	0.04	1.00	0.37	0.12	0.01	0.01	0.00	0.23	0.36

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	DISP	DEPTH	WIDTH	ADVEC VELO	MEAN VELO	DO SAT	REAER RATE	BOD1 DECA	BOD1 SETT	BOD2 DECA	BOD2 SETT	NH3 DECA	SOD
		km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	m²/s	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
	HDWTR		0.100	30.0	0.0	5.0	5.0	0.0	0.0	0.1	1.0													
	WASTELOAD # 001 (test) ENTERS HERE WITHOUT ANY FLOW																							
1	PA 1	7.73	0.100	31.6	0.0	5.2	4.9	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.4	0.874	0.11	0.01	0.01	0.00	0.23	0.38
2	PA 1	7.69	0.100	31.6	0.0	5.4	4.8	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.4	0.874	0.11	0.01	0.01	0.00	0.23	0.37
3	IA 2	7.63	0.100	31.6	0.0	5.6	4.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.4	0.874	0.11	0.01	0.01	0.00	0.24	0.37
4	IA 2	7.57	0.100	31.6	0.0	5.8	4.4	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.4	0.874	0.11	0.01	0.01	0.00	0.24	0.37
5	I1 3	7.53	0.100	31.8	0.0	5.8	4.3	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.3	0.878	0.11	0.01	0.01	0.00	0.24	0.37
6	I1 3	7.49	0.100	32.1	0.0	5.9	4.2	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.3	0.882	0.11	0.01	0.01	0.00	0.25	0.38
7	IB 4	7.41	0.113	32.1	0.0	5.2	4.1	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.003	0.003	7.3	0.881	0.11	0.01	0.01	0.00	0.24	2.19
8	IB 4	7.34	0.126	32.0	0.0	4.8	4.0	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.003	0.003	7.3	0.880	0.11	0.01	0.01	0.00	0.24	2.19
9	IB 4	7.27	0.139	32.0	0.0	4.5	4.0	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.003	0.003	7.3	0.880	0.11	0.01	0.01	0.00	0.23	2.18
10	IB 4	7.19	0.152	31.9	0.0	4.3	4.0	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.003	0.003	7.3	0.879	0.11	0.01	0.01	0.00	0.23	2.17
11	IB 4	7.12	0.165	31.9	0.0	4.1	3.9	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.004	0.004	7.3	0.879	0.11	0.01	0.01	0.00	0.23	2.17
12	IB 4	7.05	0.178	31.9	0.0	4.0	3.9	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.004	0.004	7.3	0.878	0.11	0.01	0.01	0.00	0.22	2.16
13	IB 4	6.98	0.191	31.8	0.0	4.0	3.9	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.004	0.004	7.3	0.877	0.11	0.01	0.01	0.00	0.22	2.16
14	IB 4	6.90	0.204	31.8	0.0	3.9	3.9	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.005	0.005	7.3	0.877	0.11	0.01	0.01	0.00	0.22	2.15

15	IB	4	6.83	0.217	31.7	0.0	3.9	3.9	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.005	0.005	7.3	0.876	0.11	0.01	0.01	0.00	0.22	2.15
16	IB	4	6.76	0.230	31.7	0.0	3.9	3.8	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.005	0.005	7.3	0.876	0.11	0.01	0.01	0.00	0.22	2.14
17	IC	5	6.68	0.230	31.7	0.0	3.9	3.8	0.0	0.0	0.1	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.14
18	IC	5	6.61	0.230	31.7	0.0	4.0	3.7	0.0	0.0	0.1	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.14
19	IC	5	6.53	0.230	31.7	0.0	4.0	3.6	0.0	0.0	0.1	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.14
20	IC	5	6.45	0.230	31.7	0.0	4.1	3.5	0.0	0.0	0.1	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.14
21	IC	5	6.37	0.230	31.7	0.0	4.1	3.4	0.0	0.0	0.1	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.13
22	IC	5	6.30	0.230	31.7	0.0	4.2	3.3	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.13
23	IC	5	6.22	0.230	31.7	0.0	4.2	3.2	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.13
24	IC	5	6.14	0.230	31.7	0.0	4.2	3.2	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.13
25	IC	5	6.07	0.230	31.7	0.0	4.3	3.1	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.22	2.13
26	IC	5	5.99	0.230	31.7	0.0	4.3	3.0	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.004	0.004	7.3	0.735	0.11	0.01	0.01	0.00	0.23	2.13
27	I2	6	5.91	0.299	31.7	0.0	4.1	4.0	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.002	0.002	7.3	0.418	0.11	0.01	0.01	0.00	0.22	0.37
28	I2	6	5.83	0.367	31.6	0.0	3.9	4.6	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.003	0.003	7.4	0.418	0.11	0.01	0.01	0.00	0.22	0.37
29	I2	6	5.75	0.436	31.6	0.0	3.8	4.9	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.003	0.003	7.4	0.418	0.11	0.01	0.01	0.00	0.22	0.38
30	I2	6	5.67	0.505	31.5	0.0	3.8	5.2	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.004	0.004	7.4	0.417	0.11	0.01	0.01	0.00	0.22	0.38
31	I2	6	5.59	0.573	31.5	0.0	3.7	5.4	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.004	0.004	7.4	0.417	0.11	0.01	0.01	0.00	0.21	0.38
32	I2	6	5.52	0.642	31.4	0.0	3.7	5.6	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.005	0.005	7.4	0.417	0.11	0.01	0.01	0.00	0.21	0.38
33	I2	6	5.44	0.711	31.4	0.0	3.6	5.7	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.005	0.005	7.4	0.416	0.11	0.01	0.01	0.00	0.21	0.38
34	I2	6	5.36	0.779	31.3	0.0	3.6	5.8	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.006	0.006	7.4	0.416	0.11	0.01	0.01	0.00	0.21	0.38
35	I2	6	5.28	0.848	31.3	0.0	3.6	5.9	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.007	0.007	7.4	0.416	0.11	0.01	0.01	0.00	0.21	0.38
36	I2	6	5.20	0.917	31.2	0.0	3.6	6.0	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.007	0.007	7.4	0.415	0.11	0.01	0.01	0.00	0.21	0.38
37	I2	6	5.12	0.985	31.2	0.0	3.6	6.0	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.008	0.008	7.4	0.415	0.11	0.01	0.01	0.00	0.21	0.38
38	I2	6	5.04	1.054	31.1	0.0	3.5	6.1	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.008	0.008	7.4	0.415	0.11	0.01	0.01	0.00	0.21	0.38
39	I2	6	4.96	1.123	31.1	0.0	3.5	6.1	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.009	0.009	7.4	0.414	0.11	0.01	0.01	0.00	0.20	0.38
40	I2	6	4.88	1.191	31.0	0.0	3.5	6.1	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.009	0.009	7.4	0.414	0.11	0.01	0.01	0.00	0.20	0.38
41	I2	6	4.80	1.260	31.0	0.0	3.5	6.2	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.010	0.010	7.4	0.414	0.11	0.01	0.01	0.00	0.20	0.38
42	ID	7	4.71	1.260	31.0	0.0	3.6	6.0	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.309	0.11	0.00	0.01	0.00	0.20	0.38
43	ID	7	4.62	1.260	31.0	0.0	3.7	5.9	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.309	0.11	0.00	0.01	0.00	0.21	0.38
44	ID	7	4.52	1.260	31.1	0.0	3.8	5.8	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.21	0.38
45	ID	7	4.43	1.260	31.1	0.0	3.8	5.7	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.21	0.37
46	ID	7	4.33	1.260	31.1	0.0	3.9	5.5	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.21	0.37
47	ID	7	4.24	1.260	31.1	0.0	4.0	5.4	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.21	0.37
48	ID	7	4.14	1.260	31.1	0.0	4.1	5.3	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.21	0.37
49	ID	7	4.05	1.260	31.2	0.0	4.1	5.2	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.21	0.37
50	ID	7	3.95	1.260	31.2	0.0	4.2	5.1	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.21	0.37
51	ID	7	3.86	1.260	31.2	0.0	4.3	4.9	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.22	0.37
52	ID	7	3.76	1.260	31.2	0.0	4.3	4.8	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.310	0.11	0.00	0.01	0.00	0.22	0.37
53	ID	7	3.67	1.260	31.2	0.0	4.4	4.7	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.37
54	ID	7	3.57	1.260	31.3	0.0	4.5	4.6	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.37
55	ID	7	3.48	1.260	31.3	0.0	4.5	4.5	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.36
56	ID	7	3.38	1.260	31.3	0.0	4.6	4.4	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.36
57	ID	7	3.29	1.260	31.3	0.0	4.7	4.3	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.36
58	ID	7	3.19	1.260	31.3	0.0	4.7	4.2	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.36
59	ID	7	3.10	1.260	31.4	0.0	4.8	4.1	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.36
60	ID	7	3.00	1.260	31.4	0.0	4.8	4.0	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.22	0.36
61	ID	7	2.91	1.260	31.4	0.0	4.9	4.0	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.006	0.006	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.36
62	IE	8	2.82	1.260	31.4	0.0	4.9	3.9	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.36
63	IE	8	2.74	1.260	31.4	0.0	5.0	3.8	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.36
64	IE	8	2.65	1.260	31.4	0.0	5.0	3.8	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.36

65	IE	8	2.56	1.260	31.4	0.0	5.1	3.7	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.36
66	IE	8	2.48	1.260	31.4	0.0	5.1	3.7	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.36
67	IE	8	2.39	1.260	31.4	0.0	5.1	3.6	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.36
68	IE	8	2.30	1.260	31.4	0.0	5.2	3.6	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.36
69	IE	8	2.22	1.260	31.4	0.0	5.2	3.5	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
70	IE	8	2.13	1.260	31.4	0.0	5.3	3.5	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
71	IE	8	2.04	1.260	31.4	0.0	5.3	3.4	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
72	IE	8	1.96	1.260	31.5	0.0	5.3	3.4	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	DISP	DEPTH	WIDTH	ADVEC VELO	MEAN VELO	DO SAT	REAER RATE	BOD1 DECA	BOD1 SETT	BOD2 DECA	BOD2 SETT	DECA	NH3 SOD
		km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	µg/L		m²/s	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
73	IE	8	1.87	1.260	31.5	0.0	5.4	3.3	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
74	IE	8	1.78	1.260	31.5	0.0	5.4	3.3	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
75	IE	8	1.70	1.260	31.5	0.0	5.5	3.2	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
76	IE	8	1.61	1.260	31.5	0.0	5.5	3.2	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
77	IE	8	1.52	1.260	31.5	0.0	5.5	3.1	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
78	IE	8	1.44	1.260	31.5	0.0	5.5	3.1	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
79	IE	8	1.35	1.260	31.5	0.0	5.6	3.1	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
80	IE	8	1.26	1.260	31.5	0.0	5.6	3.0	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
81	IE	8	1.17	1.260	31.5	0.0	5.6	3.0	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.35
82	IF	9	1.12	1.285	31.5	0.0	5.6	3.1	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.010	0.010	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.35
83	IF	9	1.07	1.310	31.5	0.0	5.5	3.1	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.35
84	IF	9	1.02	1.335	31.5	0.0	5.5	3.2	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.35
85	IF	9	0.96	1.360	31.5	0.0	5.4	3.3	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.35
86	IF	9	0.91	1.385	31.5	0.0	5.4	3.3	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.35
87	IF	9	0.86	1.410	31.5	0.0	5.3	3.4	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.35
88	IF	9	0.80	1.435	31.5	0.0	5.3	3.4	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.35
89	IF	9	0.75	1.460	31.5	0.0	5.3	3.5	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
90	IF	9	0.70	1.485	31.5	0.0	5.2	3.5	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
91	IF	9	0.65	1.510	31.5	0.0	5.2	3.6	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
92	IF	9	0.59	1.535	31.5	0.0	5.2	3.6	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
93	IF	9	0.54	1.560	31.5	0.0	5.1	3.7	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
94	IF	9	0.49	1.585	31.5	0.0	5.1	3.7	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
95	IF	9	0.43	1.610	31.5	0.0	5.1	3.8	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
96	IF	9	0.38	1.635	31.5	0.0	5.0	3.8	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
97	IF	9	0.33	1.660	31.5	0.0	5.0	3.9	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.014	0.014	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
98	IF	9	0.27	1.685	31.5	0.0	5.0	3.9	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.014	0.014	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
99	IF	9	0.22	1.710	31.5	0.0	5.0	3.9	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.014	0.014	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
100	IF	9	0.17	1.735	31.5	0.0	4.9	4.0	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.014	0.014	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
101	IF	9	0.12	1.760	31.5	0.0	4.9	4.0	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.014	0.014	7.4	0.415	0.12	0.01	0.01	0.00	0.23	0.36
102	TL	10	0.06	1.760	31.5	0.0	4.9	4.0	0.0	0.0	0.0	1.0	0.0	2.34	65.1	0.012	0.012	7.4	0.369	0.12	0.01	0.01	0.00	0.23	0.36
103	TL	10	0.00	1.760	31.5	0.0	4.9	3.8	0.0	0.0	0.0	1.0	0.0	2.34	65.1	0.012	0.012	7.4	0.369	0.12	0.01	0.01	0.00	0.23	0.36

SPECIAL REPORT: Headwater
WATER QUALITY CONSTITUENT VALUES

ELEM	ENDING	TEMP	SALN	CM-I	CM-II	DO	BOD1	BOD2	EBOD#1	EBOD#2	ORG-N	NH3-N	NO3-N	TOTN	PHOS	CHL A	MACRO	COLI	NCM

NO.	km	deg C	ppt	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	**	#/100mL	*
1	7.730	31.60	0.0	0.0	0.0	5.19	4.88	0.00	4.88	0.00	0.00	0.10	0.50	0.60	0.05	1.0	0.0	0.	0.00
2	7.690	31.60	0.0	0.0	0.0	5.36	4.76	0.00	4.76	0.00	0.00	0.09	0.51	0.60	0.05	1.0	0.0	0.	0.00
3	7.628	31.60	0.0	0.0	0.0	5.58	4.58	0.00	4.58	0.00	0.00	0.08	0.51	0.60	0.05	1.0	0.0	0.	0.00
4	7.565	31.60	0.0	0.0	0.0	5.75	4.40	0.00	4.40	0.00	0.00	0.08	0.52	0.60	0.05	1.0	0.0	0.	0.00
5	7.525	31.85	0.0	0.0	0.0	5.84	4.29	0.00	4.29	0.00	0.00	0.08	0.52	0.59	0.05	1.0	0.0	0.	0.00
6	7.485	32.10	0.0	0.0	0.0	5.91	4.18	0.00	4.18	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
7	7.412	32.06	0.0	0.0	0.0	5.20	4.11	0.00	4.11	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
8	7.340	32.02	0.0	0.0	0.0	4.75	4.05	0.00	4.05	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
9	7.267	31.98	0.0	0.0	0.0	4.46	4.00	0.00	4.00	0.00	0.00	0.07	0.53	0.59	0.05	1.0	0.0	0.	0.00
10	7.195	31.94	0.0	0.0	0.0	4.26	3.97	0.00	3.97	0.00	0.00	0.07	0.53	0.59	0.05	1.0	0.0	0.	0.00
11	7.122	31.90	0.0	0.0	0.0	4.13	3.94	0.00	3.94	0.00	0.00	0.07	0.53	0.59	0.05	1.0	0.0	0.	0.00
12	7.050	31.86	0.0	0.0	0.0	4.03	3.91	0.00	3.91	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
13	6.977	31.82	0.0	0.0	0.0	3.97	3.89	0.00	3.89	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
14	6.905	31.78	0.0	0.0	0.0	3.92	3.87	0.00	3.87	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
15	6.832	31.74	0.0	0.0	0.0	3.88	3.86	0.00	3.86	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
16	6.760	31.70	0.0	0.0	0.0	3.85	3.84	0.00	3.84	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
17	6.683	31.70	0.0	0.0	0.0	3.92	3.75	0.00	3.75	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
18	6.606	31.70	0.0	0.0	0.0	3.97	3.66	0.00	3.66	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
19	6.529	31.70	0.0	0.0	0.0	4.02	3.58	0.00	3.58	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
20	6.452	31.70	0.0	0.0	0.0	4.07	3.49	0.00	3.49	0.00	0.00	0.05	0.53	0.59	0.05	1.0	0.0	0.	0.00
21	6.375	31.70	0.0	0.0	0.0	4.12	3.41	0.00	3.41	0.00	0.00	0.05	0.53	0.59	0.05	1.0	0.0	0.	0.00
22	6.298	31.70	0.0	0.0	0.0	4.16	3.33	0.00	3.33	0.00	0.00	0.05	0.54	0.59	0.05	1.0	0.0	0.	0.00
23	6.221	31.70	0.0	0.0	0.0	4.19	3.25	0.00	3.25	0.00	0.00	0.05	0.54	0.58	0.05	1.0	0.0	0.	0.00
24	6.144	31.70	0.0	0.0	0.0	4.23	3.17	0.00	3.17	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
25	6.067	31.70	0.0	0.0	0.0	4.26	3.09	0.00	3.09	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
26	5.990	31.70	0.0	0.0	0.0	4.29	3.03	0.00	3.03	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
27	5.911	31.65	0.0	0.0	0.0	4.07	3.98	0.00	3.98	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
28	5.832	31.61	0.0	0.0	0.0	3.94	4.56	0.00	4.56	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
29	5.753	31.56	0.0	0.0	0.0	3.84	4.95	0.00	4.95	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
30	5.674	31.51	0.0	0.0	0.0	3.77	5.22	0.00	5.22	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
31	5.595	31.47	0.0	0.0	0.0	3.72	5.42	0.00	5.42	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
32	5.516	31.42	0.0	0.0	0.0	3.68	5.58	0.00	5.58	0.00	0.00	0.06	0.52	0.59	0.05	1.0	0.0	0.	0.00
33	5.437	31.37	0.0	0.0	0.0	3.65	5.70	0.00	5.70	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
34	5.358	31.33	0.0	0.0	0.0	3.62	5.80	0.00	5.80	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
35	5.279	31.28	0.0	0.0	0.0	3.60	5.88	0.00	5.88	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
36	5.200	31.23	0.0	0.0	0.0	3.58	5.95	0.00	5.95	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
37	5.121	31.19	0.0	0.0	0.0	3.56	6.01	0.00	6.01	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
38	5.042	31.14	0.0	0.0	0.0	3.55	6.06	0.00	6.06	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
39	4.963	31.09	0.0	0.0	0.0	3.54	6.11	0.00	6.11	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
40	4.884	31.05	0.0	0.0	0.0	3.53	6.15	0.00	6.15	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
41	4.805	31.00	0.0	0.0	0.0	3.52	6.18	0.00	6.18	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
42	4.710	31.02	0.0	0.0	0.0	3.60	6.04	0.00	6.04	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
43	4.615	31.04	0.0	0.0	0.0	3.68	5.91	0.00	5.91	0.00	0.00	0.06	0.52	0.59	0.05	1.0	0.0	0.	0.00
44	4.521	31.06	0.0	0.0	0.0	3.76	5.78	0.00	5.78	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
45	4.426	31.08	0.0	0.0	0.0	3.84	5.65	0.00	5.65	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
46	4.331	31.10	0.0	0.0	0.0	3.92	5.53	0.00	5.53	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
47	4.237	31.12	0.0	0.0	0.0	3.99	5.41	0.00	5.41	0.00	0.00	0.05	0.53	0.59	0.05	1.0	0.0	0.	0.00
48	4.142	31.14	0.0	0.0	0.0	4.06	5.29	0.00	5.29	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00

49	4.047	31.16	0.0	0.0	0.0	4.14	5.17	0.00	5.17	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
50	3.952	31.18	0.0	0.0	0.0	4.21	5.06	0.00	5.06	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
51	3.858	31.20	0.0	0.0	0.0	4.27	4.95	0.00	4.95	0.00	0.00	0.05	0.54	0.58	0.05	1.0	0.0	0.	0.00
52	3.763	31.22	0.0	0.0	0.0	4.34	4.84	0.00	4.84	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
53	3.668	31.24	0.0	0.0	0.0	4.40	4.73	0.00	4.73	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
54	3.573	31.26	0.0	0.0	0.0	4.47	4.62	0.00	4.62	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
55	3.479	31.28	0.0	0.0	0.0	4.53	4.52	0.00	4.52	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
56	3.384	31.30	0.0	0.0	0.0	4.59	4.42	0.00	4.42	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
57	3.289	31.32	0.0	0.0	0.0	4.65	4.32	0.00	4.32	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
58	3.194	31.34	0.0	0.0	0.0	4.71	4.23	0.00	4.23	0.00	0.00	0.03	0.54	0.58	0.05	1.0	0.0	0.	0.00
59	3.100	31.36	0.0	0.0	0.0	4.77	4.13	0.00	4.13	0.00	0.00	0.03	0.54	0.58	0.05	1.0	0.0	0.	0.00
60	3.005	31.38	0.0	0.0	0.0	4.82	4.04	0.00	4.04	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
61	2.910	31.40	0.0	0.0	0.0	4.87	3.95	0.00	3.95	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
62	2.823	31.40	0.0	0.0	0.0	4.92	3.90	0.00	3.90	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
63	2.737	31.41	0.0	0.0	0.0	4.97	3.84	0.00	3.84	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
64	2.650	31.41	0.0	0.0	0.0	5.02	3.79	0.00	3.79	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
65	2.563	31.42	0.0	0.0	0.0	5.06	3.73	0.00	3.73	0.00	0.00	0.03	0.55	0.57	0.05	1.0	0.0	0.	0.00
66	2.476	31.42	0.0	0.0	0.0	5.11	3.68	0.00	3.68	0.00	0.00	0.03	0.55	0.57	0.05	1.0	0.0	0.	0.00
67	2.389	31.43	0.0	0.0	0.0	5.15	3.63	0.00	3.63	0.00	0.00	0.03	0.55	0.57	0.05	1.0	0.0	0.	0.00
68	2.303	31.43	0.0	0.0	0.0	5.19	3.58	0.00	3.58	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
69	2.216	31.44	0.0	0.0	0.0	5.23	3.53	0.00	3.53	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
70	2.129	31.44	0.0	0.0	0.0	5.27	3.48	0.00	3.48	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
71	2.042	31.45	0.0	0.0	0.0	5.31	3.43	0.00	3.43	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
72	1.956	31.45	0.0	0.0	0.0	5.34	3.38	0.00	3.38	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
73	1.869	31.46	0.0	0.0	0.0	5.38	3.33	0.00	3.33	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
74	1.782	31.47	0.0	0.0	0.0	5.42	3.29	0.00	3.29	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
75	1.695	31.47	0.0	0.0	0.0	5.45	3.24	0.00	3.24	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
76	1.609	31.48	0.0	0.0	0.0	5.48	3.19	0.00	3.19	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
77	1.522	31.48	0.0	0.0	0.0	5.52	3.15	0.00	3.15	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
78	1.435	31.49	0.0	0.0	0.0	5.55	3.10	0.00	3.10	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
79	1.348	31.49	0.0	0.0	0.0	5.58	3.06	0.00	3.06	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
80	1.262	31.50	0.0	0.0	0.0	5.61	3.02	0.00	3.02	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
81	1.175	31.50	0.0	0.0	0.0	5.64	2.98	0.00	2.98	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
82	1.122	31.50	0.0	0.0	0.0	5.58	3.05	0.00	3.05	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
83	1.069	31.50	0.0	0.0	0.0	5.53	3.12	0.00	3.12	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
84	1.016	31.50	0.0	0.0	0.0	5.48	3.19	0.00	3.19	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
85	0.963	31.50	0.0	0.0	0.0	5.43	3.26	0.00	3.26	0.00	0.00	0.02	0.54	0.57	0.05	1.0	0.0	0.	0.00
86	0.910	31.50	0.0	0.0	0.0	5.39	3.32	0.00	3.32	0.00	0.00	0.02	0.54	0.57	0.05	1.0	0.0	0.	0.00
87	0.857	31.50	0.0	0.0	0.0	5.34	3.38	0.00	3.38	0.00	0.00	0.02	0.54	0.57	0.05	1.0	0.0	0.	0.00
88	0.804	31.50	0.0	0.0	0.0	5.30	3.44	0.00	3.44	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
89	0.751	31.50	0.0	0.0	0.0	5.26	3.49	0.00	3.49	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
90	0.698	31.50	0.0	0.0	0.0	5.23	3.54	0.00	3.54	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
91	0.645	31.50	0.0	0.0	0.0	5.19	3.59	0.00	3.59	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
92	0.592	31.50	0.0	0.0	0.0	5.16	3.64	0.00	3.64	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
93	0.539	31.50	0.0	0.0	0.0	5.12	3.69	0.00	3.69	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
94	0.486	31.50	0.0	0.0	0.0	5.09	3.74	0.00	3.74	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
95	0.433	31.50	0.0	0.0	0.0	5.06	3.78	0.00	3.78	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
96	0.380	31.50	0.0	0.0	0.0	5.03	3.82	0.00	3.82	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
97	0.327	31.50	0.0	0.0	0.0	5.00	3.86	0.00	3.86	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
98	0.274	31.50	0.0	0.0	0.0	4.98	3.90	0.00	3.90	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00

99	0.221	31.50	0.0	0.0	0.0	4.95	3.94	0.00	3.94	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
100	0.168	31.50	0.0	0.0	0.0	4.93	3.97	0.00	3.97	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
101	0.115	31.50	0.0	0.0	0.0	4.90	4.01	0.00	4.01	0.00	0.00	0.04	0.54	0.57	0.05	1.0	0.0	0.	0.00
102	0.058	31.50	0.0	0.0	0.0	4.92	3.98	0.00	3.98	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
103	0.000	31.50	0.0	0.0	0.0	4.94	3.83	0.00	3.83	0.00	0.00	0.04	0.52	0.56	0.05	1.0	0.0	0.	0.00

SPECIAL REPORT: Headwater
BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST km	SAT D.O. mg/L	REAER RATE 1/da	DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#1 SETT *	BOD#2 DECAY *	ABOD#2 SOD 1/da	FULL SOD 1/da	CORR DECAY 1/da	ORG-N SETT *	ORG-N DECAY **	NH3 SRCE **	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM	NCM SETT
1	7.730	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
2	7.690	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
3	7.628	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
4	7.565	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
5	7.525	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
6	7.485	7.29	0.88	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.25	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
7	7.412	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.19	2.19	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
8	7.340	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.19	2.19	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
9	7.267	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.18	2.18	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
10	7.195	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.17	2.17	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
11	7.122	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.17	2.17	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
12	7.050	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.16	2.16	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
13	6.977	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.16	2.16	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
14	6.905	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.15	2.15	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
15	6.832	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.15	2.15	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
16	6.760	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
17	6.683	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
18	6.606	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
19	6.529	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
20	6.452	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
21	6.375	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
22	6.298	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
23	6.221	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
24	6.144	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
25	6.067	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
26	5.990	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.13	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
27	5.911	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
28	5.832	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
29	5.753	7.36	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
30	5.674	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
31	5.595	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
32	5.516	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
33	5.437	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
34	5.358	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
35	5.279	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
36	5.200	7.40	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
37	5.121	7.41	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

38	5.042	7.41	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
39	4.963	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
40	4.884	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
41	4.805	7.43	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.01	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
42	4.710	7.43	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
43	4.615	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
44	4.521	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.38	0.38	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
45	4.426	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
46	4.331	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
47	4.237	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
48	4.142	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
49	4.047	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
50	3.952	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
51	3.858	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
52	3.763	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
53	3.668	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
54	3.573	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
55	3.479	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
56	3.384	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
57	3.289	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
58	3.194	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
59	3.100	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
60	3.005	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
61	2.910	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
62	2.823	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
63	2.737	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
64	2.650	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
65	2.563	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
66	2.476	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
67	2.389	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
68	2.303	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
69	2.216	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
70	2.129	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
71	2.042	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
72	1.956	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
73	1.869	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
74	1.782	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
75	1.695	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
76	1.609	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
77	1.522	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
78	1.435	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
79	1.348	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
80	1.262	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
81	1.175	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
82	1.122	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
83	1.069	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
84	1.016	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
85	0.963	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
86	0.910	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
87	0.857	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

88	0.804	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
89	0.751	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
90	0.698	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
91	0.645	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
92	0.592	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
93	0.539	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
94	0.486	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
95	0.433	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
96	0.380	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
97	0.327	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
98	0.274	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
99	0.221	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
100	0.168	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
101	0.115	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
102	0.058	7.37	0.37	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
103	0.000	7.37	0.37	0.12	0.01	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

SPECIAL REPORT: Headwater
HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW VELO m³/s	ADVCTV m/s	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
1	7.77	7.73	0.1000	0.002	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.001	0.002
2	7.73	7.69	0.1000	0.002	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.001	0.002
3	7.69	7.63	0.1000	0.002	0.99	44.7	2766.	2793.8	44.3	0.	0.000	0.001	0.002
4	7.63	7.57	0.1000	0.002	0.99	44.7	2766.	2793.8	44.3	0.	0.000	0.001	0.002
5	7.57	7.53	0.1000	0.002	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.001	0.002
6	7.53	7.49	0.1000	0.002	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.001	0.002
7	7.49	7.41	0.1130	0.003	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.003
8	7.41	7.34	0.1260	0.003	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.003
9	7.34	7.27	0.1390	0.003	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.003
10	7.27	7.19	0.1520	0.003	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.002	0.003
11	7.19	7.12	0.1650	0.004	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.002	0.004
12	7.12	7.05	0.1780	0.004	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.002	0.004
13	7.05	6.98	0.1910	0.004	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.002	0.004
14	6.98	6.90	0.2040	0.005	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.002	0.005
15	6.90	6.83	0.2170	0.005	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.002	0.005
16	6.83	6.76	0.2300	0.005	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.002	0.005
17	6.76	6.68	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
18	6.68	6.61	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
19	6.61	6.53	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
20	6.53	6.45	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
21	6.45	6.37	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
22	6.37	6.30	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
23	6.30	6.22	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
24	6.22	6.14	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
25	6.14	6.07	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004
26	6.07	5.99	0.2300	0.004	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.002	0.004

27	5.99	5.91	0.2987	0.002	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.002	0.002
28	5.91	5.83	0.3673	0.003	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.002	0.003
29	5.83	5.75	0.4360	0.003	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.003	0.003
30	5.75	5.67	0.5047	0.004	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.003	0.004
31	5.67	5.59	0.5733	0.004	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.004	0.004
32	5.59	5.52	0.6420	0.005	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.004	0.005
33	5.52	5.44	0.7107	0.005	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.005	0.005
34	5.44	5.36	0.7793	0.006	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.005	0.006
35	5.36	5.28	0.8480	0.007	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.006	0.007
36	5.28	5.20	0.9167	0.007	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.006	0.007
37	5.20	5.12	0.9853	0.008	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.006	0.008
38	5.12	5.04	1.0540	0.008	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.007	0.008
39	5.04	4.96	1.1227	0.009	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.007	0.009
40	4.96	4.88	1.1913	0.009	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.008	0.009
41	4.88	4.80	1.2600	0.010	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.008	0.010
42	4.80	4.71	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
43	4.71	4.62	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
44	4.62	4.52	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
45	4.52	4.43	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
46	4.43	4.33	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
47	4.33	4.24	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
48	4.24	4.14	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
49	4.14	4.05	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
50	4.05	3.95	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
51	3.95	3.86	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
52	3.86	3.76	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
53	3.76	3.67	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
54	3.67	3.57	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
55	3.57	3.48	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
56	3.48	3.38	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
57	3.38	3.29	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
58	3.29	3.19	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
59	3.19	3.10	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
60	3.10	3.00	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
61	3.00	2.91	1.2600	0.006	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.006	0.006
62	2.91	2.82	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
63	2.82	2.74	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
64	2.74	2.65	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
65	2.65	2.56	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
66	2.56	2.48	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
67	2.48	2.39	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
68	2.39	2.30	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
69	2.30	2.22	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
70	2.22	2.13	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
71	2.13	2.04	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
72	2.04	1.96	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
73	1.96	1.87	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
74	1.87	1.78	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
75	1.78	1.70	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
76	1.70	1.61	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008

77	1.61	1.52	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
78	1.52	1.44	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
79	1.44	1.35	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
80	1.35	1.26	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
81	1.26	1.17	1.2600	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.008	0.008
82	1.17	1.12	1.2850	0.010	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.010
83	1.12	1.07	1.3100	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.011
84	1.07	1.02	1.3350	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.011
85	1.02	0.96	1.3600	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.011
86	0.96	0.91	1.3850	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.011
87	0.91	0.86	1.4100	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012
88	0.86	0.80	1.4350	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012
89	0.80	0.75	1.4600	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012
90	0.75	0.70	1.4850	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012
91	0.70	0.65	1.5100	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.011	0.012
92	0.65	0.59	1.5350	0.013	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.011	0.013
93	0.59	0.54	1.5600	0.013	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.011	0.013
94	0.54	0.49	1.5850	0.013	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.011	0.013
95	0.49	0.43	1.6100	0.013	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.011	0.013
96	0.43	0.38	1.6350	0.013	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.011	0.013
97	0.38	0.33	1.6600	0.014	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.012	0.014
98	0.33	0.27	1.6850	0.014	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.012	0.014
99	0.27	0.22	1.7100	0.014	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.012	0.014
100	0.22	0.17	1.7350	0.014	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.012	0.014
101	0.17	0.12	1.7600	0.014	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.012	0.014
102	0.12	0.06	1.7600	0.012	2.34	65.1	8759.	3743.2	152.3	0.	0.000	0.011	0.012
103	0.06	0.00	1.7600	0.012	2.34	65.1	8759.	3743.2	152.3	0.	0.000	0.011	0.012

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 1 Pearl River to Above A COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS	CHL A	COLI #/100mL	NCM
1	HDWTR	0.10000	30.00	0.00	0.00	0.00	5.00	5.00	0.00	5.00	0.00	0.00	0.10	0.50	0.00	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
1	7.77	7.73	0.10000	0.0	0.00226	0.20	0.99	44.70	1770.12	1788.00	44.25	0.00	0.000	0.001	0.002
2	7.73	7.69	0.10000	0.0	0.00226	0.20	0.99	44.70	1770.12	1788.00	44.25	0.00	0.000	0.001	0.002
TOT					0.41				3540.24	3576.00					
AVG				0.0023			0.99	44.70			44.25				
CUM					0.41										

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	DENIT RATE	PO4 SRCE	ALG PROD	MAC PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da
1	7.730	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
2	7.690	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.37	0.37	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.71	0.06	0.01	0.00	0.01	0.00	0.00	0.15			0.05	0.01	0.10	0.00	0.00	0.00			3.00	0.00	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m^3	COLI #/100mL	NCM
1	7.730	31.60	0.00	0.00	0.00	5.19	4.88	0.00	4.88	0.00	0.00	0.10	0.50	0.60	0.05	1.00	0.00	0.	0.00
2	7.690	31.60	0.00	0.00	0.00	5.36	4.76	0.00	4.76	0.00	0.00	0.09	0.51	0.60	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 2 Include A COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
3	UPR RCH	0.10000	31.60	0.00	0.00	0.00	5.36	4.76	0.00	4.76	0.00	0.00	0.09	0.51	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m^3/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m^3	VOLUME m^2	SURFACE AREA m^2	X-SECT AREA m^3	TIDAL PRISM m/s	TIDAL VELO m^2/s	DISPRSN m/s	MEAN VELO
3	7.69	7.63	0.10000	0.0	0.00226	0.32	0.99	44.70	2765.81	2793.75	44.25	0.00	0.000	0.001	0.002
4	7.63	7.57	0.10000	0.0	0.00226	0.32	0.99	44.70	2765.81	2793.75	44.25	0.00	0.000	0.001	0.002
TOT					0.64			5531.63	5587.50						
AVG				0.0023		0.99	44.70				44.25				
CUM					1.05										

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	DENIT RATE	PO4 SRCE	ALG PROD	MAC PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da

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  3   7.628  7.35    0.87   0.11  0.01   0.00   0.01  0.00   0.00  0.31  0.37  0.37   0.06  0.01   0.24  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
  4   7.565  7.35    0.87   0.11  0.01   0.00   0.01  0.00   0.00  0.31  0.37  0.37   0.06  0.01   0.24  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00

AVG 20 DEG C RATE    0.71   0.06  0.01   0.00   0.01  0.00   0.00  0.15            0.05  0.01   0.10  0.00   0.00  0.00            3.00   0.00   0.00

*   g/m²/d          **   mg/L/day

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

ELEM  ENDING   TEMP  SALN    CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT     mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    g/m³  #/100mL

  3   7.628  31.60  0.00     0.00    0.00   5.58   4.58   0.00   4.58   0.00   0.00   0.08   0.51   0.60   0.05   1.00   0.00      0.   0.00
  4   7.565  31.60  0.00     0.00    0.00   5.75   4.40   0.00   4.40   0.00   0.00   0.08   0.52   0.60   0.05   1.00   0.00      0.   0.00

FINAL REPORT            Headwater                        Pearl River DO Modeling 090105
REACH NO.  3    Include Stream 1                         COEF-1 Run

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

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

  5  UPR RCH   0.10000   31.60    0.00    0.00    0.00   5.75   4.40   0.00   4.40   0.00   0.00   0.08   0.52   0.05   1.00    0.00    0.00

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

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

  5    7.57    7.53   0.10000   0.0   0.00226    0.20    0.99   44.70   1770.12   1788.00   44.25    0.00   0.000    0.001   0.002
  6    7.53    7.49   0.10000   0.0   0.00226    0.20    0.99   44.70   1770.12   1788.00   44.25    0.00   0.000    0.001   0.002

 TOT                                   0.41                3540.24    3576.00
 AVG                            0.0023          0.99   44.70                 44.25
 CUM                                   1.46

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

ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da   1/da   1/da   1/da   1/da   1/da    *     *     *   1/da   1/da   1/da    *    1/da    *    **    **   1/da   1/da   1/da

  5   7.525  7.32    0.88   0.11  0.01   0.00   0.01  0.00   0.00  0.32  0.37  0.37   0.06  0.01   0.24  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
  6   7.485  7.29    0.88   0.11  0.01   0.00   0.01  0.00   0.00  0.32  0.38  0.38   0.06  0.01   0.25  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00

AVG 20 DEG C RATE    0.71   0.06  0.01   0.00   0.01  0.00   0.00  0.15            0.05  0.01   0.10  0.00   0.00  0.00            3.00   0.00   0.00
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* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
5	7.525	31.85	0.00	0.00	0.00	5.84	4.29	0.00	4.29	0.00	0.00	0.08	0.52	0.59	0.05	1.00	0.00	0.	0.00
6	7.485	32.10	0.00	0.00	0.00	5.91	4.18	0.00	4.18	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 4 Include B COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
7	UPR RCH	0.10000	32.10	0.00	0.00	0.00	5.91	4.18	0.00	4.18	0.00	0.00	0.07	0.52	0.05	1.00	0.00	0.00
EACH	INCR	0.01300	30.00	0.00	0.00	0.00	2.00	5.00	0.00		0.00	0.10	0.50	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
7	7.49	7.41	0.11300	0.0	0.00255	0.33	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.003
8	7.41	7.34	0.12600	0.0	0.00285	0.29	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.003
9	7.34	7.27	0.13900	0.0	0.00314	0.27	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.003
10	7.27	7.19	0.15200	0.0	0.00343	0.24	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.002	0.003
11	7.19	7.12	0.16500	0.0	0.00373	0.23	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.002	0.004
12	7.12	7.05	0.17800	0.0	0.00402	0.21	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.002	0.004
13	7.05	6.98	0.19100	0.0	0.00432	0.19	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.002	0.004
14	6.98	6.90	0.20400	0.0	0.00461	0.18	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.002	0.005
15	6.90	6.83	0.21700	0.0	0.00490	0.17	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.002	0.005
16	6.83	6.76	0.23000	0.0	0.00520	0.16	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.002	0.005
TOT					2.28				32083.43	32407.50					
AVG				0.0037			0.99	44.70			44.25				
CUM					3.74										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT 1/da	BOD#2 DECAY 1/da	ABOD#2 SOD *	BKGD SOD *	FULL SOD *	CORR DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	SRCE *	NH3 RATE 1/da	NH3 SRCE *	DENIT PROD **	PO4 PROD **	ALG DECAY 1/da	MAC DECAY 1/da	COLI SETT 1/da	NCM	NCM
7	7.412	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.14	2.19	2.19	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
8	7.340	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.19	2.19	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		

9	7.267	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.13	2.18	2.18	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
10	7.195	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.12	2.17	2.17	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
11	7.122	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.12	2.17	2.17	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
12	7.050	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.11	2.16	2.16	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
13	6.977	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.11	2.16	2.16	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
14	6.905	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.10	2.15	2.15	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
15	6.832	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.15	2.15	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
16	6.760	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.71 0.06 0.01 0.00 0.01 0.00 0.00 1.00 0.05 0.01 0.10 0.00 0.00 0.00 3.00 0.00 0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO	COLI #/100mL	NCM
7	7.412	32.06	0.00	0.00	0.00	5.20	4.11	0.00	4.11	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
8	7.340	32.02	0.00	0.00	0.00	4.75	4.05	0.00	4.05	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
9	7.267	31.98	0.00	0.00	0.00	4.46	4.00	0.00	4.00	0.00	0.00	0.07	0.53	0.59	0.05	1.00	0.00	0.	0.00
10	7.195	31.94	0.00	0.00	0.00	4.26	3.97	0.00	3.97	0.00	0.00	0.07	0.53	0.59	0.05	1.00	0.00	0.	0.00
11	7.122	31.90	0.00	0.00	0.00	4.13	3.94	0.00	3.94	0.00	0.00	0.07	0.53	0.59	0.05	1.00	0.00	0.	0.00
12	7.050	31.86	0.00	0.00	0.00	4.03	3.91	0.00	3.91	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
13	6.977	31.82	0.00	0.00	0.00	3.97	3.89	0.00	3.89	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
14	6.905	31.78	0.00	0.00	0.00	3.92	3.87	0.00	3.87	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
15	6.832	31.74	0.00	0.00	0.00	3.88	3.86	0.00	3.86	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
16	6.760	31.70	0.00	0.00	0.00	3.85	3.84	0.00	3.84	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 5 Include C COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
17	UPR RCH	0.23000	31.70	0.00	0.00	0.00	3.85	3.84	0.00	3.84	0.00	0.00	0.06	0.53	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m³	VOLUME m²	SURFACE AREA m²	X-SECT AREA m³	TIDAL PRISM m/s	TIDAL VELO m²/s	DISPRSN m/s	MEAN VELO m/s
17	6.76	6.68	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
18	6.68	6.61	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
19	6.61	6.53	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
20	6.53	6.45	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
21	6.45	6.37	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004

22	6.37	6.30	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
23	6.30	6.22	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
24	6.22	6.14	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
25	6.14	6.07	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
26	6.07	5.99	0.23000	0.0	0.00446	0.20	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.002	0.004
TOT					2.00				39751.25	33687.50					
AVG					0.0045		1.18	43.75			51.62				
CUM					5.74										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD 1/da	FULL SOD 1/da	CORR DECAY 1/da	ORGN SETT *	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE 1/da	DENIT SRCE *	PO4 PROD **	ALG PROD **	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
17	6.683	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
18	6.606	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
19	6.529	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
20	6.452	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.14	2.14	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
21	6.375	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
22	6.298	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
23	6.221	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
24	6.144	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
25	6.067	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.13	2.13	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
26	5.990	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	2.09	2.13	2.13	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.59	0.06	0.01	0.00	0.01	0.00	0.00	1.00			0.05	0.01	0.10	0.00	0.00	0.00			3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO	COLI #/100mL	NCM
17	6.683	31.70	0.00	0.00	0.00	3.92	3.75	0.00	3.75	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
18	6.606	31.70	0.00	0.00	0.00	3.97	3.66	0.00	3.66	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
19	6.529	31.70	0.00	0.00	0.00	4.02	3.58	0.00	3.58	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
20	6.452	31.70	0.00	0.00	0.00	4.07	3.49	0.00	3.49	0.00	0.00	0.05	0.53	0.59	0.05	1.00	0.00	0.	0.00
21	6.375	31.70	0.00	0.00	0.00	4.12	3.41	0.00	3.41	0.00	0.00	0.05	0.53	0.59	0.05	1.00	0.00	0.	0.00
22	6.298	31.70	0.00	0.00	0.00	4.16	3.33	0.00	3.33	0.00	0.00	0.05	0.54	0.59	0.05	1.00	0.00	0.	0.00
23	6.221	31.70	0.00	0.00	0.00	4.19	3.25	0.00	3.25	0.00	0.00	0.05	0.54	0.58	0.05	1.00	0.00	0.	0.00
24	6.144	31.70	0.00	0.00	0.00	4.23	3.17	0.00	3.17	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
25	6.067	31.70	0.00	0.00	0.00	4.26	3.09	0.00	3.09	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
26	5.990	31.70	0.00	0.00	0.00	4.29	3.03	0.00	3.03	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 6 Include Stream 2 COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 µg/L	NO3+2	PHOS	CHL A	COLI #/100mL	NCM
27	UPR RCH	0.23000	31.70	0.00	0.00	0.00	4.29	3.03	0.00	3.03	0.00	0.00	0.04	0.54	0.05	1.00	0.00	0.00
EACH	INCR	0.06867	30.00	0.00	0.00	0.00	2.00	8.00	0.00		0.00	0.10	0.50	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m³	VOLUME m²	SURFACE AREA m²	X-SECT AREA m³	TIDAL PRISM m/s	TIDAL VELO m²/s	DISPRSN m/s	MEAN VELO
27	5.99	5.91	0.29867	0.0	0.00230	0.40	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.002	0.002	
28	5.91	5.83	0.36733	0.0	0.00283	0.32	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.002	0.003	
29	5.83	5.75	0.43600	0.0	0.00336	0.27	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.003	0.003	
30	5.75	5.67	0.50467	0.0	0.00389	0.24	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.003	0.004	
31	5.67	5.59	0.57333	0.0	0.00441	0.21	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.004	0.004	
32	5.59	5.52	0.64200	0.0	0.00494	0.18	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.004	0.005	
33	5.52	5.44	0.71067	0.0	0.00547	0.17	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.005	0.005	
34	5.44	5.36	0.77933	0.0	0.00600	0.15	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.005	0.006	
35	5.36	5.28	0.84800	0.0	0.00653	0.14	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.006	0.007	
36	5.28	5.20	0.91667	0.0	0.00706	0.13	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.006	0.007	
37	5.20	5.12	0.98533	0.0	0.00759	0.12	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.006	0.008	
38	5.12	5.04	1.05400	0.0	0.00811	0.11	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.007	0.008	
39	5.04	4.96	1.12267	0.0	0.00864	0.11	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.007	0.009	
40	4.96	4.88	1.19133	0.0	0.00917	0.10	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.008	0.009	
41	4.88	4.80	1.26000	0.0	0.00970	0.09	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.008	0.010	
TOT					2.74				153922.59	74358.75						
AVG				0.0050			2.07	62.75			129.89					
CUM					8.48											

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD 1/da	FULL SOD 1/da	CORR DECAY 1/da	ORGN SETT *	ORGN DECAY *	SRCE **	NH3 RATE **	NH3 SRCE 1/da	DENIT PROD 1/da	PO4 PROD 1/da	ALG DECAY 1/da	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da
27	5.911	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.37	0.37	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
28	5.832	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.37	0.37	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
29	5.753	7.36	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.22	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
30	5.674	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
31	5.595	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
32	5.516	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
33	5.437	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
34	5.358	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
35	5.279	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
36	5.200	7.40	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

37	5.121	7.41	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
38	5.042	7.41	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
39	4.963	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.01	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
40	4.884	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.01	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
41	4.805	7.43	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.01	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.34 0.06 0.00 0.00 0.01 0.00 0.00 0.15 0.05 0.00 0.10 0.00 0.00 0.00 3.00 0.00 0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO #/100mL	COLI	NCM
27	5.911	31.65	0.00	0.00	0.00	4.07	3.98	0.00	3.98	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
28	5.832	31.61	0.00	0.00	0.00	3.94	4.56	0.00	4.56	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
29	5.753	31.56	0.00	0.00	0.00	3.84	4.95	0.00	4.95	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
30	5.674	31.51	0.00	0.00	0.00	3.77	5.22	0.00	5.22	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
31	5.595	31.47	0.00	0.00	0.00	3.72	5.42	0.00	5.42	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
32	5.516	31.42	0.00	0.00	0.00	3.68	5.58	0.00	5.58	0.00	0.00	0.06	0.52	0.59	0.05	1.00	0.00	0.	0.00
33	5.437	31.37	0.00	0.00	0.00	3.65	5.70	0.00	5.70	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
34	5.358	31.33	0.00	0.00	0.00	3.62	5.80	0.00	5.80	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
35	5.279	31.28	0.00	0.00	0.00	3.60	5.88	0.00	5.88	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
36	5.200	31.23	0.00	0.00	0.00	3.58	5.95	0.00	5.95	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
37	5.121	31.19	0.00	0.00	0.00	3.56	6.01	0.00	6.01	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
38	5.042	31.14	0.00	0.00	0.00	3.55	6.06	0.00	6.06	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
39	4.963	31.09	0.00	0.00	0.00	3.54	6.11	0.00	6.11	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
40	4.884	31.05	0.00	0.00	0.00	3.53	6.15	0.00	6.15	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
41	4.805	31.00	0.00	0.00	0.00	3.52	6.18	0.00	6.18	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 7 Include D COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
42	UPR RCH	1.26000	31.00	0.00	0.00	0.00	3.52	6.18	0.00	6.18	0.00	0.00	0.07	0.52	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN VELO m²/s	MEAN m/s
42	4.80	4.71	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
43	4.71	4.62	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
44	4.62	4.52	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006

45	4.52	4.43	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
46	4.43	4.33	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
47	4.33	4.24	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
48	4.24	4.14	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
49	4.14	4.05	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
50	4.05	3.95	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
51	3.95	3.86	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
52	3.86	3.76	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
53	3.76	3.67	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
54	3.67	3.57	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
55	3.57	3.48	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
56	3.48	3.38	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
57	3.38	3.29	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
58	3.29	3.19	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
59	3.19	3.10	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
60	3.10	3.00	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
61	3.00	2.91	1.26000	0.0	0.00550	0.20	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.006	0.006
TOT					3.99			434104.81	156716.53						
AVG				0.0055			2.77	82.70			229.08				
CUM					12.47										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD 1/da	FULL SOD 1/da	CORR DECAY *	ORGN SETT **	ORGN DECAY **	NH3 SRCE 1/da	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM SETT
42	4.710	7.43	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
43	4.615	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
44	4.521	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.38	0.38	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
45	4.426	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
46	4.331	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
47	4.237	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
48	4.142	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
49	4.047	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
50	3.952	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
51	3.858	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
52	3.763	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
53	3.668	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
54	3.573	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.37	0.37	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
55	3.479	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
56	3.384	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
57	3.289	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
58	3.194	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
59	3.100	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
60	3.005	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
61	2.910	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.25	0.06	0.00	0.00	0.01	0.00	0.00	0.15		0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO	COLI #/100mL	NCM
42	4.710	31.02	0.00	0.00	0.00	3.60	6.04	0.00	6.04	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
43	4.615	31.04	0.00	0.00	0.00	3.68	5.91	0.00	5.91	0.00	0.00	0.06	0.52	0.59	0.05	1.00	0.00	0.	0.00
44	4.521	31.06	0.00	0.00	0.00	3.76	5.78	0.00	5.78	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
45	4.426	31.08	0.00	0.00	0.00	3.84	5.65	0.00	5.65	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
46	4.331	31.10	0.00	0.00	0.00	3.92	5.53	0.00	5.53	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
47	4.237	31.12	0.00	0.00	0.00	3.99	5.41	0.00	5.41	0.00	0.00	0.05	0.53	0.59	0.05	1.00	0.00	0.	0.00
48	4.142	31.14	0.00	0.00	0.00	4.06	5.29	0.00	5.29	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
49	4.047	31.16	0.00	0.00	0.00	4.14	5.17	0.00	5.17	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
50	3.952	31.18	0.00	0.00	0.00	4.21	5.06	0.00	5.06	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
51	3.858	31.20	0.00	0.00	0.00	4.27	4.95	0.00	4.95	0.00	0.00	0.05	0.54	0.58	0.05	1.00	0.00	0.	0.00
52	3.763	31.22	0.00	0.00	0.00	4.34	4.84	0.00	4.84	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
53	3.668	31.24	0.00	0.00	0.00	4.40	4.73	0.00	4.73	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
54	3.573	31.26	0.00	0.00	0.00	4.47	4.62	0.00	4.62	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
55	3.479	31.28	0.00	0.00	0.00	4.53	4.52	0.00	4.52	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
56	3.384	31.30	0.00	0.00	0.00	4.59	4.42	0.00	4.42	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
57	3.289	31.32	0.00	0.00	0.00	4.65	4.32	0.00	4.32	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
58	3.194	31.34	0.00	0.00	0.00	4.71	4.23	0.00	4.23	0.00	0.00	0.03	0.54	0.58	0.05	1.00	0.00	0.	0.00
59	3.100	31.36	0.00	0.00	0.00	4.77	4.13	0.00	4.13	0.00	0.00	0.03	0.54	0.58	0.05	1.00	0.00	0.	0.00
60	3.005	31.38	0.00	0.00	0.00	4.82	4.04	0.00	4.04	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
61	2.910	31.40	0.00	0.00	0.00	4.87	3.95	0.00	3.95	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 8 Include E COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS #/100mL	CHL A	COLI	NCM
62	UPR RCH	1.26000	31.40	0.00	0.00	0.00	4.87	3.95	0.00	3.95	0.00	0.00	0.03	0.54	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
62	2.91	2.82	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008	
63	2.82	2.74	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008	
64	2.74	2.65	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008	
65	2.65	2.56	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008	
66	2.56	2.48	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008	

67	2.48	2.39	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
68	2.39	2.30	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
69	2.30	2.22	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
70	2.22	2.13	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
71	2.13	2.04	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
72	2.04	1.96	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
73	1.96	1.87	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
74	1.87	1.78	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
75	1.78	1.70	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
76	1.70	1.61	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
77	1.61	1.52	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
78	1.52	1.44	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
79	1.44	1.35	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
80	1.35	1.26	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
81	1.26	1.17	1.26000	0.0	0.00813	0.12	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.008	0.008
TOT					2.47			268982.22	117459.52						
AVG				0.0081			2.29	67.70			155.03				
CUM					14.94										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O. 1/da	REAER RATE 1/da	DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD 1/da	FULL SOD 1/da	CORR DECAY *	ORGN SETT **	ORGN DECAY **	NH3 SRCE 1/da	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM SETT
62	2.823	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
63	2.737	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
64	2.650	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
65	2.563	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
66	2.476	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
67	2.389	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
68	2.303	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
69	2.216	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
70	2.129	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
71	2.042	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
72	1.956	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
73	1.869	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
74	1.782	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
75	1.695	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
76	1.609	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
77	1.522	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
78	1.435	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
79	1.348	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
80	1.262	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
81	1.175	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.31	0.06	0.00	0.00	0.01	0.00	0.00	0.15		0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00		

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO #/100mL	COLI	NCM
62	2.823	31.40	0.00	0.00	0.00	4.92	3.90	0.00	3.90	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
63	2.737	31.41	0.00	0.00	0.00	4.97	3.84	0.00	3.84	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
64	2.650	31.41	0.00	0.00	0.00	5.02	3.79	0.00	3.79	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
65	2.563	31.42	0.00	0.00	0.00	5.06	3.73	0.00	3.73	0.00	0.00	0.03	0.55	0.57	0.05	1.00	0.00	0.	0.00
66	2.476	31.42	0.00	0.00	0.00	5.11	3.68	0.00	3.68	0.00	0.00	0.03	0.55	0.57	0.05	1.00	0.00	0.	0.00
67	2.389	31.43	0.00	0.00	0.00	5.15	3.63	0.00	3.63	0.00	0.00	0.03	0.55	0.57	0.05	1.00	0.00	0.	0.00
68	2.303	31.43	0.00	0.00	0.00	5.19	3.58	0.00	3.58	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
69	2.216	31.44	0.00	0.00	0.00	5.23	3.53	0.00	3.53	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
70	2.129	31.44	0.00	0.00	0.00	5.27	3.48	0.00	3.48	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
71	2.042	31.45	0.00	0.00	0.00	5.31	3.43	0.00	3.43	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
72	1.956	31.45	0.00	0.00	0.00	5.34	3.38	0.00	3.38	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
73	1.869	31.46	0.00	0.00	0.00	5.38	3.33	0.00	3.33	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
74	1.782	31.47	0.00	0.00	0.00	5.42	3.29	0.00	3.29	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
75	1.695	31.47	0.00	0.00	0.00	5.45	3.24	0.00	3.24	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
76	1.609	31.48	0.00	0.00	0.00	5.48	3.19	0.00	3.19	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
77	1.522	31.48	0.00	0.00	0.00	5.52	3.15	0.00	3.15	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
78	1.435	31.49	0.00	0.00	0.00	5.55	3.10	0.00	3.10	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
79	1.348	31.49	0.00	0.00	0.00	5.58	3.06	0.00	3.06	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
80	1.262	31.50	0.00	0.00	0.00	5.61	3.02	0.00	3.02	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
81	1.175	31.50	0.00	0.00	0.00	5.64	2.98	0.00	2.98	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 9 Include F COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS #/100mL	CHL A	COLI	NCM
82	UPR RCH	1.26000	31.50	0.00	0.00	0.00	5.64	2.98	0.00	2.98	0.00	0.00	0.02	0.55	0.05	1.00	0.00	0.00
EACH	INCR	0.02500	30.00	0.00	0.00	0.00	2.00	8.00	0.00		0.00	0.10	0.50	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	PRISM m³	VELO m/s	TIDAL VELO m²/s	TIDAL VELO m/s	DISPRSN m/s	MEAN
82	1.17	1.12	1.28500	0.0	0.01049	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.010		
83	1.12	1.07	1.31000	0.0	0.01069	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.011		
84	1.07	1.02	1.33500	0.0	0.01090	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.011		
85	1.02	0.96	1.36000	0.0	0.01110	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.011		
86	0.96	0.91	1.38500	0.0	0.01131	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.011		
87	0.91	0.86	1.41000	0.0	0.01151	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012		

88	0.86	0.80	1.43500	0.0	0.01171	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012
89	0.80	0.75	1.46000	0.0	0.01192	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012
90	0.75	0.70	1.48500	0.0	0.01212	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012
91	0.70	0.65	1.51000	0.0	0.01233	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.012
92	0.65	0.59	1.53500	0.0	0.01253	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
93	0.59	0.54	1.56000	0.0	0.01273	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
94	0.54	0.49	1.58500	0.0	0.01294	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
95	0.49	0.43	1.61000	0.0	0.01314	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
96	0.43	0.38	1.63500	0.0	0.01335	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
97	0.38	0.33	1.66000	0.0	0.01355	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.012	0.014
98	0.33	0.27	1.68500	0.0	0.01375	0.04	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.012	0.014
99	0.27	0.22	1.71000	0.0	0.01396	0.04	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.012	0.014
100	0.22	0.17	1.73500	0.0	0.01416	0.04	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.012	0.014
101	0.17	0.12	1.76000	0.0	0.01437	0.04	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.012	0.014
TOT					1.00				129862.70	62433.99					
AVG					0.0123		2.08	58.90			122.51				
CUM					15.94										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O. 1/da	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD 1/da	FULL SOD 1/da	CORR DECAY *	ORGN SETT 1/da	ORGN DECAY **	NH3 SRCE **	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
82	1.122	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
83	1.069	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
84	1.016	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
85	0.963	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
86	0.910	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
87	0.857	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
88	0.804	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.35	0.35	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
89	0.751	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
90	0.698	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
91	0.645	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
92	0.592	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
93	0.539	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
94	0.486	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
95	0.433	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
96	0.380	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
97	0.327	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
98	0.274	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
99	0.221	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
100	0.168	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
101	0.115	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.34	0.07	0.00	0.00	0.01	0.00	0.00	0.15			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO	COLI #/100mL	NCM
82	1.122	31.50	0.00	0.00	0.00	5.58	3.05	0.00	3.05	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
83	1.069	31.50	0.00	0.00	0.00	5.53	3.12	0.00	3.12	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
84	1.016	31.50	0.00	0.00	0.00	5.48	3.19	0.00	3.19	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
85	0.963	31.50	0.00	0.00	0.00	5.43	3.26	0.00	3.26	0.00	0.00	0.02	0.54	0.57	0.05	1.00	0.00	0.	0.00
86	0.910	31.50	0.00	0.00	0.00	5.39	3.32	0.00	3.32	0.00	0.00	0.02	0.54	0.57	0.05	1.00	0.00	0.	0.00
87	0.857	31.50	0.00	0.00	0.00	5.34	3.38	0.00	3.38	0.00	0.00	0.02	0.54	0.57	0.05	1.00	0.00	0.	0.00
88	0.804	31.50	0.00	0.00	0.00	5.30	3.44	0.00	3.44	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
89	0.751	31.50	0.00	0.00	0.00	5.26	3.49	0.00	3.49	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
90	0.698	31.50	0.00	0.00	0.00	5.23	3.54	0.00	3.54	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
91	0.645	31.50	0.00	0.00	0.00	5.19	3.59	0.00	3.59	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
92	0.592	31.50	0.00	0.00	0.00	5.16	3.64	0.00	3.64	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
93	0.539	31.50	0.00	0.00	0.00	5.12	3.69	0.00	3.69	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
94	0.486	31.50	0.00	0.00	0.00	5.09	3.74	0.00	3.74	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
95	0.433	31.50	0.00	0.00	0.00	5.06	3.78	0.00	3.78	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
96	0.380	31.50	0.00	0.00	0.00	5.03	3.82	0.00	3.82	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
97	0.327	31.50	0.00	0.00	0.00	5.00	3.86	0.00	3.86	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
98	0.274	31.50	0.00	0.00	0.00	4.98	3.90	0.00	3.90	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
99	0.221	31.50	0.00	0.00	0.00	4.95	3.94	0.00	3.94	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
100	0.168	31.50	0.00	0.00	0.00	4.93	3.97	0.00	3.97	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
101	0.115	31.50	0.00	0.00	0.00	4.90	4.01	0.00	4.01	0.00	0.00	0.04	0.54	0.57	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 10 To Lock 3 COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
102	UPR RCH	1.76000	31.50	0.00	0.00	0.00	4.90	4.01	0.00	4.01	0.00	0.00	0.04	0.54	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
102	0.12	0.06	1.76000	0.0	0.01155	0.06	2.34	65.10	8759.20	3743.25	152.33	0.00	0.000	0.011	0.012
103	0.06	0.00	1.76000	0.0	0.01155	0.06	2.34	65.10	8759.20	3743.25	152.33	0.00	0.000	0.011	0.012
TOT						0.12			17518.41	7486.50					
AVG					0.0116		2.34	65.10			152.33				
CUM						16.05									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE **	ALG PROD **	MAC PROD 1/da	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
102	0.058	7.37	0.37	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
103	0.000	7.37	0.37	0.12	0.01	0.00	0.01	0.00	0.00	0.31	0.36	0.36	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.30	0.07	0.00	0.00	0.01	0.00	0.00	0.15			0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00	

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m^3	MACRO	COLI #/100mL	NCM
102	0.058	31.50	0.00	0.00	0.00	4.92	3.98	0.00	3.98	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
103	0.000	31.50	0.00	0.00	0.00	4.94	3.83	0.00	3.83	0.00	0.00	0.04	0.52	0.56	0.05	1.00	0.00	0.	0.00

STREAM SUMMARY Pearl River DO Modeling 090105
Headwater COEF-1 Run

TRAVEL TIME = 16.05 DAYS

MAXIMUM EFFLUENT = 0.00 PERCENT

FLOW = 0.10000 TO 1.76000 m^3/s
DISPERSION = 0.0010 TO 0.0122 m^2/s
VELOCITY = 0.00226 TO 0.01437 m/s
DEPTH = 0.99 TO 2.77 m
WIDTH = 43.75 TO 82.70 m

BOD DECAY = 0.11 TO 0.12 per day
NH3 DECAY = 0.20 TO 0.25 per day
SOD = 0.35 TO 2.19 $g/m^2/d$
NH3 SOURCE = 0.00 TO 0.00 $g/m^2/d$
REAERATION = 0.31 TO 0.88 per day
BOD SETTLING = 0.00 TO 0.01 per day
ORG-N DECAY = 0.06 TO 0.06 per day
ORG-N SETTLING = 0.00 TO 0.01 per day

TEMPERATURE = 31.00 TO 32.10 deg C
DISSOLVED OXYGEN = 3.52 TO 5.91 mg/L

Pearl River DO Modeling 090105
COEF-1 Run

REACH SUMMARY REPORT FOR Headwater

RCH NO.	REACH NAME	BEGIN DIST km	ENDING DIST km	REACH LENGTH km	TRAVEL TIME days	FLOW AT EOR m3/s	AVERAGE VELO m/s	AVG DEPTH m	AVG WIDTH m	FLOW AT EOR cfs	AVERAGE VELO fps	AVG DEPTH ft	AVG WIDTH ft
1	Pearl River to Above A	7.77	7.69	0.08	0.41	0.10000	0.00226	0.990	44.70	3.531	0.007	3.248	146.66
2	Include A	7.69	7.57	0.12	0.64	0.10000	0.00226	0.990	44.70	3.531	0.007	3.248	146.66
3	Include Stream 1	7.57	7.49	0.08	0.41	0.10000	0.00226	0.990	44.70	3.531	0.007	3.248	146.66
4	Include B	7.49	6.76	0.72	2.28	0.23000	0.00368	0.990	44.70	8.121	0.012	3.248	146.66
5	Include C	6.76	5.99	0.77	2.00	0.23000	0.00446	1.180	43.75	8.121	0.015	3.872	143.54
6	Include Stream 2	5.99	4.80	1.18	2.74	1.26000	0.00500	2.070	62.75	44.491	0.016	6.792	205.88
7	Include D	4.80	2.91	1.89	3.99	1.26000	0.00550	2.770	82.70	44.491	0.018	9.088	271.34
8	Include E	2.91	1.17	1.74	2.47	1.26000	0.00813	2.290	67.70	44.491	0.027	7.513	222.12
9	Include F	1.17	0.12	1.06	1.00	1.76000	0.01232	2.080	58.90	62.146	0.040	6.824	193.25
10	To Lock 3	0.12	0.00	0.12	0.12	1.76000	0.01155	2.340	65.10	62.146	0.038	7.678	213.59

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N BKGD	ORG-N BOD1	NCM ALG	SOD NCM	SOD PHOT	SOD RESP	SOD PHOT	ALG OUT	ALG IN	MAC	TOT	TOT
1	43.	0.	-45.	0.	0.	0.	0.	0.	0.	0.	0.	3.	-1.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	-46.7	46.7	0.00
2	45.	0.	-46.	0.	0.	0.	0.	0.	0.	0.	0.	3.	-1.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	-48.1	48.1	0.00
3	46.	0.	-48.	0.	0.	0.	0.	0.	0.	0.	0.	4.	-1.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	-50.9	50.9	0.00
4	48.	0.	-50.	0.	0.	0.	0.	0.	0.	0.	0.	4.	-1.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	-52.3	52.3	0.00
5	50.	0.	-50.	0.	0.	0.	0.	0.	0.	0.	0.	2.	-1.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	-52.2	52.2	0.00
6	50.	0.	-51.	0.	0.	0.	0.	0.	0.	0.	0.	2.	-1.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	-52.8	52.8	0.00
7	51.	0.	-51.	0.	0.	0.	2.	0.	0.	0.	0.	6.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-59.6	59.6	0.00
8	51.	0.	-52.	0.	0.	0.	2.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-60.5	60.5	0.00
9	52.	0.	-54.	0.	0.	0.	2.	0.	0.	0.	0.	8.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-62.3	62.3	0.00
10	54.	0.	-56.	0.	0.	0.	2.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-64.7	64.7	0.00
11	56.	0.	-59.	0.	0.	0.	2.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-67.5	67.5	0.00
12	59.	0.	-62.	0.	0.	0.	2.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-70.7	70.7	0.00
13	62.	0.	-65.	0.	0.	0.	2.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-74.0	74.0	0.00
14	65.	0.	-69.	0.	0.	0.	2.	0.	0.	0.	0.	10.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-77.6	77.6	0.00
15	69.	0.	-73.	0.	0.	0.	2.	0.	0.	0.	0.	10.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-81.3	81.3	0.00
16	73.	0.	-77.	0.	0.	0.	2.	0.	0.	0.	0.	10.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-85.1	85.1	0.00
17	77.	0.	-78.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-2.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-86.9	86.9	0.00
18	78.	0.	-79.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-2.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-88.0	88.0	0.00
19	79.	0.	-80.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-2.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-89.0	89.0	0.00
20	80.	0.	-81.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-2.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-89.9	89.9	0.00
21	81.	0.	-82.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-2.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-90.7	90.7	0.00
22	82.	0.	-83.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-91.4	91.4	0.00
23	83.	0.	-83.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-92.1	92.1	0.00
24	83.	0.	-84.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-92.8	92.8	0.00
25	84.	0.	-85.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-93.4	93.4	0.00
26	85.	0.	-85.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-1.	0.	0.	0.	-7.	0.	0.	0.	0.	0.	0.	-93.9	93.9	0.00
27	85.	0.	-105.	0.	0.	0.	12.	0.	0.	0.	0.	14.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-112.0	112.0	0.00
28	105.	0.	-125.	0.	0.	0.	12.	0.	0.	0.	0.	15.	-5.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-132.6	132.6	0.00
29	125.	0.	-145.	0.	0.	0.	12.	0.	0.	0.	0.	15.	-6.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-152.8	152.8	0.00
30	145.	0.	-165.	0.	0.	0.	12.	0.	0.	0.	0.	15.	-6.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-172.9	172.9	0.00
31	165.	0.	-184.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-6.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-192.9	192.9	0.00

32	184.	0.	-204.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-6.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-212.8	212.8	0.00
33	204.	0.	-224.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-6.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-232.8	232.8	0.00
34	224.	0.	-244.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-7.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-252.7	252.7	0.00
35	244.	0.	-263.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-7.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-272.6	272.6	0.00
36	263.	0.	-283.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-7.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-292.5	292.5	0.00
37	283.	0.	-303.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-7.	-1.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-312.4	312.4	0.00
38	303.	0.	-323.	0.	0.	0.	12.	0.	0.	0.	0.	16.	-7.	-1.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-332.4	332.4	0.00
39	323.	0.	-343.	0.	0.	0.	12.	0.	0.	0.	0.	17.	-7.	-1.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-352.3	352.3	0.00
40	343.	0.	-363.	0.	0.	0.	12.	0.	0.	0.	0.	17.	-7.	-1.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-372.3	372.3	0.00
41	363.	0.	-383.	0.	0.	0.	12.	0.	0.	0.	0.	17.	-7.	-1.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-392.4	392.4	0.00
42	383.	0.	-392.	0.	0.	0.	0.	0.	0.	0.	0.	26.	-14.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-410.6	410.6	0.01
43	392.	0.	-401.	0.	0.	0.	0.	0.	0.	0.	0.	25.	-14.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-419.1	419.2	0.01
44	401.	0.	-410.	0.	0.	0.	0.	0.	0.	0.	0.	25.	-14.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-427.5	427.5	0.00
45	410.	0.	-418.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-13.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-435.6	435.6	0.00
46	418.	0.	-426.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-13.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-443.6	443.6	0.00
47	426.	0.	-435.	0.	0.	0.	0.	0.	0.	0.	0.	23.	-13.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-451.4	451.4	0.00
48	435.	0.	-442.	0.	0.	0.	0.	0.	0.	0.	0.	23.	-12.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-459.0	459.0	0.00
49	442.	0.	-450.	0.	0.	0.	0.	0.	0.	0.	0.	22.	-12.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-466.4	466.4	0.00
50	450.	0.	-458.	0.	0.	0.	0.	0.	0.	0.	0.	22.	-12.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-473.7	473.7	0.00
51	458.	0.	-465.	0.	0.	0.	0.	0.	0.	0.	0.	21.	-12.	-1.	0.	0.	-2.	-1.	0.	0.	2.	0.	0.	-480.8	480.8	0.00
52	465.	0.	-472.	0.	0.	0.	0.	0.	0.	0.	0.	21.	-11.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-487.7	487.7	0.00
53	472.	0.	-480.	0.	0.	0.	0.	0.	0.	0.	0.	20.	-11.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-494.5	494.5	0.00
54	480.	0.	-486.	0.	0.	0.	0.	0.	0.	0.	0.	20.	-11.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-501.2	501.2	0.00
55	486.	0.	-493.	0.	0.	0.	0.	0.	0.	0.	0.	19.	-11.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-507.6	507.6	0.00
56	493.	0.	-500.	0.	0.	0.	0.	0.	0.	0.	0.	19.	-10.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-514.0	514.0	0.00
57	500.	0.	-506.	0.	0.	0.	0.	0.	0.	0.	0.	18.	-10.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-520.2	520.2	0.00
58	506.	0.	-513.	0.	0.	0.	0.	0.	0.	0.	0.	18.	-10.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-526.2	526.2	0.00
59	513.	0.	-519.	0.	0.	0.	0.	0.	0.	0.	0.	18.	-10.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-532.2	532.2	0.00

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	WSLD OUT	WITH IN	REAE DECA	BOD1 DECA	NH3-N DECA	ORG-N BKGD	NCM BOD1	SOD ALG	SOD NCM	SOD PHOT	SOD RESP	ALG PHOT	ALG OUT	MAC IN	TOT	TOT
60	519.	0.	-525.	0.	0.	0.	0.	0.	0.	0.	0.	17.	-10.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-538.0	538.0	0.00
61	525.	0.	-531.	0.	0.	0.	0.	0.	0.	0.	0.	17.	-9.	-1.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-543.6	543.6	0.00
62	531.	0.	-536.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-6.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-544.3	544.3	0.00
63	536.	0.	-541.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-6.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-549.4	549.4	0.00
64	541.	0.	-546.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-6.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-554.3	554.3	0.00
65	546.	0.	-551.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-6.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-559.1	559.1	0.00
66	551.	0.	-556.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-563.8	563.8	0.00
67	556.	0.	-561.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-568.3	568.3	0.00
68	561.	0.	-565.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-572.8	572.8	0.00
69	565.	0.	-569.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-577.1	577.1	0.00
70	569.	0.	-574.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-581.2	581.2	0.00
71	574.	0.	-578.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-585.3	585.3	0.00
72	578.	0.	-582.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-589.3	589.3	0.00
73	582.	0.	-586.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-593.1	593.1	0.00
74	586.	0.	-590.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-596.9	596.9	0.00
75	590.	0.	-593.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-600.6	600.6	0.00
76	593.	0.	-597.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-604.1	604.1	0.00

77	597.	0.	-601.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-607.6	607.6	0.00
78	601.	0.	-604.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-611.0	611.0	0.00
79	604.	0.	-607.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-5.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-614.3	614.3	0.00
80	607.	0.	-611.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-4.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-617.5	617.5	0.00
81	611.	0.	-614.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-4.	0.	0.	0.	-2.	0.	0.	0.	1.	0.	0.	-620.6	620.6	0.00
82	614.	0.	-620.	0.	0.	0.	4.	0.	0.	0.	0.	5.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-623.6	623.6	0.00
83	620.	0.	-626.	0.	0.	0.	4.	0.	0.	0.	0.	5.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-629.8	629.8	0.00
84	626.	0.	-632.	0.	0.	0.	4.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-636.0	636.0	0.00
85	632.	0.	-638.	0.	0.	0.	4.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-642.3	642.3	0.00
86	638.	0.	-645.	0.	0.	0.	4.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-648.7	648.7	0.00
87	645.	0.	-651.	0.	0.	0.	4.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-655.2	655.2	0.00
88	651.	0.	-658.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-661.7	661.7	0.00
89	658.	0.	-664.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-668.2	668.2	0.00
90	664.	0.	-671.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-674.8	674.8	0.00
91	671.	0.	-677.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-681.4	681.4	0.00
92	677.	0.	-684.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-688.1	688.1	0.00
93	684.	0.	-691.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-694.9	694.9	0.00
94	691.	0.	-697.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-701.6	701.6	0.00
95	697.	0.	-704.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-708.4	708.4	0.00
96	704.	0.	-711.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-715.3	715.3	0.00
97	711.	0.	-718.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-722.2	722.2	0.00
98	718.	0.	-725.	0.	0.	0.	4.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-729.1	729.1	0.00
99	725.	0.	-732.	0.	0.	0.	4.	0.	0.	0.	0.	7.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-736.0	736.0	0.00
100	732.	0.	-738.	0.	0.	0.	4.	0.	0.	0.	0.	7.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-743.0	743.0	0.00
101	738.	0.	-746.	0.	0.	0.	4.	0.	0.	0.	0.	7.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-750.1	750.1	0.00
102	746.	0.	-748.	0.	0.	0.	0.	0.	0.	0.	0.	8.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-754.2	754.2	0.00
103	748.	0.	-751.	0.	0.	0.	0.	0.	0.	0.	0.	8.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-757.2	757.2	0.00

Pearl River DO Modeling 090105
COEF-1 Run

INPUT/OUTPUT LOADING SUMMARY

	FLOW m^3/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER FLOW	0.1	43.2	43.2	0	0	0.9	4.3	0	0	0
INCREMENTAL INFLOW	1.66	286.8	1113.7	0	0	14.3	71.7	0	0	0
INCREMENTAL OUTFLOW	0	0	0	0	0	0	0	0	0	0
WASTELOADS	0	0	0	0	0	0	0	0	0	0
WITHDRAWLS	0	0	0	0	0	0	0	0	0	0
FLOW THRU LOWER BNDRY	-1.76	-751.4	-581.9	0	0	-5.5	-79.1	0	0	0
DISPERSION THRU LOWER BNDRY		0.3	-19	0	0	0.3	-2.4	0	0	0
DISPERSION THRU HDWTR BNDRY		0	0	0	0	0	0	0	0	0
NON-POINT INPUT		0	0	0	0	0				
NATURAL REAERATION		1199.7								
DAM REAERATION		0								
BACKGROUND SOD		-271.1								
BOD#1 DECAY		-528	-528							
BOD#1 SETTLING		-28	-28							
ANAEROBIC BOD#1 DECAY			0							

BOD#2 DECAY		0		0						
BOD#2 SETTLING		0		0						
ANAEROBIC BOD#2 DECAY				0						
ORG-N DECAY		0			0	0				
ORG-N SETTLING					0	0				
NH3 DECAY		-43.2				-10	10			
BACKGROUND NH3 SOURCE						0				
OTHER DENITRIFICATION							0			
PHOSPHORUS SOURCE								0		
ALGAE PHOTOSYNTHESIS		91.8				0	-4.6	0	0	
ALGAE RESPIRATION		0				0		0	0	
ALGAE SETTLING		0							0	
MACRO PHOTOSYNTHESIS		0				0	0	0		
NCM DECAY		0								0
NCM SETTLING		0								0
Total inputs	1.76	1621.8	1156.9	0	0	15.5	86	0	0	0
Total outputs	-1.76	-1621.7	-1156.9	0	0	-15.5	-86.1	0	0	0
Net convergence error	0	0.1	0	0	0	0	0	0	0	0

.....EXECUTION COMPLETED

Calibration output file for subsegment 090204

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LA-QUAL Version 8.00
Louisiana Department of Environmental Quality

Input file is D:\Pearl\LAQUAL\S090204\Seg090204.txt
Output produced at 09:59 on 06/29/2007

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

CARD TYPE      CONTROL TITLES

TITLE01        Pearl River DO Modeling 090204
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01

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

CARD TYPE      MODEL OPTION

MODOPT     NO   TEMPERATURE
MODOPT     NO   SALINITY
MODOPT     NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT     NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT    YES   DISSOLVED OXYGEN
MODOPT    YES   BOD1
MODOPT     NO   BOD2
MODOPT    YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT     NO   PHOSPHORUS
MODOPT     NO   CHLOROPHYLL A
MODOPT     NO   MACROPHYTES
MODOPT     NO   COLIFORM
MODOPT     NO   NONCONSERVATIVE MATERIAL
ENDATA02

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

CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE

PROGRAM        MAXImum Iteration Limit          =     5000.00000
PROGRAM        HYDRaulic calculation method     =        2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE           =        1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE           =        1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                       =       0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE         =        3.00000 (inhibit all rates but SOD)
PROGRAM        K2 MAXIMUM                       =      25.00000 per day
ENDATA03
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$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$

 CARD TYPE     RATE CODE     THETA VALUE

ENDATA04

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

CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE

ENDATA05

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

CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE

ENDATA06

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

CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE

ENDATA07

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

REACH ID     1   LA  Lock 3 to Below A                23.00  TO   21.50   0.3000     1.50       5       1      5
REACH ID     2   IB  Below A to Below B               21.50  TO   20.50   0.2000     1.00       5       6     10
REACH ID     3   IC  Below B to Below C               20.50  TO   19.00   0.3000     1.50       5      11     15
REACH ID     4   ID  Below C to Lock 2                19.00  TO   17.78   0.3050     1.22       4      16     19
REACH ID     5   IE  Lock 2 (Church) to ABTalisheek      17.78  TO   13.43   0.2900     4.35      15      20     34
REACH ID     6   I1  AB to Talisheek                 13.43  TO   11.98   0.2900     1.45       5      35     39
REACH ID     7   IG  Talisheek to Below G             11.98  TO   10.40   0.3950     1.58       4      40     43
REACH ID     8   IH  Below G to Below H               10.40  TO    7.40   0.3000     3.00      10      44     53
REACH ID     9   II  Below H to Evans Creek            7.40  TO    5.45   0.3900     1.95       5      54     58
REACH ID    10   EP  Evans Creek to Possible Stream       5.45  TO    4.70   0.2500     0.75       3      59     61
REACH ID    11   PJ  Possible Stream to Junior High       4.70  TO    3.40   0.3250     1.30       4      62     65
REACH ID    12   IJ  Junior High to Spillway           3.40  TO    2.70   0.3500     0.70       2      66     67
REACH ID    13   IK  Spillway to Lock 1               2.70  TO    0.00   0.3000     2.70       9      68     76
ENDATA08

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

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

HYDRO-1      1  LA      0.000      0.000     55.100      0.000      0.000      2.210     0.00010   0.025
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HYDRO-1     2  IB     0.000     0.000     55.100     0.000     0.000     2.210    0.00010  0.025
HYDRO-1     3  IC     0.000     0.000     55.100     0.000     0.000     2.210    0.00010  0.025
HYDRO-1     4  ID     0.000     0.000     59.300     0.000     0.000     2.110    0.00010  0.025
HYDRO-1     5  IE     0.000     0.000     62.900     0.000     0.000     1.910    0.00010  0.025
HYDRO-1     6  I1     0.000     0.000     62.900     0.000     0.000     1.910    0.00010  0.025
HYDRO-1     7  IG     0.000     0.000     69.500     0.000     0.000     3.750    0.00010  0.025
HYDRO-1     8  IH     0.000     0.000     49.600     0.000     0.000     1.640    0.00010  0.025
HYDRO-1     9  II     0.000     0.000     98.100     0.000     0.000     2.250    0.00010  0.025
HYDRO-1    10  EP     0.000     0.000     98.100     0.000     0.000     2.250    0.00010  0.025
HYDRO-1    11  PJ     0.000     0.000     98.100     0.000     0.000     2.250    0.00010  0.025
HYDRO-1    12  IJ     0.000     0.000     58.900     0.000     0.000     1.810    0.00010  0.025
HYDRO-1    13  IK     0.000     0.000     85.700     0.000     0.000     2.260    0.00010  0.025
ENDATA09

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

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

ENDATA10

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

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

INITIAL        1  LA     32.10    0.00    6.30    0.10    0.20    0.07    1.50    0.00
INITIAL        2  IB     32.10    0.00    6.30    0.10    0.20    0.07    1.50    0.00
INITIAL        3  IC     32.10    0.00    6.30    0.10    0.20    0.07    1.50    0.00
INITIAL        4  ID     31.70    0.00    6.80    0.10    0.32    0.07    0.80    0.00
INITIAL        5  IE     31.80    0.00    6.50    0.10    0.15    0.07    3.60    0.00
INITIAL        6  I1     31.80    0.00    6.50    0.10    0.15    0.07    3.60    0.00
INITIAL        7  IG     29.80    0.00    3.50    0.10    0.09    0.06    0.80    0.00
INITIAL        8  IH     30.90    0.00    5.20    0.10    0.04    0.06    4.20    0.00
INITIAL        9  II     30.80    0.00    4.90    0.11    0.06    0.06    7.30    0.00
INITIAL       10  EP     30.80    0.00    4.90    0.10    0.06    0.06    7.30    0.00
INITIAL       11  PJ     30.80    0.00    4.90    0.10    0.06    0.06    7.30    0.00
INITIAL       12  IJ     31.10    0.00    5.60    0.10    0.06    0.06    9.80    0.00
INITIAL       13  IK     31.60    0.00    6.70    0.10    0.04    0.03    2.30    0.00
ENDATA11

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

COEF-1    1  LA   3 OCONNER-DOBB    0.000   0.000   0.000   0.500   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    2  IB   3 OCONNER-DOBB    0.000   0.000   0.000   0.500   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    3  IC   3 OCONNER-DOBB    0.000   0.000   0.000   0.400   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    4  ID   3 OCONNER-DOBB    0.000   0.000   0.000   0.400   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
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COEF-1    5  IE   3 OCONNER-DOBB    0.000    0.000    0.000    0.100    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    6  I1   3 OCONNER-DOBB    0.000    0.000    0.000    3.100    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    7  IG   3 OCONNER-DOBB    0.000    0.000    0.000    0.300    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    8  IH   3 OCONNER-DOBB    0.000    0.000    0.000    0.300    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    9  II   3 OCONNER-DOBB    0.000    0.000    0.000    1.300    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   10  EP   3 OCONNER-DOBB    0.000    0.000    0.000    0.900    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   11  PJ   3 OCONNER-DOBB    0.000    0.000    0.000    0.900    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   12  IJ   3 OCONNER-DOBB    0.000    0.000    0.000    0.800    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   13  IK   3 OCONNER-DOBB    0.000    0.000    0.000    0.000    0.060    0.100    1.000    0.001    0.010    0.000    0.000    0.000
ENDATA12

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

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

COEF-2          1  LA      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          2  IB      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          3  IC      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          4  ID      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          5  IE      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          6  I1      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          7  IG      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          8  IH      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2          9  II      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2         10  EP      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2         11  PJ      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2         12  IJ      0.050    0.010    1.000     0.100    0.000    0.000    0.001
COEF-2         13  IK      0.050    0.010    1.000     0.100    0.000    0.000    0.001
ENDATA13

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

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

COEF-3          1  LA      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          2  IB      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          3  IC      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          4  ID      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          5  IE      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          6  I1      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          7  IG      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          8  IH      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3          9  II      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3         10  EP      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3         11  PJ      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3         12  IJ      3.00    0.000     0.00     0.00      0.00     0.00     0.00     0.00
COEF-3         13  IK      3.00    0.000     0.00     0.00      0.00     0.00     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
COEF-4	1	LA	3.000	0.000	0.000	0.000
COEF-4	2	IB	3.000	0.000	0.000	0.000
COEF-4	3	IC	3.000	0.000	0.000	0.000
COEF-4	4	ID	3.000	0.000	0.000	0.000
COEF-4	5	IE	3.000	0.000	0.000	0.000
COEF-4	6	I1	3.000	0.000	0.000	0.000
COEF-4	7	IG	3.000	0.000	0.000	0.000
COEF-4	8	IH	3.000	0.000	0.000	0.000
COEF-4	9	II	3.000	0.000	0.000	0.000
COEF-4	10	EP	3.000	0.000	0.000	0.000
COEF-4	11	PJ	3.000	0.000	0.000	0.000
COEF-4	12	IJ	3.000	0.000	0.000	0.000
COEF-4	13	IK	3.000	0.000	0.000	0.000

ENDATA15

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

CARD TYPE	REACH ID		OUTFLOW	INFLOW	TEMP	SALIN	CM-I	CM-II	IN/DIST	OUT/DIST
INCR-1	1	LA	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	2	IB	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	3	IC	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	4	ID	0.00000	0.87000	30.00	0.00	0.00	0.00	0.71312	0.00000
INCR-1	5	IE	0.00000	0.28000	30.00	0.00	0.00	0.00	0.06437	0.00000
INCR-1	6	I1	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	7	IG	0.00000	0.59000	30.00	0.00	0.00	0.00	0.37342	0.00000
INCR-1	8	IH	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	9	II	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	10	EP	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	11	PJ	0.00000	0.30000	30.00	0.00	0.00	0.00	0.23077	0.00000
INCR-1	12	IJ	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000
INCR-1	13	IK	0.00000	0.00000	30.00	0.00	0.00	0.00	0.00000	0.00000

ENDATA16

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

CARD TYPE	REACH ID		DO	BOD	ORG-N	NH3-N	NO3-N	BOD#2
INCR-2	1	LA	8.00	0.00	0.00	0.00	0.00	0.00
INCR-2	2	IB	8.00	0.00	0.00	0.00	0.00	0.00
INCR-2	3	IC	8.00	0.00	0.00	0.00	0.00	0.00
INCR-2	4	ID	8.00	5.00	0.00	0.50	0.10	0.00
INCR-2	5	IE	8.00	10.00	0.00	0.50	0.10	0.00
INCR-2	6	I1	8.00	10.00	0.00	0.50	0.10	0.00

```
INCR-2        7  IG      8.00    15.00     0.00     1.00     0.10     0.00
INCR-2        8  IH      8.00     0.00     0.00     0.00     0.00     0.00
INCR-2        9  II      8.00     0.00     0.00     0.00     0.00     0.00
INCR-2       10  EP      8.00     0.00     0.00     0.00     0.00     0.00
INCR-2       11  PJ      8.00    15.00     0.00     0.50     0.10     0.00
INCR-2       12  IJ      8.00     0.00     0.00     0.00     0.00     0.00
INCR-2       13  IK      8.00     0.00     0.00     0.00     0.00     0.00
ENDATA17

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

 CARD TYPE     REACH  ID      PHOS     CHL A     COLI      NCM

INCR-3        1  LA      0.00     0.00     0.00     0.00
INCR-3        2  IB      0.00     0.00     0.00     0.00
INCR-3        3  IC      0.00     0.00     0.00     0.00
INCR-3        4  ID      0.00     0.00     0.00     0.00
INCR-3        5  IE      0.00     0.00     0.00     0.00
INCR-3        6  I1      0.00     0.00     0.00     0.00
INCR-3        7  IG      0.00     0.00     0.00     0.00
INCR-3        8  IH      0.00     0.00     0.00     0.00
INCR-3        9  II      0.00     0.00     0.00     0.00
INCR-3       10  EP      0.00     0.00     0.00     0.00
INCR-3       11  PJ      0.00     0.00     0.00     0.00
INCR-3       12  IJ      0.00     0.00     0.00     0.00
INCR-3       13  IK      0.00     0.00     0.00     0.00
ENDATA18

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

CARD TYPE     REACH  ID      BOD#1    ORG-N     COLI      NCM       DO     BOD#2

ENDATA19

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

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

HDWTR-1         1             Headwater    0   0.28000    9.887   30.00     0.00     0.000     0.000
ENDATA20

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

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

HDWTR-2         1             Headwater       6.00      1.00      0.00      0.50      0.10      0.00
ENDATA21
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$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$

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

HDWTR-3        1            Headwater       0.00     0.00     0.00     0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM    RIVER    NAME
         ELEMENT  ELEMENT    KILOM

ENDATA23

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

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

WSTLD-1      20      17.78  Church             0.00008    0.00278    0.002   30.00     0.00     0.000     0.000
WSTLD-1      66       3.40  Junior High        0.00019    0.00665    0.004   30.00     0.00     0.000     0.000
ENDATA24

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

WSTLD-2        20    Church                0.00     5.00     0.00     0.00     0.70     0.00     0.00     0.00
WSTLD-2        66    Junior High           0.00     5.00     0.00     0.00     0.70     0.00     0.00     0.00
ENDATA25

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

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

WSTLD-3        20    Church                0.00     0.00     0.00     0.00
WSTLD-3        66    Junior High           0.00     0.00     0.00     0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                CONCENTRATION

ENDATA27

$$$ DATA TYPE 28 (DAM DATA) $$$
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```
CARD TYPE    ELEMENT   NAME              EQN     "A"     "B"     "H"

ENDATA28

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

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

SENSITIV       VELOCITY    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       DISPERSI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       REAERATI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD DECA    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD SETT    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BENTHAL     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
ENDATA29

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

NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =  13
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13
ENDATA30

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

OVERLAY 1      s2.OVL                    :S090204
ENDATA31

    .....NO ERRORS DETECTED IN INPUT DATA
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN   4 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED

INTERMEDIATE REPORT
 Dissolved Oxygen                                  Pearl River DO Modeling 090204
    mg/L                                        COEF-1 Run

  ID   RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9

  LA    1    1       5.65     5.56     5.60     5.69     5.80
  IB    2    6       5.87     5.94     6.00     6.06     6.11
  IC    3   11       6.26     6.36     6.42     6.45     6.48
  ID    4   16       6.68     6.69     6.69     6.68
  IE    5   20       6.61     6.55     6.51     6.49     6.47     6.46     6.46     6.46     6.47     6.48
  IE    5   30       6.49     6.50     6.52     6.53     6.54
  I1    6   35       5.74     5.04     4.45     3.94     3.50
  IG    7   40       4.11     4.49     4.75     4.93
  IH    8   44       4.97     5.01     5.05     5.10     5.16     5.21     5.27     5.33     5.39     5.46
  II    9   54       5.26     5.12     5.02     4.96     4.92
```

EP	10	59	5.01	5.09	5.17						
PJ	11	62	5.34	5.48	5.60	5.69					
IJ	12	66	5.65	5.56							
IK	13	68	5.65	5.73	5.81	5.89	5.97	6.05	6.12	6.19	6.26

INTERMEDIATE REPORT
Effective BOD — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.80	0.64	0.51	0.41	0.33					
IB	2	6	0.28	0.24	0.21	0.18	0.15					
IC	3	11	0.12	0.10	0.08	0.06	0.06					
ID	4	16	1.93	2.60	2.93	3.12						
IE	5	20	3.05	2.98	2.92	2.87	2.82	2.77	2.73	2.69	2.65	2.62
IE	5	30	2.59	2.56	2.53	2.51	2.48					
I1	6	35	2.37	2.26	2.16	2.07	1.98					
IG	7	40	2.92	3.62	4.17	4.59						
IH	8	44	4.48	4.37	4.27	4.16	4.06	3.97	3.87	3.78	3.68	3.59
II	9	54	3.34	3.10	2.88	2.67	2.48					
EP	10	59	2.37	2.25	2.15							
PJ	11	62	2.46	2.73	2.96	3.17						
IJ	12	66	3.07	2.98								
IK	13	68	2.85	2.72	2.60	2.48	2.37	2.27	2.17	2.07	1.97	

INTERMEDIATE REPORT
Biochemical Oxygen Demand — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.80	0.64	0.51	0.41	0.33					
IB	2	6	0.28	0.24	0.21	0.18	0.15					
IC	3	11	0.12	0.10	0.08	0.06	0.06					
ID	4	16	1.93	2.60	2.93	3.12						
IE	5	20	3.05	2.98	2.92	2.87	2.82	2.77	2.73	2.69	2.65	2.62
IE	5	30	2.59	2.56	2.53	2.51	2.48					
I1	6	35	2.37	2.26	2.16	2.07	1.98					
IG	7	40	2.92	3.62	4.17	4.59						
IH	8	44	4.48	4.37	4.27	4.16	4.06	3.97	3.87	3.78	3.68	3.59
II	9	54	3.34	3.10	2.88	2.67	2.48					
EP	10	59	2.37	2.25	2.15							
PJ	11	62	2.46	2.73	2.96	3.17						
IJ	12	66	3.07	2.98								
IK	13	68	2.85	2.72	2.60	2.48	2.37	2.27	2.17	2.07	1.97	

INTERMEDIATE REPORT
Organic Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.00	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.00					
ID	4	16	0.00	0.00	0.00	0.00						
IE	5	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	5	30	0.00	0.00	0.00	0.00	0.00					
I1	6	35	0.00	0.00	0.00	0.00	0.00					
IG	7	40	0.00	0.00	0.00	0.00						
IH	8	44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II	9	54	0.00	0.00	0.00	0.00	0.00					
EP	10	59	0.00	0.00	0.00							
PJ	11	62	0.00	0.00	0.00	0.00						
IJ	12	66	0.00	0.00								
IK	13	68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

INTERMEDIATE REPORT
Ammonia Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.36	0.26	0.19	0.14	0.10					
IB	2	6	0.08	0.07	0.05	0.04	0.03					
IC	3	11	0.02	0.02	0.01	0.01	0.01					
ID	4	16	0.18	0.24	0.27	0.29						
IE	5	20	0.27	0.25	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16
IE	5	30	0.15	0.15	0.14	0.14	0.13					
I1	6	35	0.13	0.12	0.11	0.11	0.10					
IG	7	40	0.16	0.20	0.24	0.26						
IH	8	44	0.25	0.24	0.24	0.23	0.22	0.22	0.21	0.20	0.20	0.19
II	9	54	0.17	0.16	0.14	0.13	0.11					
EP	10	59	0.11	0.10	0.09							
PJ	11	62	0.10	0.10	0.11	0.11						
IJ	12	66	0.11	0.10								
IK	13	68	0.10	0.09	0.08	0.08	0.07	0.07	0.06	0.06	0.06	

INTERMEDIATE REPORT
Nitrate+Nitrite Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.23	0.32	0.38	0.42	0.45					
IB	2	6	0.46	0.47	0.48	0.48	0.48					
IC	3	11	0.48	0.48	0.48	0.48	0.48					
ID	4	16	0.35	0.30	0.28	0.27						
IE	5	20	0.28	0.30	0.31	0.32	0.33	0.33	0.34	0.34	0.35	0.35

IE	5	30	0.36	0.36	0.36	0.36	0.36					
I1	6	35	0.37	0.37	0.38	0.38	0.39					
IG	7	40	0.38	0.38	0.38	0.38						
IH	8	44	0.39	0.39	0.39	0.40	0.40	0.40	0.41	0.41	0.41	0.41
II	9	54	0.42	0.42	0.42	0.42	0.42					
EP	10	59	0.41	0.41	0.41							
PJ	11	62	0.39	0.38	0.36	0.35						
IJ	12	66	0.35	0.35								
IK	13	68	0.36	0.36	0.36	0.37	0.37	0.37	0.37	0.37	0.37	

INTERMEDIATE REPORT
Total Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.59	0.58	0.57	0.56	0.55					
IB	2	6	0.54	0.54	0.53	0.52	0.52					
IC	3	11	0.51	0.50	0.49	0.49	0.48					
ID	4	16	0.53	0.54	0.55	0.55						
IE	5	20	0.55	0.55	0.54	0.54	0.53	0.53	0.53	0.52	0.52	0.51
IE	5	30	0.51	0.51	0.50	0.50	0.50					
I1	6	35	0.49	0.49	0.49	0.49	0.49					
IG	7	40	0.54	0.58	0.61	0.64						
IH	8	44	0.64	0.63	0.63	0.63	0.62	0.62	0.62	0.61	0.61	0.60
II	9	54	0.59	0.57	0.56	0.54	0.53					
EP	10	59	0.52	0.51	0.50							
PJ	11	62	0.49	0.48	0.47	0.46						
IJ	12	66	0.46	0.46								
IK	13	68	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.43	0.43	

INTERMEDIATE REPORT
Chlorophyll a — Pearl River DO Modeling 090204
µg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	1.50	1.50	1.50	1.50	1.50					
IB	2	6	1.50	1.50	1.50	1.50	1.50					
IC	3	11	1.36	1.22	1.08	0.94	0.80					
ID	4	16	1.50	2.20	2.90	3.60						
IE	5	20	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
IE	5	30	3.60	3.60	3.60	3.60	3.60					
I1	6	35	3.04	2.48	1.92	1.36	0.80					
IG	7	40	1.65	2.50	3.35	4.20						
IH	8	44	4.51	4.82	5.13	5.44	5.75	6.06	6.37	6.68	6.99	7.30
II	9	54	7.30	7.30	7.30	7.30	7.30					
EP	10	59	7.30	7.30	7.30							
PJ	11	62	7.93	8.55	9.18	9.80						
IJ	12	66	6.05	2.30								

IK	13	68	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30

INTERMEDIATE REPORT
Temperature — Pearl River DO Modeling 090204
deg C — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	32.10	32.10	32.10	32.10	32.10					
IB	2	6	32.10	32.10	32.10	32.10	32.10					
IC	3	11	32.02	31.94	31.86	31.78	31.70					
ID	4	16	31.73	31.75	31.77	31.80						
IE	5	20	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80
IE	5	30	31.80	31.80	31.80	31.80	31.80					
I1	6	35	31.40	31.00	30.60	30.20	29.80					
IG	7	40	30.07	30.35	30.62	30.90						
IH	8	44	30.89	30.88	30.87	30.86	30.85	30.84	30.83	30.82	30.81	30.80
II	9	54	30.80	30.80	30.80	30.80	30.80					
EP	10	59	30.80	30.80	30.80							
PJ	11	62	30.88	30.95	31.02	31.10						
IJ	12	66	31.35	31.60								
IK	13	68	31.60	31.60	31.60	31.60	31.60	31.60	31.60	31.60	31.60	

INTERMEDIATE REPORT
Salinity — Pearl River DO Modeling 090204
ppt — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.00	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.00					
ID	4	16	0.00	0.00	0.00	0.00						
IE	5	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	5	30	0.00	0.00	0.00	0.00	0.00					
I1	6	35	0.00	0.00	0.00	0.00	0.00					
IG	7	40	0.00	0.00	0.00	0.00						
IH	8	44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II	9	54	0.00	0.00	0.00	0.00	0.00					
EP	10	59	0.00	0.00	0.00							
PJ	11	62	0.00	0.00	0.00	0.00						
IJ	12	66	0.00	0.00								
IK	13	68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

INTERMEDIATE REPORT
River Distance — Pearl River DO Modeling 090204
km — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9

LA	1	1	23.	22.	22.	22.	22.						
IB	2	6	21.	21.	21.	21.	20.						
IC	3	11	20.	20.	20.	19.	19.						
ID	4	16	19.	18.	18.	18.							
IE	5	20	17.	17.	17.	17.	16.	16.	16.	15.	15.	15.	
IE	5	30	15.	14.	14.	14.	13.						
I1	6	35	13.	13.	13.	12.	12.						
IG	7	40	12.	11.	11.	10.							
IH	8	44	10.	10.	9.	9.	9.	9.	8.	8.	8.	7.	
II	9	54	7.	7.	6.	6.	5.						
EP	10	59	5.	5.	5.								
PJ	11	62	4.	4.	4.	3.							
IJ	12	66	3.	3.									
IK	13	68	2.	2.	2.	2.	1.	1.	1.	0.	0.		

INTERMEDIATE REPORT
Flow — Pearl River DO Modeling 090204
m^3/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.3	0.3	0.3	0.3	0.3					
IB	2	6	0.3	0.3	0.3	0.3	0.3					
IC	3	11	0.3	0.3	0.3	0.3	0.3					
ID	4	16	0.5	0.7	0.9	1.1						
IE	5	20	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3
IE	5	30	1.4	1.4	1.4	1.4	1.4					
I1	6	35	1.4	1.4	1.4	1.4	1.4					
IG	7	40	1.6	1.7	1.9	2.0						
IH	8	44	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
II	9	54	2.0	2.0	2.0	2.0	2.0					
EP	10	59	2.0	2.0	2.0							
PJ	11	62	2.1	2.2	2.2	2.3						
IJ	12	66	2.3	2.3								
IK	13	68	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	

INTERMEDIATE REPORT
Dispersion — Pearl River DO Modeling 090204
m^2/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.0	0.0	0.0	0.0	0.0					
IB	2	6	0.0	0.0	0.0	0.0	0.0					
IC	3	11	0.0	0.0	0.0	0.0	0.0					
ID	4	16	0.0	0.0	0.0	0.0						
IE	5	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	5	30	0.0	0.0	0.0	0.0	0.0					
I1	6	35	0.0	0.0	0.0	0.0	0.0					
IG	7	40	0.0	0.0	0.0	0.0						

IH	8	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II	9	54	0.0	0.0	0.0	0.0	0.0					
EP	10	59	0.0	0.0	0.0							
PJ	11	62	0.0	0.0	0.0	0.0						
IJ	12	66	0.0	0.0								
IK	13	68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

INTERMEDIATE REPORT
Advective Velocity Pearl River DO Modeling 090204
m/s COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.0	0.0	0.0	0.0	0.0					
IB	2	6	0.0	0.0	0.0	0.0	0.0					
IC	3	11	0.0	0.0	0.0	0.0	0.0					
ID	4	16	0.0	0.0	0.0	0.0						
IE	5	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	5	30	0.0	0.0	0.0	0.0	0.0					
I1	6	35	0.0	0.0	0.0	0.0	0.0					
IG	7	40	0.0	0.0	0.0	0.0						
IH	8	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II	9	54	0.0	0.0	0.0	0.0	0.0					
EP	10	59	0.0	0.0	0.0							
PJ	11	62	0.0	0.0	0.0	0.0						
IJ	12	66	0.0	0.0								
IK	13	68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

INTERMEDIATE REPORT
Depth Pearl River DO Modeling 090204
m COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	2.2	2.2	2.2	2.2	2.2					
IB	2	6	2.2	2.2	2.2	2.2	2.2					
IC	3	11	2.2	2.2	2.2	2.2	2.2					
ID	4	16	2.1	2.1	2.1	2.1						
IE	5	20	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
IE	5	30	1.9	1.9	1.9	1.9	1.9					
I1	6	35	1.9	1.9	1.9	1.9	1.9					
IG	7	40	3.8	3.8	3.8	3.8						
IH	8	44	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
II	9	54	2.2	2.2	2.2	2.2	2.2					
EP	10	59	2.2	2.2	2.2							
PJ	11	62	2.2	2.2	2.2	2.2						
IJ	12	66	1.8	1.8								
IK	13	68	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	

INTERMEDIATE REPORT

Width
m

Pearl River DO Modeling 090204
COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	55.1	55.1	55.1	55.1	55.1					
IB	2	6	55.1	55.1	55.1	55.1	55.1					
IC	3	11	55.1	55.1	55.1	55.1	55.1					
ID	4	16	59.3	59.3	59.3	59.3						
IE	5	20	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9
IE	5	30	62.9	62.9	62.9	62.9	62.9					
I1	6	35	62.9	62.9	62.9	62.9	62.9					
IG	7	40	69.5	69.5	69.5	69.5						
IH	8	44	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6
II	9	54	98.1	98.1	98.1	98.1	98.1					
EP	10	59	98.1	98.1	98.1							
PJ	11	62	98.1	98.1	98.1	98.1						
IJ	12	66	58.9	58.9								
IK	13	68	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	

INTERMEDIATE REPORT
Cross-Sectional Area
m^2

Pearl River DO Modeling 090204
COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	121.8	121.8	121.8	121.8	121.8					
IB	2	6	121.8	121.8	121.8	121.8	121.8					
IC	3	11	121.8	121.8	121.8	121.8	121.8					
ID	4	16	125.1	125.1	125.1	125.1						
IE	5	20	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1
IE	5	30	120.1	120.1	120.1	120.1	120.1					
I1	6	35	120.1	120.1	120.1	120.1	120.1					
IG	7	40	260.6	260.6	260.6	260.6						
IH	8	44	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
II	9	54	220.7	220.7	220.7	220.7	220.7					
EP	10	59	220.7	220.7	220.7							
PJ	11	62	220.7	220.7	220.7	220.7						
IJ	12	66	106.6	106.6								
IK	13	68	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7	

INTERMEDIATE REPORT
Reaeration Rate
per day

Pearl River DO Modeling 090204
COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.395	0.395	0.395	0.395	0.395					
IB	2	6	0.395	0.395	0.395	0.395	0.395					
IC	3	11	0.394	0.394	0.393	0.393	0.392					

ID	4	16	0.411	0.411	0.411	0.412						
IE	5	20	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455
IE	5	30	0.455	0.455	0.455	0.455	0.455					
I1	6	35	0.452	0.448	0.445	0.442	0.439					
IG	7	40	0.225	0.226	0.227	0.228						
IH	8	44	0.521	0.521	0.521	0.521	0.521	0.521	0.521	0.521	0.521	0.521
II	9	54	0.379	0.379	0.379	0.379	0.379					
EP	10	59	0.379	0.379	0.379							
PJ	11	62	0.380	0.380	0.381	0.381						
IJ	12	66	0.476	0.478								
IK	13	68	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	

INTERMEDIATE REPORT
BOD Decay Rate — Pearl River DO Modeling 090204
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.10	0.10	0.10	0.10	0.10					
IB	2	6	0.10	0.10	0.10	0.10	0.10					
IC	3	11	0.10	0.10	0.10	0.10	0.10					
ID	4	16	0.10	0.10	0.10	0.10						
IE	5	20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
IE	5	30	0.10	0.10	0.10	0.10	0.10					
I1	6	35	0.10	0.10	0.10	0.10	0.09					
IG	7	40	0.10	0.10	0.10	0.10						
IH	8	44	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
II	9	54	0.10	0.10	0.10	0.10	0.10					
EP	10	59	0.10	0.10	0.10							
PJ	11	62	0.10	0.10	0.10	0.10						
IJ	12	66	0.10	0.10								
IK	13	68	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	

INTERMEDIATE REPORT
BOD Settling Rate — Pearl River DO Modeling 090204
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.06	0.06	0.06	0.06	0.06					
IB	2	6	0.06	0.06	0.06	0.06	0.06					
IC	3	11	0.06	0.06	0.06	0.06	0.06					
ID	4	16	0.06	0.06	0.06	0.06						
IE	5	20	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
IE	5	30	0.07	0.07	0.07	0.07	0.07					
I1	6	35	0.07	0.07	0.07	0.07	0.07					
IG	7	40	0.03	0.03	0.03	0.03						
IH	8	44	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
II	9	54	0.06	0.06	0.06	0.06	0.06					
EP	10	59	0.06	0.06	0.06							

PJ	11	62	0.06	0.06	0.06	0.06					
IJ	12	66	0.07	0.07							
IK	13	68	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06

INTERMEDIATE REPORT
Ammonia Decay Rate — Pearl River DO Modeling 090204
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.25	0.25	0.25	0.25	0.25					
IB	2	6	0.25	0.25	0.25	0.25	0.25					
IC	3	11	0.25	0.25	0.25	0.25	0.25					
ID	4	16	0.25	0.25	0.25	0.25						
IE	5	20	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
IE	5	30	0.25	0.25	0.25	0.25	0.25					
I1	6	35	0.23	0.22	0.21	0.19	0.18					
IG	7	40	0.19	0.20	0.21	0.22						
IH	8	44	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
II	9	54	0.22	0.22	0.22	0.22	0.22					
EP	10	59	0.22	0.22	0.22							
PJ	11	62	0.22	0.22	0.23	0.23						
IJ	12	66	0.23	0.24								
IK	13	68	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	

INTERMEDIATE REPORT
Sediment Oxygen Demand — Pearl River DO Modeling 090204
$g/m^2/d$ — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	1.18	1.16	1.14	1.13	1.12					
IB	2	6	1.11	1.10	1.10	1.10	1.09					
IC	3	11	0.87	0.86	0.85	0.85	0.84					
ID	4	16	1.09	1.18	1.23	1.25						
IE	5	20	0.61	0.61	0.60	0.59	0.58	0.58	0.57	0.57	0.56	0.56
IE	5	30	0.55	0.55	0.55	0.54	0.54					
I1	6	35	6.67	6.49	6.32	6.16	6.00					
IG	7	40	0.94	1.04	1.12	1.19						
IH	8	44	1.18	1.16	1.15	1.13	1.12	1.11	1.09	1.08	1.07	1.06
II	9	54	3.00	2.97	2.94	2.91	2.89					
EP	10	59	2.08	2.07	2.05							
PJ	11	62	2.10	2.15	2.19	2.22						
IJ	12	66	2.04	2.05								
IK	13	68	0.37	0.36	0.34	0.33	0.31	0.30	0.29	0.27	0.26	

CONDENSED CAPSULE SUMMARY FOR Headwater

DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORGN	NH3	CHLA	REAER RATE	BOD1 DECA	BOD1 SETT	BOD2 DECA	BOD2 SETT	NH3 DECA	SOD

km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	µg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
HDWTR	0.28000	30.00	0.00	6.00	1.00	0.00	0.00	0.50	1.50						
22.70	0.28000	32.10	0.00	5.65	0.80	0.00	0.00	0.36	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.18
22.40	0.28000	32.10	0.00	5.56	0.64	0.00	0.00	0.26	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.16
22.10	0.28000	32.10	0.00	5.60	0.51	0.00	0.00	0.19	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.14
21.80	0.28000	32.10	0.00	5.69	0.41	0.00	0.00	0.14	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.13
21.50	0.28000	32.10	0.00	5.80	0.33	0.00	0.00	0.10	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.12
21.30	0.28000	32.10	0.00	5.87	0.28	0.00	0.00	0.08	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.11
21.10	0.28000	32.10	0.00	5.94	0.24	0.00	0.00	0.07	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.10
20.90	0.28000	32.10	0.00	6.00	0.21	0.00	0.00	0.05	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.10
20.70	0.28000	32.10	0.00	6.06	0.18	0.00	0.00	0.04	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.10
20.50	0.28000	32.10	0.00	6.11	0.15	0.00	0.00	0.03	1.50	0.39	0.10	0.06	0.01	0.00	0.25	1.09
20.20	0.28000	32.02	0.00	6.26	0.12	0.00	0.00	0.02	1.36	0.39	0.10	0.06	0.01	0.00	0.25	0.87
19.90	0.28000	31.94	0.00	6.36	0.10	0.00	0.00	0.02	1.22	0.39	0.10	0.06	0.01	0.00	0.25	0.86
19.60	0.28000	31.86	0.00	6.42	0.08	0.00	0.00	0.01	1.08	0.39	0.10	0.06	0.01	0.00	0.25	0.85
19.30	0.28000	31.78	0.00	6.45	0.06	0.00	0.00	0.01	0.94	0.39	0.10	0.06	0.01	0.00	0.25	0.85
19.00	0.28000	31.70	0.00	6.48	0.06	0.00	0.00	0.01	0.80	0.39	0.10	0.06	0.01	0.00	0.25	0.84
18.69	0.49750	31.73	0.00	6.68	1.93	0.00	0.00	0.18	1.50	0.41	0.10	0.06	0.01	0.00	0.25	1.09
18.39	0.71500	31.75	0.00	6.69	2.60	0.00	0.00	0.24	2.20	0.41	0.10	0.06	0.01	0.00	0.25	1.18
18.08	0.93250	31.77	0.00	6.69	2.93	0.00	0.00	0.27	2.90	0.41	0.10	0.06	0.01	0.00	0.25	1.23
17.78	1.15000	31.80	0.00	6.68	3.12	0.00	0.00	0.29	3.60	0.41	0.10	0.06	0.01	0.00	0.25	1.25
17.49	1.16875	31.80	0.00	6.61	3.05	0.00	0.00	0.27	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.61
17.20	1.18741	31.80	0.00	6.55	2.98	0.00	0.00	0.25	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.61
16.91	1.20608	31.80	0.00	6.51	2.92	0.00	0.00	0.23	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.60
16.62	1.22475	31.80	0.00	6.49	2.87	0.00	0.00	0.22	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.59
16.33	1.24341	31.80	0.00	6.47	2.82	0.00	0.00	0.21	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.58
16.04	1.26208	31.80	0.00	6.46	2.77	0.00	0.00	0.20	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.58
15.75	1.28075	31.80	0.00	6.46	2.73	0.00	0.00	0.19	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.57
15.46	1.29941	31.80	0.00	6.46	2.69	0.00	0.00	0.18	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.57
15.17	1.31808	31.80	0.00	6.47	2.65	0.00	0.00	0.17	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.56
14.88	1.33675	31.80	0.00	6.48	2.62	0.00	0.00	0.16	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.56
14.59	1.35541	31.80	0.00	6.49	2.59	0.00	0.00	0.15	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.55
14.30	1.37408	31.80	0.00	6.50	2.56	0.00	0.00	0.15	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.55
14.01	1.39274	31.80	0.00	6.52	2.53	0.00	0.00	0.14	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.55
13.72	1.41141	31.80	0.00	6.53	2.51	0.00	0.00	0.14	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.54
13.43	1.43008	31.80	0.00	6.54	2.48	0.00	0.00	0.13	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.54
13.14	1.43008	31.40	0.00	5.74	2.37	0.00	0.00	0.13	3.04	0.45	0.10	0.07	0.01	0.00	0.23	6.67
12.85	1.43008	31.00	0.00	5.04	2.26	0.00	0.00	0.12	2.48	0.45	0.10	0.07	0.01	0.00	0.22	6.49
12.56	1.43008	30.60	0.00	4.45	2.16	0.00	0.00	0.11	1.92	0.45	0.10	0.07	0.01	0.00	0.21	6.32
12.27	1.43008	30.20	0.00	3.94	2.07	0.00	0.00	0.11	1.36	0.44	0.10	0.07	0.01	0.00	0.19	6.16
11.98	1.43008	29.80	0.00	3.50	1.98	0.00	0.00	0.10	0.80	0.44	0.09	0.07	0.01	0.00	0.18	6.00
11.58	1.57758	30.07	0.00	4.11	2.92	0.00	0.00	0.16	1.65	0.22	0.10	0.03	0.01	0.00	0.19	0.94
11.19	1.72508	30.35	0.00	4.49	3.62	0.00	0.00	0.20	2.50	0.23	0.10	0.03	0.01	0.00	0.20	1.04
10.79	1.87258	30.62	0.00	4.75	4.17	0.00	0.00	0.24	3.35	0.23	0.10	0.03	0.01	0.00	0.21	1.12
10.40	2.02008	30.90	0.00	4.93	4.59	0.00	0.00	0.26	4.20	0.23	0.10	0.03	0.01	0.00	0.22	1.19
10.10	2.02008	30.89	0.00	4.97	4.48	0.00	0.00	0.25	4.51	0.52	0.10	0.08	0.01	0.00	0.22	1.18
9.80	2.02008	30.88	0.00	5.01	4.37	0.00	0.00	0.24	4.82	0.52	0.10	0.08	0.01	0.00	0.22	1.16
9.50	2.02008	30.87	0.00	5.05	4.27	0.00	0.00	0.24	5.13	0.52	0.10	0.08	0.01	0.00	0.22	1.15
9.20	2.02008	30.86	0.00	5.10	4.16	0.00	0.00	0.23	5.44	0.52	0.10	0.08	0.01	0.00	0.22	1.13

8.90	2.02008	30.85	0.00	5.16	4.06	0.00	0.00	0.22	5.75	0.52	0.10	0.08	0.01	0.00	0.22	1.12
8.60	2.02008	30.84	0.00	5.21	3.97	0.00	0.00	0.22	6.06	0.52	0.10	0.08	0.01	0.00	0.22	1.11
8.30	2.02008	30.83	0.00	5.27	3.87	0.00	0.00	0.21	6.37	0.52	0.10	0.08	0.01	0.00	0.22	1.09
8.00	2.02008	30.82	0.00	5.33	3.78	0.00	0.00	0.20	6.68	0.52	0.10	0.08	0.01	0.00	0.22	1.08
7.70	2.02008	30.81	0.00	5.39	3.68	0.00	0.00	0.20	6.99	0.52	0.10	0.08	0.01	0.00	0.22	1.07
7.40	2.02008	30.80	0.00	5.46	3.59	0.00	0.00	0.19	7.30	0.52	0.10	0.08	0.01	0.00	0.22	1.06
7.01	2.02008	30.80	0.00	5.26	3.34	0.00	0.00	0.17	7.30	0.38	0.10	0.06	0.01	0.00	0.22	3.00
6.62	2.02008	30.80	0.00	5.12	3.10	0.00	0.00	0.16	7.30	0.38	0.10	0.06	0.01	0.00	0.22	2.97
6.23	2.02008	30.80	0.00	5.02	2.88	0.00	0.00	0.14	7.30	0.38	0.10	0.06	0.01	0.00	0.22	2.94
5.84	2.02008	30.80	0.00	4.96	2.67	0.00	0.00	0.13	7.30	0.38	0.10	0.06	0.01	0.00	0.22	2.91
5.45	2.02008	30.80	0.00	4.92	2.48	0.00	0.00	0.11	7.30	0.38	0.10	0.06	0.01	0.00	0.22	2.89
5.20	2.02008	30.80	0.00	5.01	2.37	0.00	0.00	0.11	7.30	0.38	0.10	0.06	0.01	0.00	0.22	2.08
4.95	2.02008	30.80	0.00	5.09	2.25	0.00	0.00	0.10	7.30	0.38	0.10	0.06	0.01	0.00	0.22	2.07
4.70	2.02008	30.80	0.00	5.17	2.15	0.00	0.00	0.09	7.30	0.38	0.10	0.06	0.01	0.00	0.22	2.05
4.38	2.09508	30.88	0.00	5.34	2.46	0.00	0.00	0.10	7.93	0.38	0.10	0.06	0.01	0.00	0.22	2.10
4.05	2.17008	30.95	0.00	5.48	2.73	0.00	0.00	0.10	8.55	0.38	0.10	0.06	0.01	0.00	0.22	2.15
3.73	2.24508	31.02	0.00	5.60	2.96	0.00	0.00	0.11	9.18	0.38	0.10	0.06	0.01	0.00	0.23	2.19
3.40	2.32008	31.10	0.00	5.69	3.17	0.00	0.00	0.11	9.80	0.38	0.10	0.06	0.01	0.00	0.23	2.22
3.05	2.32027	31.35	0.00	5.65	3.07	0.00	0.00	0.11	6.05	0.48	0.10	0.07	0.01	0.00	0.23	2.04
2.70	2.32027	31.60	0.00	5.56	2.98	0.00	0.00	0.10	2.30	0.48	0.10	0.07	0.01	0.00	0.24	2.05
2.40	2.32027	31.60	0.00	5.65	2.85	0.00	0.00	0.10	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.37
2.10	2.32027	31.60	0.00	5.73	2.72	0.00	0.00	0.09	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.36
1.80	2.32027	31.60	0.00	5.81	2.60	0.00	0.00	0.08	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.34
1.50	2.32027	31.60	0.00	5.89	2.48	0.00	0.00	0.08	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.33
1.20	2.32027	31.60	0.00	5.97	2.37	0.00	0.00	0.07	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.31
0.90	2.32027	31.60	0.00	6.05	2.27	0.00	0.00	0.07	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.30
0.60	2.32027	31.60	0.00	6.12	2.17	0.00	0.00	0.06	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.29
0.30	2.32027	31.60	0.00	6.19	2.07	0.00	0.00	0.06	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.27
0.00	2.32027	31.60	0.00	6.26	1.97	0.00	0.00	0.06	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.26

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	DISP	DEPTH	WIDTH	VELO	VELO	SAT	RATE	DECA	SETT	DECA	SETT	DECA	SOD
		km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	m²/s	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
	HDWTR		0.280	30.0	0.0	6.0	1.0	0.0	0.0	0.5	1.5													
1 LA	1	22.70	0.280	32.1	0.0	5.7	0.8	0.0	0.0	0.4	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.18
2 LA	1	22.40	0.280	32.1	0.0	5.6	0.6	0.0	0.0	0.3	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.16
3 LA	1	22.10	0.280	32.1	0.0	5.6	0.5	0.0	0.0	0.2	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.14
4 LA	1	21.80	0.280	32.1	0.0	5.7	0.4	0.0	0.0	0.1	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.13
5 LA	1	21.50	0.280	32.1	0.0	5.8	0.3	0.0	0.0	0.1	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.12
6 IB	2	21.30	0.280	32.1	0.0	5.9	0.3	0.0	0.0	0.1	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.11
7 IB	2	21.10	0.280	32.1	0.0	5.9	0.2	0.0	0.0	0.1	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.10
8 IB	2	20.90	0.280	32.1	0.0	6.0	0.2	0.0	0.0	0.1	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.10
9 IB	2	20.70	0.280	32.1	0.0	6.1	0.2	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.10
10 IB	2	20.50	0.280	32.1	0.0	6.1	0.2	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.002	0.002	7.3	0.395	0.10	0.06	0.01	0.00	0.25	1.09
11 IC	3	20.20	0.280	32.0	0.0	6.3	0.1	0.0	0.0	0.0	1.4	0.0	2.21	55.1	0.002	0.002	7.3	0.394	0.10	0.06	0.01	0.00	0.25	0.87
12 IC	3	19.90	0.280	31.9	0.0	6.4	0.1	0.0	0.0	0.0	1.2	0.0	2.21	55.1	0.002	0.002	7.3	0.394	0.10	0.06	0.01	0.00	0.25	0.86
13 IC	3	19.60	0.280	31.9	0.0	6.4	0.1	0.0	0.0	0.0	1.1	0.0	2.21	55.1	0.002	0.002	7.3	0.393	0.10	0.06	0.01	0.00	0.25	0.85

14	IC	3	19.30	0.280	31.8	0.0	6.5	0.1	0.0	0.0	0.0	0.9	0.0	2.21	55.1	0.002	0.002	7.3	0.393	0.10	0.06	0.01	0.00	0.25	0.85
15	IC	3	19.00	0.280	31.7	0.0	6.5	0.1	0.0	0.0	0.0	0.8	0.0	2.21	55.1	0.002	0.002	7.3	0.392	0.10	0.06	0.01	0.00	0.25	0.84
16	ID	4	18.69	0.498	31.7	0.0	6.7	1.9	0.0	0.0	0.2	1.5	0.0	2.11	59.3	0.004	0.004	7.3	0.411	0.10	0.06	0.01	0.00	0.25	1.09
17	ID	4	18.39	0.715	31.8	0.0	6.7	2.6	0.0	0.0	0.2	2.2	0.0	2.11	59.3	0.006	0.006	7.3	0.411	0.10	0.06	0.01	0.00	0.25	1.18
18	ID	4	18.08	0.933	31.8	0.0	6.7	2.9	0.0	0.0	0.3	2.9	0.0	2.11	59.3	0.007	0.007	7.3	0.411	0.10	0.06	0.01	0.00	0.25	1.23
19	ID	4	17.78	1.150	31.8	0.0	6.7	3.1	0.0	0.0	0.3	3.6	0.0	2.11	59.3	0.009	0.009	7.3	0.412	0.10	0.06	0.01	0.00	0.25	1.25
WASTELOAD # 020 (Church) ENTERS HERE																									
20	IE	5	17.49	1.169	31.8	0.0	6.6	3.0	0.0	0.0	0.3	3.6	0.0	1.91	62.9	0.010	0.010	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.61
21	IE	5	17.20	1.187	31.8	0.0	6.6	3.0	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.010	0.010	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.61
22	IE	5	16.91	1.206	31.8	0.0	6.5	2.9	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.010	0.010	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.60
23	IE	5	16.62	1.225	31.8	0.0	6.5	2.9	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.010	0.010	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.59
24	IE	5	16.33	1.243	31.8	0.0	6.5	2.8	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.010	0.010	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.58
25	IE	5	16.04	1.262	31.8	0.0	6.5	2.8	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.011	0.011	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.58
26	IE	5	15.75	1.281	31.8	0.0	6.5	2.7	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.011	0.011	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.57
27	IE	5	15.46	1.299	31.8	0.0	6.5	2.7	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.011	0.011	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.57
28	IE	5	15.17	1.318	31.8	0.0	6.5	2.7	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.011	0.011	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.56
29	IE	5	14.88	1.337	31.8	0.0	6.5	2.6	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.011	0.011	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.56
30	IE	5	14.59	1.355	31.8	0.0	6.5	2.6	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.011	0.011	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.55
31	IE	5	14.30	1.374	31.8	0.0	6.5	2.6	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.011	0.011	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.55
32	IE	5	14.01	1.393	31.8	0.0	6.5	2.5	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.012	0.012	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.55
33	IE	5	13.72	1.411	31.8	0.0	6.5	2.5	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.012	0.012	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.54
34	IE	5	13.43	1.430	31.8	0.0	6.5	2.5	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.012	0.012	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.54
35	I1	6	13.14	1.430	31.4	0.0	5.7	2.4	0.0	0.0	0.1	3.0	0.0	1.91	62.9	0.012	0.012	7.4	0.452	0.10	0.07	0.01	0.00	0.23	6.67
36	I1	6	12.85	1.430	31.0	0.0	5.0	2.3	0.0	0.0	0.1	2.5	0.0	1.91	62.9	0.012	0.012	7.4	0.448	0.10	0.07	0.01	0.00	0.22	6.49
37	I1	6	12.56	1.430	30.6	0.0	4.4	2.2	0.0	0.0	0.1	1.9	0.0	1.91	62.9	0.012	0.012	7.5	0.445	0.10	0.07	0.01	0.00	0.21	6.32
38	I1	6	12.27	1.430	30.2	0.0	3.9	2.1	0.0	0.0	0.1	1.4	0.0	1.91	62.9	0.012	0.012	7.5	0.442	0.10	0.07	0.01	0.00	0.19	6.16
39	I1	6	11.98	1.430	29.8	0.0	3.5	2.0	0.0	0.0	0.1	0.8	0.0	1.91	62.9	0.012	0.012	7.6	0.439	0.09	0.07	0.01	0.00	0.18	6.00
40	IG	7	11.58	1.578	30.1	0.0	4.1	2.9	0.0	0.0	0.2	1.6	0.0	3.75	69.5	0.006	0.006	7.5	0.225	0.10	0.03	0.01	0.00	0.19	0.94
41	IG	7	11.19	1.725	30.3	0.0	4.5	3.6	0.0	0.0	0.2	2.5	0.0	3.75	69.5	0.007	0.007	7.5	0.226	0.10	0.03	0.01	0.00	0.20	1.04
42	IG	7	10.79	1.873	30.6	0.0	4.8	4.2	0.0	0.0	0.2	3.3	0.0	3.75	69.5	0.007	0.007	7.5	0.227	0.10	0.03	0.01	0.00	0.21	1.12
43	IG	7	10.40	2.020	30.9	0.0	4.9	4.6	0.0	0.0	0.3	4.2	0.0	3.75	69.5	0.008	0.008	7.4	0.228	0.10	0.03	0.01	0.00	0.22	1.19
44	IH	8	10.10	2.020	30.9	0.0	5.0	4.5	0.0	0.0	0.3	4.5	0.0	1.64	49.6	0.025	0.025	7.4	0.521	0.10	0.08	0.01	0.00	0.22	1.18
45	IH	8	9.80	2.020	30.9	0.0	5.0	4.4	0.0	0.0	0.2	4.8	0.0	1.64	49.6	0.025	0.025	7.4	0.521	0.10	0.08	0.01	0.00	0.22	1.16
46	IH	8	9.50	2.020	30.9	0.0	5.1	4.3	0.0	0.0	0.2	5.1	0.0	1.64	49.6	0.025	0.025	7.4	0.521	0.10	0.08	0.01	0.00	0.22	1.15
47	IH	8	9.20	2.020	30.9	0.0	5.1	4.2	0.0	0.0	0.2	5.4	0.0	1.64	49.6	0.025	0.025	7.4	0.521	0.10	0.08	0.01	0.00	0.22	1.13
48	IH	8	8.90	2.020	30.9	0.0	5.2	4.1	0.0	0.0	0.2	5.8	0.0	1.64	49.6	0.025	0.025	7.4	0.521	0.10	0.08	0.01	0.00	0.22	1.12
49	IH	8	8.60	2.020	30.8	0.0	5.2	4.0	0.0	0.0	0.2	6.1	0.0	1.64	49.6	0.025	0.025	7.5	0.521	0.10	0.08	0.01	0.00	0.22	1.11
50	IH	8	8.30	2.020	30.8	0.0	5.3	3.9	0.0	0.0	0.2	6.4	0.0	1.64	49.6	0.025	0.025	7.5	0.521	0.10	0.08	0.01	0.00	0.22	1.09
51	IH	8	8.00	2.020	30.8	0.0	5.3	3.8	0.0	0.0	0.2	6.7	0.0	1.64	49.6	0.025	0.025	7.5	0.521	0.10	0.08	0.01	0.00	0.22	1.08
52	IH	8	7.70	2.020	30.8	0.0	5.4	3.7	0.0	0.0	0.2	7.0	0.0	1.64	49.6	0.025	0.025	7.5	0.521	0.10	0.08	0.01	0.00	0.22	1.07
53	IH	8	7.40	2.020	30.8	0.0	5.5	3.6	0.0	0.0	0.2	7.3	0.0	1.64	49.6	0.025	0.025	7.5	0.521	0.10	0.08	0.01	0.00	0.22	1.06
54	II	9	7.01	2.020	30.8	0.0	5.3	3.3	0.0	0.0	0.2	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	3.00
55	II	9	6.62	2.020	30.8	0.0	5.1	3.1	0.0	0.0	0.2	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	2.97
56	II	9	6.23	2.020	30.8	0.0	5.0	2.9	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	2.94
57	II	9	5.84	2.020	30.8	0.0	5.0	2.7	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	2.91
58	II	9	5.45	2.020	30.8	0.0	4.9	2.5	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	2.89
59	EP	10	5.20	2.020	30.8	0.0	5.0	2.4	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	2.08
60	EP	10	4.95	2.020	30.8	0.0	5.1	2.3	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	2.07
61	EP	10	4.70	2.020	30.8	0.0	5.2	2.1	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.009	0.009	7.5	0.379	0.10	0.06	0.01	0.00	0.22	2.05
62	PJ	11	4.38	2.095	30.9	0.0	5.3	2.5	0.0	0.0	0.1	7.9	0.0	2.25	98.1	0.009	0.009	7.4	0.380	0.10	0.06	0.01	0.00	0.22	2.10

63	PJ 11	4.05	2.170	31.0	0.0	5.5	2.7	0.0	0.0	0.1	8.6	0.0	2.25	98.1	0.010	0.010	7.4	0.380	0.10	0.06	0.01	0.00	0.22	2.15
64	PJ 11	3.73	2.245	31.0	0.0	5.6	3.0	0.0	0.0	0.1	9.2	0.0	2.25	98.1	0.010	0.010	7.4	0.381	0.10	0.06	0.01	0.00	0.23	2.19
65	PJ 11	3.40	2.320	31.1	0.0	5.7	3.2	0.0	0.0	0.1	9.8	0.0	2.25	98.1	0.011	0.011	7.4	0.381	0.10	0.06	0.01	0.00	0.23	2.22
WASTELOAD # 066 (Junior High) ENTERS HERE																								
66	IJ 12	3.05	2.320	31.4	0.0	5.7	3.1	0.0	0.0	0.1	6.1	0.0	1.81	58.9	0.022	0.022	7.4	0.476	0.10	0.07	0.01	0.00	0.23	2.04
67	IJ 12	2.70	2.320	31.6	0.0	5.6	3.0	0.0	0.0	0.1	2.3	0.0	1.81	58.9	0.022	0.022	7.4	0.478	0.10	0.07	0.01	0.00	0.24	2.05
68	IK 13	2.40	2.320	31.6	0.0	5.6	2.8	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.37
69	IK 13	2.10	2.320	31.6	0.0	5.7	2.7	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.36
70	IK 13	1.80	2.320	31.6	0.0	5.8	2.6	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.34
71	IK 13	1.50	2.320	31.6	0.0	5.9	2.5	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.33

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	DISP	DEPTH	WIDTH	ADVEC VELO	MEAN VELO	DO SAT	REAER RATE	BOD1 DECA	BOD1 SETT	BOD2 DECA	BOD2 SETT	NH3 DECA	SOD
	km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	m²/s	m	m	m/s	m/s	mg/L		1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
72	IK 13	1.20	2.320	31.6	0.0	6.0	2.4	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.31
73	IK 13	0.90	2.320	31.6	0.0	6.0	2.3	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.30
74	IK 13	0.60	2.320	31.6	0.0	6.1	2.2	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.29
75	IK 13	0.30	2.320	31.6	0.0	6.2	2.1	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.27
76	IK 13	0.00	2.320	31.6	0.0	6.3	2.0	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.012	0.012	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.26

SPECIAL REPORT: Headwater
WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING km	TEMP deg C	SALN ppt	CM-I *	CM-II *	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N µg/L	TOTN **	PHOS	CHL A #/100mL	MACRO *	COLI	NCM
1	22.700	32.10	0.0	0.0	0.0	5.65	0.80	0.00	0.80	0.00	0.00	0.36	0.23	0.59	0.07	1.5	0.0	0.	0.00
2	22.400	32.10	0.0	0.0	0.0	5.56	0.64	0.00	0.64	0.00	0.00	0.26	0.32	0.58	0.07	1.5	0.0	0.	0.00
3	22.100	32.10	0.0	0.0	0.0	5.60	0.51	0.00	0.51	0.00	0.00	0.19	0.38	0.57	0.07	1.5	0.0	0.	0.00
4	21.800	32.10	0.0	0.0	0.0	5.69	0.41	0.00	0.41	0.00	0.00	0.14	0.42	0.56	0.07	1.5	0.0	0.	0.00
5	21.500	32.10	0.0	0.0	0.0	5.80	0.33	0.00	0.33	0.00	0.00	0.10	0.45	0.55	0.07	1.5	0.0	0.	0.00
6	21.300	32.10	0.0	0.0	0.0	5.87	0.28	0.00	0.28	0.00	0.00	0.08	0.46	0.54	0.07	1.5	0.0	0.	0.00
7	21.100	32.10	0.0	0.0	0.0	5.94	0.24	0.00	0.24	0.00	0.00	0.07	0.47	0.54	0.07	1.5	0.0	0.	0.00
8	20.900	32.10	0.0	0.0	0.0	6.00	0.21	0.00	0.21	0.00	0.00	0.05	0.48	0.53	0.07	1.5	0.0	0.	0.00
9	20.700	32.10	0.0	0.0	0.0	6.06	0.18	0.00	0.18	0.00	0.00	0.04	0.48	0.52	0.07	1.5	0.0	0.	0.00
10	20.500	32.10	0.0	0.0	0.0	6.11	0.15	0.00	0.15	0.00	0.00	0.03	0.48	0.52	0.07	1.5	0.0	0.	0.00
11	20.200	32.02	0.0	0.0	0.0	6.26	0.12	0.00	0.12	0.00	0.00	0.02	0.48	0.51	0.07	1.4	0.0	0.	0.00
12	19.900	31.94	0.0	0.0	0.0	6.36	0.10	0.00	0.10	0.00	0.00	0.02	0.48	0.50	0.07	1.2	0.0	0.	0.00
13	19.600	31.86	0.0	0.0	0.0	6.42	0.08	0.00	0.08	0.00	0.00	0.01	0.48	0.49	0.07	1.1	0.0	0.	0.00
14	19.300	31.78	0.0	0.0	0.0	6.45	0.06	0.00	0.06	0.00	0.00	0.01	0.48	0.49	0.07	0.9	0.0	0.	0.00
15	19.000	31.70	0.0	0.0	0.0	6.48	0.06	0.00	0.06	0.00	0.00	0.01	0.48	0.48	0.07	0.8	0.0	0.	0.00
16	18.695	31.73	0.0	0.0	0.0	6.68	1.93	0.00	1.93	0.00	0.00	0.18	0.35	0.53	0.07	1.5	0.0	0.	0.00
17	18.390	31.75	0.0	0.0	0.0	6.69	2.60	0.00	2.60	0.00	0.00	0.24	0.30	0.54	0.07	2.2	0.0	0.	0.00
18	18.085	31.77	0.0	0.0	0.0	6.69	2.93	0.00	2.93	0.00	0.00	0.27	0.28	0.55	0.07	2.9	0.0	0.	0.00
19	17.780	31.80	0.0	0.0	0.0	6.68	3.12	0.00	3.12	0.00	0.00	0.29	0.27	0.55	0.07	3.6	0.0	0.	0.00
20	17.490	31.80	0.0	0.0	0.0	6.61	3.05	0.00	3.05	0.00	0.00	0.27	0.28	0.55	0.07	3.6	0.0	0.	0.00
21	17.200	31.80	0.0	0.0	0.0	6.55	2.98	0.00	2.98	0.00	0.00	0.25	0.30	0.55	0.07	3.6	0.0	0.	0.00

22	16.910	31.80	0.0	0.0	0.0	6.51	2.92	0.00	2.92	0.00	0.00	0.23	0.31	0.54	0.07	3.6	0.0	0.	0.00
23	16.620	31.80	0.0	0.0	0.0	6.49	2.87	0.00	2.87	0.00	0.00	0.22	0.32	0.54	0.07	3.6	0.0	0.	0.00
24	16.330	31.80	0.0	0.0	0.0	6.47	2.82	0.00	2.82	0.00	0.00	0.21	0.33	0.53	0.07	3.6	0.0	0.	0.00
25	16.040	31.80	0.0	0.0	0.0	6.46	2.77	0.00	2.77	0.00	0.00	0.20	0.33	0.53	0.07	3.6	0.0	0.	0.00
26	15.750	31.80	0.0	0.0	0.0	6.46	2.73	0.00	2.73	0.00	0.00	0.19	0.34	0.53	0.07	3.6	0.0	0.	0.00
27	15.460	31.80	0.0	0.0	0.0	6.46	2.69	0.00	2.69	0.00	0.00	0.18	0.34	0.52	0.07	3.6	0.0	0.	0.00
28	15.170	31.80	0.0	0.0	0.0	6.47	2.65	0.00	2.65	0.00	0.00	0.17	0.35	0.52	0.07	3.6	0.0	0.	0.00
29	14.880	31.80	0.0	0.0	0.0	6.48	2.62	0.00	2.62	0.00	0.00	0.16	0.35	0.51	0.07	3.6	0.0	0.	0.00
30	14.590	31.80	0.0	0.0	0.0	6.49	2.59	0.00	2.59	0.00	0.00	0.15	0.36	0.51	0.07	3.6	0.0	0.	0.00
31	14.300	31.80	0.0	0.0	0.0	6.50	2.56	0.00	2.56	0.00	0.00	0.15	0.36	0.51	0.07	3.6	0.0	0.	0.00
32	14.010	31.80	0.0	0.0	0.0	6.52	2.53	0.00	2.53	0.00	0.00	0.14	0.36	0.50	0.07	3.6	0.0	0.	0.00
33	13.720	31.80	0.0	0.0	0.0	6.53	2.51	0.00	2.51	0.00	0.00	0.14	0.36	0.50	0.07	3.6	0.0	0.	0.00
34	13.430	31.80	0.0	0.0	0.0	6.54	2.48	0.00	2.48	0.00	0.00	0.13	0.36	0.50	0.07	3.6	0.0	0.	0.00
35	13.140	31.40	0.0	0.0	0.0	5.74	2.37	0.00	2.37	0.00	0.00	0.13	0.37	0.49	0.07	3.0	0.0	0.	0.00
36	12.850	31.00	0.0	0.0	0.0	5.04	2.26	0.00	2.26	0.00	0.00	0.12	0.37	0.49	0.07	2.5	0.0	0.	0.00
37	12.560	30.60	0.0	0.0	0.0	4.45	2.16	0.00	2.16	0.00	0.00	0.11	0.38	0.49	0.06	1.9	0.0	0.	0.00
38	12.270	30.20	0.0	0.0	0.0	3.94	2.07	0.00	2.07	0.00	0.00	0.11	0.38	0.49	0.06	1.4	0.0	0.	0.00
39	11.980	29.80	0.0	0.0	0.0	3.50	1.98	0.00	1.98	0.00	0.00	0.10	0.39	0.49	0.06	0.8	0.0	0.	0.00
40	11.585	30.07	0.0	0.0	0.0	4.11	2.92	0.00	2.92	0.00	0.00	0.16	0.38	0.54	0.06	1.6	0.0	0.	0.00
41	11.190	30.35	0.0	0.0	0.0	4.49	3.62	0.00	3.62	0.00	0.00	0.20	0.38	0.58	0.06	2.5	0.0	0.	0.00
42	10.795	30.62	0.0	0.0	0.0	4.75	4.17	0.00	4.17	0.00	0.00	0.24	0.38	0.61	0.06	3.3	0.0	0.	0.00
43	10.400	30.90	0.0	0.0	0.0	4.93	4.59	0.00	4.59	0.00	0.00	0.26	0.38	0.64	0.06	4.2	0.0	0.	0.00
44	10.100	30.89	0.0	0.0	0.0	4.97	4.48	0.00	4.48	0.00	0.00	0.25	0.39	0.64	0.06	4.5	0.0	0.	0.00
45	9.800	30.88	0.0	0.0	0.0	5.01	4.37	0.00	4.37	0.00	0.00	0.24	0.39	0.63	0.06	4.8	0.0	0.	0.00
46	9.500	30.87	0.0	0.0	0.0	5.05	4.27	0.00	4.27	0.00	0.00	0.24	0.39	0.63	0.06	5.1	0.0	0.	0.00
47	9.200	30.86	0.0	0.0	0.0	5.10	4.16	0.00	4.16	0.00	0.00	0.23	0.40	0.63	0.06	5.4	0.0	0.	0.00
48	8.900	30.85	0.0	0.0	0.0	5.16	4.06	0.00	4.06	0.00	0.00	0.22	0.40	0.62	0.06	5.8	0.0	0.	0.00
49	8.600	30.84	0.0	0.0	0.0	5.21	3.97	0.00	3.97	0.00	0.00	0.22	0.40	0.62	0.06	6.1	0.0	0.	0.00
50	8.300	30.83	0.0	0.0	0.0	5.27	3.87	0.00	3.87	0.00	0.00	0.21	0.41	0.62	0.06	6.4	0.0	0.	0.00
51	8.000	30.82	0.0	0.0	0.0	5.33	3.78	0.00	3.78	0.00	0.00	0.20	0.41	0.61	0.06	6.7	0.0	0.	0.00
52	7.700	30.81	0.0	0.0	0.0	5.39	3.68	0.00	3.68	0.00	0.00	0.20	0.41	0.61	0.06	7.0	0.0	0.	0.00
53	7.400	30.80	0.0	0.0	0.0	5.46	3.59	0.00	3.59	0.00	0.00	0.19	0.41	0.60	0.06	7.3	0.0	0.	0.00
54	7.010	30.80	0.0	0.0	0.0	5.26	3.34	0.00	3.34	0.00	0.00	0.17	0.42	0.59	0.06	7.3	0.0	0.	0.00
55	6.620	30.80	0.0	0.0	0.0	5.12	3.10	0.00	3.10	0.00	0.00	0.16	0.42	0.57	0.06	7.3	0.0	0.	0.00
56	6.230	30.80	0.0	0.0	0.0	5.02	2.88	0.00	2.88	0.00	0.00	0.14	0.42	0.56	0.06	7.3	0.0	0.	0.00
57	5.840	30.80	0.0	0.0	0.0	4.96	2.67	0.00	2.67	0.00	0.00	0.13	0.42	0.54	0.06	7.3	0.0	0.	0.00
58	5.450	30.80	0.0	0.0	0.0	4.92	2.48	0.00	2.48	0.00	0.00	0.11	0.42	0.53	0.06	7.3	0.0	0.	0.00
59	5.200	30.80	0.0	0.0	0.0	5.01	2.37	0.00	2.37	0.00	0.00	0.11	0.41	0.52	0.06	7.3	0.0	0.	0.00
60	4.950	30.80	0.0	0.0	0.0	5.09	2.25	0.00	2.25	0.00	0.00	0.10	0.41	0.51	0.06	7.3	0.0	0.	0.00
61	4.700	30.80	0.0	0.0	0.0	5.17	2.15	0.00	2.15	0.00	0.00	0.09	0.41	0.50	0.06	7.3	0.0	0.	0.00
62	4.375	30.88	0.0	0.0	0.0	5.34	2.46	0.00	2.46	0.00	0.00	0.10	0.39	0.49	0.06	7.9	0.0	0.	0.00
63	4.050	30.95	0.0	0.0	0.0	5.48	2.73	0.00	2.73	0.00	0.00	0.10	0.38	0.48	0.06	8.6	0.0	0.	0.00
64	3.725	31.02	0.0	0.0	0.0	5.60	2.96	0.00	2.96	0.00	0.00	0.11	0.36	0.47	0.06	9.2	0.0	0.	0.00
65	3.400	31.10	0.0	0.0	0.0	5.69	3.17	0.00	3.17	0.00	0.00	0.11	0.35	0.46	0.06	9.8	0.0	0.	0.00
66	3.050	31.35	0.0	0.0	0.0	5.65	3.07	0.00	3.07	0.00	0.00	0.11	0.35	0.46	0.04	6.1	0.0	0.	0.00
67	2.700	31.60	0.0	0.0	0.0	5.56	2.98	0.00	2.98	0.00	0.00	0.10	0.35	0.46	0.03	2.3	0.0	0.	0.00
68	2.400	31.60	0.0	0.0	0.0	5.65	2.85	0.00	2.85	0.00	0.00	0.10	0.36	0.45	0.03	2.3	0.0	0.	0.00
69	2.100	31.60	0.0	0.0	0.0	5.73	2.72	0.00	2.72	0.00	0.00	0.09	0.36	0.45	0.03	2.3	0.0	0.	0.00
70	1.800	31.60	0.0	0.0	0.0	5.81	2.60	0.00	2.60	0.00	0.00	0.08	0.36	0.45	0.03	2.3	0.0	0.	0.00
71	1.500	31.60	0.0	0.0	0.0	5.89	2.48	0.00	2.48	0.00	0.00	0.08	0.37	0.44	0.03	2.3	0.0	0.	0.00

72	1.200	31.60	0.0	0.0	0.0	5.97	2.37	0.00	2.37	0.00	0.00	0.07	0.37	0.44	0.03	2.3	0.0	0.	0.00
73	0.900	31.60	0.0	0.0	0.0	6.05	2.27	0.00	2.27	0.00	0.00	0.07	0.37	0.44	0.03	2.3	0.0	0.	0.00
74	0.600	31.60	0.0	0.0	0.0	6.12	2.17	0.00	2.17	0.00	0.00	0.06	0.37	0.44	0.03	2.3	0.0	0.	0.00
75	0.300	31.60	0.0	0.0	0.0	6.19	2.07	0.00	2.07	0.00	0.00	0.06	0.37	0.43	0.03	2.3	0.0	0.	0.00
76	0.000	31.60	0.0	0.0	0.0	6.26	1.97	0.00	1.97	0.00	0.00	0.06	0.37	0.43	0.03	2.3	0.0	0.	0.00

SPECIAL REPORT: Headwater
BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST km	SAT D.O. mg/L	REAER RATE 1/da	DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#1 SETT *	BOD#2 DECAY *	ABOD#2 SOD 1/da	FULL SOD 1/da	CORR DECAY *	ORG-N SETT **	ORG-N DECAY **	NH3 SRCE 1/da	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM	NCM SETT
1	22.700	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.18	1.18	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
2	22.400	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.16	1.16	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
3	22.100	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.14	1.14	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
4	21.800	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.13	1.13	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
5	21.500	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.12	1.12	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
6	21.300	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.11	1.11	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
7	21.100	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.10	1.10	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
8	20.900	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.10	1.10	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
9	20.700	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.10	1.10	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
10	20.500	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.09	1.09	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
11	20.200	7.30	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.87	0.87	0.06	0.01	0.25	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
12	19.900	7.31	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.86	0.86	0.06	0.01	0.25	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
13	19.600	7.32	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.85	0.85	0.06	0.01	0.25	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
14	19.300	7.33	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.85	0.85	0.06	0.01	0.25	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
15	19.000	7.34	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.84	0.84	0.06	0.01	0.25	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
16	18.695	7.34	0.41	0.10	0.06	0.00	0.01	0.00	0.00	1.09	1.09	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
17	18.390	7.34	0.41	0.10	0.06	0.00	0.01	0.00	0.00	1.18	1.18	0.06	0.01	0.25	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
18	18.085	7.33	0.41	0.10	0.06	0.00	0.01	0.00	0.00	1.23	1.23	0.06	0.01	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
19	17.780	7.33	0.41	0.10	0.06	0.00	0.01	0.00	0.00	1.25	1.25	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
20	17.490	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.61	0.61	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
21	17.200	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.61	0.61	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
22	16.910	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.60	0.60	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
23	16.620	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.59	0.59	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
24	16.330	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.58	0.58	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
25	16.040	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.58	0.58	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
26	15.750	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.57	0.57	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
27	15.460	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.57	0.57	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
28	15.170	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.56	0.56	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
29	14.880	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.56	0.56	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
30	14.590	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.55	0.55	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
31	14.300	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.55	0.55	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
32	14.010	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.55	0.55	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
33	13.720	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.54	0.54	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
34	13.430	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.54	0.54	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
35	13.140	7.38	0.45	0.10	0.07	0.00	0.01	0.00	0.00	6.67	6.67	0.06	0.01	0.23	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
36	12.850	7.43	0.45	0.10	0.07	0.00	0.01	0.00	0.00	6.49	6.49	0.06	0.01	0.22	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
37	12.560	7.48	0.45	0.10	0.07	0.00	0.01	0.00	0.00	6.32	6.32	0.06	0.01	0.21	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00

38	12.270	7.53	0.44	0.10	0.07	0.00	0.01	0.00	0.00	6.16	6.16	0.06	0.01	0.19	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
39	11.980	7.58	0.44	0.09	0.07	0.00	0.01	0.00	0.00	6.00	6.00	0.06	0.01	0.18	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
40	11.585	7.55	0.22	0.10	0.03	0.00	0.01	0.00	0.00	0.94	0.94	0.06	0.00	0.19	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
41	11.190	7.51	0.23	0.10	0.03	0.00	0.01	0.00	0.00	1.04	1.04	0.06	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
42	10.795	7.48	0.23	0.10	0.03	0.00	0.01	0.00	0.00	1.12	1.12	0.06	0.00	0.21	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
43	10.400	7.44	0.23	0.10	0.03	0.00	0.01	0.00	0.00	1.19	1.19	0.06	0.00	0.22	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00
44	10.100	7.44	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.18	1.18	0.06	0.01	0.22	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
45	9.800	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.16	1.16	0.06	0.01	0.22	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00
46	9.500	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.15	1.15	0.06	0.01	0.22	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
47	9.200	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.13	1.13	0.06	0.01	0.22	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00
48	8.900	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.12	1.12	0.06	0.01	0.22	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
49	8.600	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.11	1.11	0.06	0.01	0.22	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
50	8.300	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.09	1.09	0.06	0.01	0.22	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
51	8.000	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.08	1.08	0.06	0.01	0.22	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
52	7.700	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.07	1.07	0.06	0.01	0.22	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
53	7.400	7.46	0.52	0.10	0.08	0.00	0.01	0.00	0.00	1.06	1.06	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
54	7.010	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	3.00	3.00	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
55	6.620	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.97	2.97	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
56	6.230	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.94	2.94	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
57	5.840	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.91	2.91	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
58	5.450	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.89	2.89	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
59	5.200	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.08	2.08	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
60	4.950	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.07	2.07	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
61	4.700	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.05	2.05	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
62	4.375	7.45	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.10	2.10	0.06	0.01	0.22	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00
63	4.050	7.44	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.15	2.15	0.06	0.01	0.22	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
64	3.725	7.43	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.19	2.19	0.06	0.01	0.23	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00
65	3.400	7.42	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.22	2.22	0.06	0.01	0.23	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00
66	3.050	7.39	0.48	0.10	0.07	0.00	0.01	0.00	0.00	2.04	2.04	0.06	0.01	0.23	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
67	2.700	7.35	0.48	0.10	0.07	0.00	0.01	0.00	0.00	2.05	2.05	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
68	2.400	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.37	0.37	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
69	2.100	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.36	0.36	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
70	1.800	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.34	0.34	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
71	1.500	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.33	0.33	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
72	1.200	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.31	0.31	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
73	0.900	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
74	0.600	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
75	0.300	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.27	0.27	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
76	0.000	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.26	0.26	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00

SPECIAL REPORT: Headwater
HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW VELO m³/s	ADVCTV m/s	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	PRISM m³	TIDAL VELO m/s	TIDAL m²/s	DISPRSN m/s	MEAN
1	23.00	22.70	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002	
2	22.70	22.40	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002	
3	22.40	22.10	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002	

4	22.10	21.80	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002
5	21.80	21.50	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002
6	21.50	21.30	0.2800	0.002	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.002	0.002
7	21.30	21.10	0.2800	0.002	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.002	0.002
8	21.10	20.90	0.2800	0.002	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.002	0.002
9	20.90	20.70	0.2800	0.002	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.002	0.002
10	20.70	20.50	0.2800	0.002	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.002	0.002
11	20.50	20.20	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002
12	20.20	19.90	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002
13	19.90	19.60	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002
14	19.60	19.30	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002
15	19.30	19.00	0.2800	0.002	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.002	0.002
16	19.00	18.69	0.4975	0.004	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.003	0.004
17	18.69	18.39	0.7150	0.006	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.005	0.006
18	18.39	18.08	0.9325	0.007	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.006	0.007
19	18.08	17.78	1.1500	0.009	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.008	0.009
20	17.78	17.49	1.1687	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
21	17.49	17.20	1.1874	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
22	17.20	16.91	1.2061	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
23	16.91	16.62	1.2247	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
24	16.62	16.33	1.2434	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
25	16.33	16.04	1.2621	0.011	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.011
26	16.04	15.75	1.2807	0.011	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.011
27	15.75	15.46	1.2994	0.011	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.011
28	15.46	15.17	1.3181	0.011	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.011
29	15.17	14.88	1.3367	0.011	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.011
30	14.88	14.59	1.3554	0.011	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.011
31	14.59	14.30	1.3741	0.011	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.011
32	14.30	14.01	1.3927	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
33	14.01	13.72	1.4114	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
34	13.72	13.43	1.4301	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
35	13.43	13.14	1.4301	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
36	13.14	12.85	1.4301	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
37	12.85	12.56	1.4301	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
38	12.56	12.27	1.4301	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
39	12.27	11.98	1.4301	0.012	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.009	0.012
40	11.98	11.58	1.5776	0.006	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.008	0.006
41	11.58	11.19	1.7251	0.007	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.009	0.007
42	11.19	10.79	1.8726	0.007	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.010	0.007
43	10.79	10.40	2.0201	0.008	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.011	0.008
44	10.40	10.10	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
45	10.10	9.80	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
46	9.80	9.50	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
47	9.50	9.20	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
48	9.20	8.90	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
49	8.90	8.60	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
50	8.60	8.30	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
51	8.30	8.00	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
52	8.00	7.70	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025
53	7.70	7.40	2.0201	0.025	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.017	0.025

54	7.40	7.01	2.0201	0.009	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.008	0.009
55	7.01	6.62	2.0201	0.009	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.008	0.009
56	6.62	6.23	2.0201	0.009	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.008	0.009
57	6.23	5.84	2.0201	0.009	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.008	0.009
58	5.84	5.45	2.0201	0.009	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.008	0.009
59	5.45	5.20	2.0201	0.009	2.25	98.1	55181.	24525.0	220.7	0.	0.000	0.008	0.009
60	5.20	4.95	2.0201	0.009	2.25	98.1	55181.	24525.0	220.7	0.	0.000	0.008	0.009
61	4.95	4.70	2.0201	0.009	2.25	98.1	55181.	24525.0	220.7	0.	0.000	0.008	0.009
62	4.70	4.38	2.0951	0.009	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.009	0.009
63	4.38	4.05	2.1701	0.010	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.009	0.010
64	4.05	3.73	2.2451	0.010	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.009	0.010
65	3.73	3.40	2.3201	0.011	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.010	0.011
66	3.40	3.05	2.3203	0.022	1.81	58.9	37313.	20615.0	106.6	0.	0.000	0.017	0.022
67	3.05	2.70	2.3203	0.022	1.81	58.9	37313.	20615.0	106.6	0.	0.000	0.017	0.022
68	2.70	2.40	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
69	2.40	2.10	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
70	2.10	1.80	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
71	1.80	1.50	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
72	1.50	1.20	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
73	1.20	0.90	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
74	0.90	0.60	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
75	0.60	0.30	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012
76	0.30	0.00	2.3203	0.012	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.011	0.012

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 1 Lock 3 to Below A COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS	CHL A	COLI #/100mL	NCM
1	HDWTR	0.28000	30.00	0.00	0.00	0.00	6.00	1.00	0.00	1.00	0.00	0.00	0.50	0.10	0.00	1.50	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	PRISM m³	TIDAL VELO m/s	TIDAL VELO m²/s	DISPRSN	MEAN
1	23.00	22.70	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002	
2	22.70	22.40	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002	
3	22.40	22.10	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002	
4	22.10	21.80	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002	
5	21.80	21.50	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002	
TOT						7.55			182656.48	82650.00						
AVG					0.0023		2.21	55.10			121.77					
CUM						7.55										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD 1/da	FULL SOD 1/da	CORR DECAY 1/da	ORGN SETT *	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE **	DENIT SRCE **	PO4 PROD 1/da	ALG PROD 1/da	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
1	22.700	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.18	1.18	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
2	22.400	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.16	1.16	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
3	22.100	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.14	1.14	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
4	21.800	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.13	1.13	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
5	21.500	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.12	1.12	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.32	0.06	0.05	0.00	0.01	0.00	0.00	0.50			0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00		

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
1	22.700	32.10	0.00	0.00	0.00	5.65	0.80	0.00	0.80	0.00	0.00	0.36	0.23	0.59	0.07	1.50	0.00	0.	0.00
2	22.400	32.10	0.00	0.00	0.00	5.56	0.64	0.00	0.64	0.00	0.00	0.26	0.32	0.58	0.07	1.50	0.00	0.	0.00
3	22.100	32.10	0.00	0.00	0.00	5.60	0.51	0.00	0.51	0.00	0.00	0.19	0.38	0.57	0.07	1.50	0.00	0.	0.00
4	21.800	32.10	0.00	0.00	0.00	5.69	0.41	0.00	0.41	0.00	0.00	0.14	0.42	0.56	0.07	1.50	0.00	0.	0.00
5	21.500	32.10	0.00	0.00	0.00	5.80	0.33	0.00	0.33	0.00	0.00	0.10	0.45	0.55	0.07	1.50	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 2 Below A to Below B COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
6	UPR RCH	0.28000	32.10	0.00	0.00	0.00	5.80	0.33	0.00	0.33	0.00	0.00	0.10	0.45	0.07	1.50	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
6	21.50	21.30	0.28000	0.0	0.00230	1.01	2.21	55.10	24354.20	11020.00	121.77	0.00	0.000	0.002	0.002
7	21.30	21.10	0.28000	0.0	0.00230	1.01	2.21	55.10	24354.20	11020.00	121.77	0.00	0.000	0.002	0.002
8	21.10	20.90	0.28000	0.0	0.00230	1.01	2.21	55.10	24354.20	11020.00	121.77	0.00	0.000	0.002	0.002
9	20.90	20.70	0.28000	0.0	0.00230	1.01	2.21	55.10	24354.20	11020.00	121.77	0.00	0.000	0.002	0.002
10	20.70	20.50	0.28000	0.0	0.00230	1.01	2.21	55.10	24354.20	11020.00	121.77	0.00	0.000	0.002	0.002
TOT								5.03		121771.00	55100.00				

AVG 0.0023 2.21 55.10 121.77
CUM 12.58

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT 1/da	BOD#2 DECAY 1/da	ABOD#2 SETT 1/da	BKGD *	FULL *	CORR *	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
6	21.300	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.11	1.11	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
7	21.100	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.10	1.10	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
8	20.900	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.10	1.10	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
9	20.700	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.10	1.10	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
10	20.500	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	1.07	1.09	1.09	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.32	0.06	0.05	0.00	0.01	0.00	0.00	0.50			0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
6	21.300	32.10	0.00	0.00	0.00	5.87	0.28	0.00	0.28	0.00	0.00	0.08	0.46	0.54	0.07	1.50	0.00	0.	0.00
7	21.100	32.10	0.00	0.00	0.00	5.94	0.24	0.00	0.24	0.00	0.00	0.07	0.47	0.54	0.07	1.50	0.00	0.	0.00
8	20.900	32.10	0.00	0.00	0.00	6.00	0.21	0.00	0.21	0.00	0.00	0.05	0.48	0.53	0.07	1.50	0.00	0.	0.00
9	20.700	32.10	0.00	0.00	0.00	6.06	0.18	0.00	0.18	0.00	0.00	0.04	0.48	0.52	0.07	1.50	0.00	0.	0.00
10	20.500	32.10	0.00	0.00	0.00	6.11	0.15	0.00	0.15	0.00	0.00	0.03	0.48	0.52	0.07	1.50	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 3 Below B to Below C COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
11	UPR RCH	0.28000	32.10	0.00	0.00	0.00	6.11	0.15	0.00	0.15	0.00	0.00	0.03	0.48	0.07	1.50	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN VELO m²/s	MEAN m/s
11	20.50	20.20	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002
12	20.20	19.90	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002
13	19.90	19.60	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002
14	19.60	19.30	0.28000	0.0	0.00230	1.51	2.21	55.10	36531.30	16530.00	121.77	0.00	0.000	0.002	0.002

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 15  19.30  19.00   0.28000  0.0  0.00230    1.51   2.21   55.10  36531.30  16530.00  121.77     0.00  0.000    0.002  0.002

TOT                                  7.55            182656.48   82650.00
AVG                            0.0023          2.21   55.10                121.77
CUM                                 20.13

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

ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN   NH3  NH3  DENIT  PO4   ALG   MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
         mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da

 11  20.200  7.30   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.85  0.87  0.87  0.06  0.01  0.25  0.00  0.00  0.00  0.12  0.00  0.00  0.00  0.00
 12  19.900  7.31   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.85  0.86  0.86  0.06  0.01  0.25  0.00  0.00  0.00  0.11  0.00  0.00  0.00  0.00
 13  19.600  7.32   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.84  0.85  0.85  0.06  0.01  0.25  0.00  0.00  0.00  0.09  0.00  0.00  0.00  0.00
 14  19.300  7.33   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.84  0.85  0.85  0.06  0.01  0.25  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 15  19.000  7.34   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.84  0.84  0.84  0.06  0.01  0.25  0.00  0.00  0.00  0.07  0.00  0.00  0.00  0.00

AVG 20 DEG C RATE    0.32  0.06  0.05  0.00  0.01  0.00  0.00  0.40            0.05  0.00  0.10  0.00  0.00  0.00            3.00  0.00  0.00

*  g/m²/d          **  mg/L/day

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

ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO   COLI   NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL

 11  20.200  32.02  0.00    0.00    0.00  6.26  0.12  0.00  0.12  0.00  0.00  0.02  0.48  0.51  0.07  1.36  0.00     0.   0.00
 12  19.900  31.94  0.00    0.00    0.00  6.36  0.10  0.00  0.10  0.00  0.00  0.02  0.48  0.50  0.07  1.22  0.00     0.   0.00
 13  19.600  31.86  0.00    0.00    0.00  6.42  0.08  0.00  0.08  0.00  0.00  0.01  0.48  0.49  0.07  1.08  0.00     0.   0.00
 14  19.300  31.78  0.00    0.00    0.00  6.45  0.06  0.00  0.06  0.00  0.00  0.01  0.48  0.49  0.07  0.94  0.00     0.   0.00
 15  19.000  31.70  0.00    0.00    0.00  6.48  0.06  0.00  0.06  0.00  0.00  0.01  0.48  0.48  0.07  0.80  0.00     0.   0.00

FINAL REPORT          Headwater                    Pearl River DO Modeling 090204
REACH NO.  4   Below C to Lock 2                    COEF-1 Run

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

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

 16  UPR RCH  0.28000  31.70    0.00    0.00    0.00  6.48  0.06  0.00  0.06  0.00  0.00  0.01  0.48  0.07  0.80    0.00   0.00
EACH  INCR    0.21750  30.00    0.00    0.00    0.00  8.00  5.00  0.00            0.00  0.50  0.10  0.00    0.00   0.00

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

ELEM  BEGIN  ENDING    FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST      EFF   VELO   TIME                   AREA   AREA    PRISM   VELO          VELO
      km     km      m³/s     m/s   days    m      m      m³      m²     m²      m³    m/s    m²/s   m/s
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16	19.00	18.69	0.49750	0.0	0.00398	0.89	2.11	59.30	38162.51	18086.50	125.12	0.00	0.000	0.003	0.004
17	18.69	18.39	0.71500	0.0	0.00571	0.62	2.11	59.30	38162.51	18086.50	125.12	0.00	0.000	0.005	0.006
18	18.39	18.08	0.93250	0.0	0.00745	0.47	2.11	59.30	38162.51	18086.50	125.12	0.00	0.000	0.006	0.007
19	18.08	17.78	1.15000	0.0	0.00919	0.38	2.11	59.30	38162.51	18086.50	125.12	0.00	0.000	0.008	0.009

TOT		2.36		152650.05	72346.00
AVG	0.0060		2.11	59.30	125.12
CUM		22.50			

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY *	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY *	NH3 SRCE *	NH3 RATE **	DENIT SRCE **	PO4 PROD 1/da	ALG PROD 1/da	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
16	18.695	7.34	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.84	1.09	1.09	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	
17	18.390	7.34	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.84	1.18	1.18	0.06	0.01	0.25	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	
18	18.085	7.33	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.84	1.23	1.23	0.06	0.01	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	
19	17.780	7.33	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.84	1.25	1.25	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.33	0.06	0.05	0.00	0.01	0.00	0.00	0.40		0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00		

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m^3	MACRO	COLI #/100mL	NCM
16	18.695	31.73	0.00	0.00	0.00	6.68	1.93	0.00	1.93	0.00	0.00	0.18	0.35	0.53	0.07	1.50	0.00	0.	0.00
17	18.390	31.75	0.00	0.00	0.00	6.69	2.60	0.00	2.60	0.00	0.00	0.24	0.30	0.54	0.07	2.20	0.00	0.	0.00
18	18.085	31.77	0.00	0.00	0.00	6.69	2.93	0.00	2.93	0.00	0.00	0.27	0.28	0.55	0.07	2.90	0.00	0.	0.00
19	17.780	31.80	0.00	0.00	0.00	6.68	3.12	0.00	3.12	0.00	0.00	0.29	0.27	0.55	0.07	3.60	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 5 Lock 2 (Church) to ABTalisheek COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
20	UPR RCH	1.15000	31.80	0.00	0.00	0.00	6.68	3.12	0.00	3.12	0.00	0.00	0.29	0.27	0.07	3.60	0.00	0.00
EACH	INCR	0.01867	30.00	0.00	0.00	0.00	8.00	10.00	0.00		0.00	0.50	0.10	0.00	0.00	0.00		
20	WSTLD	0.00008	30.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW EFF	PCT VELO	ADVCTV TIME	TRAVEL	DEPTH AREA	WIDTH AREA	VOLUME PRISM	SURFACE VELO	X-SECT	TIDAL VELO	TIDAL	DISPRSN	MEAN

	km	km	m³/s	m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s		
20	17.78	17.49	1.16875	0.0	0.00973	0.35	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.008	0.010
21	17.49	17.20	1.18741	0.0	0.00988	0.34	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.008	0.010
22	17.20	16.91	1.20608	0.0	0.01004	0.33	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.008	0.010
23	16.91	16.62	1.22475	0.0	0.01019	0.33	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.008	0.010
24	16.62	16.33	1.24341	0.0	0.01035	0.32	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.008	0.010
25	16.33	16.04	1.26208	0.0	0.01051	0.32	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.008	0.011
26	16.04	15.75	1.28075	0.0	0.01066	0.31	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.008	0.011
27	15.75	15.46	1.29941	0.0	0.01082	0.31	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.011
28	15.46	15.17	1.31808	0.0	0.01097	0.31	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.011
29	15.17	14.88	1.33675	0.0	0.01113	0.30	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.011
30	14.88	14.59	1.35541	0.0	0.01128	0.30	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.011
31	14.59	14.30	1.37408	0.0	0.01144	0.29	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.011
32	14.30	14.01	1.39274	0.0	0.01159	0.29	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.012
33	14.01	13.72	1.41141	0.0	0.01175	0.29	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.012
34	13.72	13.43	1.43008	0.0	0.01190	0.28	1.91	62.90	34840.31	18241.00	120.14		0.00	0.000	0.009	0.012
TOT					4.67			522604.66	273615.00							
AVG				0.0108			1.91	62.90			120.14					
CUM					27.17											

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	BOD#1 DECAY	ABOD#1 DECAY	BOD#2 SETT	BOD#2 DECAY	ABOD#2 SOD	BKGD SOD	FULL SOD	CORR DECAY	ORGN SETT	ORGN DECAY	NH3 SRCE	NH3 RATE	DENIT SRCE	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM	NCM SETT
	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da			
20	17.490	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.61	0.61	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
21	17.200	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.61	0.61	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
22	16.910	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.60	0.60	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
23	16.620	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.59	0.59	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
24	16.330	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.58	0.58	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
25	16.040	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.58	0.58	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
26	15.750	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.57	0.57	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
27	15.460	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.57	0.57	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
28	15.170	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.56	0.56	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
29	14.880	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.56	0.56	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
30	14.590	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.55	0.55	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
31	14.300	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.55	0.55	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
32	14.010	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.55	0.55	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
33	13.720	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.54	0.54	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
34	13.430	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.21	0.54	0.54	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.37	0.06	0.05	0.00	0.01	0.00	0.00	0.10			0.05	0.01	0.10	0.00	0.00	0.00			3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO	COLI #/100mL	NCM
20	17.490	31.80	0.00	0.00	0.00	6.61	3.05	0.00	3.05	0.00	0.00	0.27	0.28	0.55	0.07	3.60	0.00	0.	0.00
21	17.200	31.80	0.00	0.00	0.00	6.55	2.98	0.00	2.98	0.00	0.00	0.25	0.30	0.55	0.07	3.60	0.00	0.	0.00
22	16.910	31.80	0.00	0.00	0.00	6.51	2.92	0.00	2.92	0.00	0.00	0.23	0.31	0.54	0.07	3.60	0.00	0.	0.00
23	16.620	31.80	0.00	0.00	0.00	6.49	2.87	0.00	2.87	0.00	0.00	0.22	0.32	0.54	0.07	3.60	0.00	0.	0.00
24	16.330	31.80	0.00	0.00	0.00	6.47	2.82	0.00	2.82	0.00	0.00	0.21	0.33	0.53	0.07	3.60	0.00	0.	0.00
25	16.040	31.80	0.00	0.00	0.00	6.46	2.77	0.00	2.77	0.00	0.00	0.20	0.33	0.53	0.07	3.60	0.00	0.	0.00
26	15.750	31.80	0.00	0.00	0.00	6.46	2.73	0.00	2.73	0.00	0.00	0.19	0.34	0.53	0.07	3.60	0.00	0.	0.00
27	15.460	31.80	0.00	0.00	0.00	6.46	2.69	0.00	2.69	0.00	0.00	0.18	0.34	0.52	0.07	3.60	0.00	0.	0.00
28	15.170	31.80	0.00	0.00	0.00	6.47	2.65	0.00	2.65	0.00	0.00	0.17	0.35	0.52	0.07	3.60	0.00	0.	0.00
29	14.880	31.80	0.00	0.00	0.00	6.48	2.62	0.00	2.62	0.00	0.00	0.16	0.35	0.51	0.07	3.60	0.00	0.	0.00
30	14.590	31.80	0.00	0.00	0.00	6.49	2.59	0.00	2.59	0.00	0.00	0.15	0.36	0.51	0.07	3.60	0.00	0.	0.00
31	14.300	31.80	0.00	0.00	0.00	6.50	2.56	0.00	2.56	0.00	0.00	0.15	0.36	0.51	0.07	3.60	0.00	0.	0.00
32	14.010	31.80	0.00	0.00	0.00	6.52	2.53	0.00	2.53	0.00	0.00	0.14	0.36	0.50	0.07	3.60	0.00	0.	0.00
33	13.720	31.80	0.00	0.00	0.00	6.53	2.51	0.00	2.51	0.00	0.00	0.14	0.36	0.50	0.07	3.60	0.00	0.	0.00
34	13.430	31.80	0.00	0.00	0.00	6.54	2.48	0.00	2.48	0.00	0.00	0.13	0.36	0.50	0.07	3.60	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 6 AB to Talisheek COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS #/100mL	CHL A	COLI	NCM
35	UPR RCH	1.43008	31.80	0.00	0.00	0.00	6.54	2.48	0.00	2.48	0.00	0.00	0.13	0.36	0.07	3.60	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
35	13.43	13.14	1.43008	0.0	0.01190	0.28	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.009	0.012
36	13.14	12.85	1.43008	0.0	0.01190	0.28	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.009	0.012
37	12.85	12.56	1.43008	0.0	0.01190	0.28	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.009	0.012
38	12.56	12.27	1.43008	0.0	0.01190	0.28	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.009	0.012
39	12.27	11.98	1.43008	0.0	0.01190	0.28	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.009	0.012
TOT						1.41			174201.55	91205.00					
AVG				0.0119			1.91	62.90			120.14				
CUM						28.58									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT 1/da	BOD#2 DECAY 1/da	ABOD#2 SETT 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 PROD *	NH3 PROD **	DENIT DECAY **	PO4 DECAY 1/da	ALG SETT 1/da	MAC DECAY 1/da	COLI DECAY *	NCM SETT 1/da	NCM

35	13.140	7.38	0.45	0.10	0.07	0.00	0.01	0.00	0.00	6.36	6.67	6.67	0.06	0.01	0.23	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
36	12.850	7.43	0.45	0.10	0.07	0.00	0.01	0.00	0.00	6.20	6.49	6.49	0.06	0.01	0.22	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
37	12.560	7.48	0.45	0.10	0.07	0.00	0.01	0.00	0.00	6.04	6.32	6.32	0.06	0.01	0.21	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
38	12.270	7.53	0.44	0.10	0.07	0.00	0.01	0.00	0.00	5.89	6.16	6.16	0.06	0.01	0.19	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
39	11.980	7.58	0.44	0.09	0.07	0.00	0.01	0.00	0.00	5.75	6.00	6.00	0.06	0.01	0.18	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.37 0.06 0.05 0.00 0.01 0.00 0.00 3.10 0.05 0.01 0.10 0.00 0.00 0.00 3.00 0.00 0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
35	13.140	31.40	0.00	0.00	0.00	5.74	2.37	0.00	2.37	0.00	0.00	0.13	0.37	0.49	0.07	3.04	0.00	0.	0.00
36	12.850	31.00	0.00	0.00	0.00	5.04	2.26	0.00	2.26	0.00	0.00	0.12	0.37	0.49	0.07	2.48	0.00	0.	0.00
37	12.560	30.60	0.00	0.00	0.00	4.45	2.16	0.00	2.16	0.00	0.00	0.11	0.38	0.49	0.06	1.92	0.00	0.	0.00
38	12.270	30.20	0.00	0.00	0.00	3.94	2.07	0.00	2.07	0.00	0.00	0.11	0.38	0.49	0.06	1.36	0.00	0.	0.00
39	11.980	29.80	0.00	0.00	0.00	3.50	1.98	0.00	1.98	0.00	0.00	0.10	0.39	0.49	0.06	0.80	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 7 Talisheek to Below G COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
40	UPR RCH	1.43008	29.80	0.00	0.00	0.00	3.50	1.98	0.00	1.98	0.00	0.00	0.10	0.39	0.06	0.80	0.00	0.00
EACH	INCR	0.14750	30.00	0.00	0.00	0.00	8.00	15.00	0.00		0.00	1.00	0.10	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	PRISM m³	VELO m/s	TIDAL VELO m²/s	TIDAL m/s	DISPRSN	MEAN
40	11.98	11.58	1.57758	0.0	0.00605	0.76	3.75	69.50	102946.88	27452.50	260.62		0.00	0.000	0.008	0.006	
41	11.58	11.19	1.72508	0.0	0.00662	0.69	3.75	69.50	102946.88	27452.50	260.62		0.00	0.000	0.009	0.007	
42	11.19	10.79	1.87258	0.0	0.00718	0.64	3.75	69.50	102946.88	27452.50	260.62		0.00	0.000	0.010	0.007	
43	10.79	10.40	2.02008	0.0	0.00775	0.59	3.75	69.50	102946.88	27452.50	260.62		0.00	0.000	0.011	0.008	
TOT					2.67			411787.50	109810.00								
AVG				0.0068		3.75	69.50				260.62						
CUM					31.25												

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT 1/da	BOD#2 DECAY 1/da	ABOD#2 SOD *	BKGD SOD *	FULL SOD *	CORR SOD 1/da	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 SRCE *	NH3 RATE 1/da	DENIT SRCE *	PO4 PROD **	ALG PROD **	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
40	11.585	7.55	0.22	0.10	0.03	0.00	0.01	0.00	0.00	0.57	0.94	0.94	0.06	0.00	0.19	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
41	11.190	7.51	0.23	0.10	0.03	0.00	0.01	0.00	0.00	0.58	1.04	1.04	0.06	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
42	10.795	7.48	0.23	0.10	0.03	0.00	0.01	0.00	0.00	0.59	1.12	1.12	0.06	0.00	0.21	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
43	10.400	7.44	0.23	0.10	0.03	0.00	0.01	0.00	0.00	0.60	1.19	1.19	0.06	0.00	0.22	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.19	0.06	0.03	0.00	0.01	0.00	0.00	0.30			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
40	11.585	30.07	0.00	0.00	0.00	4.11	2.92	0.00	2.92	0.00	0.00	0.16	0.38	0.54	0.06	1.65	0.00	0.	0.00
41	11.190	30.35	0.00	0.00	0.00	4.49	3.62	0.00	3.62	0.00	0.00	0.20	0.38	0.58	0.06	2.50	0.00	0.	0.00
42	10.795	30.62	0.00	0.00	0.00	4.75	4.17	0.00	4.17	0.00	0.00	0.24	0.38	0.61	0.06	3.35	0.00	0.	0.00
43	10.400	30.90	0.00	0.00	0.00	4.93	4.59	0.00	4.59	0.00	0.00	0.26	0.38	0.64	0.06	4.20	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 8 Below G to Below H COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
44	UPR RCH	2.02008	30.90	0.00	0.00	0.00	4.93	4.59	0.00	4.59	0.00	0.00	0.26	0.38	0.06	4.20	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN VELO m²/s	MEAN m/s
44	10.40	10.10	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
45	10.10	9.80	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
46	9.80	9.50	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
47	9.50	9.20	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
48	9.20	8.90	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
49	8.90	8.60	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
50	8.60	8.30	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
51	8.30	8.00	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
52	8.00	7.70	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025
53	7.70	7.40	2.02008	0.0	0.02483	0.14	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.017	0.025

TOT								1.40				244032.02	148800.00														
AVG								0.0248			1.64	49.60									81.34						
CUM								32.65																			

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE **	PO4 SRCE **	ALG PROD 1/da	MAC PROD 1/da	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
44	10.100	7.44	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.60	1.18	1.18	0.06	0.01	0.22	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
45	9.800	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.60	1.16	1.16	0.06	0.01	0.22	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00
46	9.500	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.15	1.15	0.06	0.01	0.22	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
47	9.200	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.13	1.13	0.06	0.01	0.22	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00
48	8.900	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.12	1.12	0.06	0.01	0.22	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
49	8.600	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.11	1.11	0.06	0.01	0.22	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
50	8.300	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.09	1.09	0.06	0.01	0.22	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
51	8.000	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.08	1.08	0.06	0.01	0.22	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
52	7.700	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.07	1.07	0.06	0.01	0.22	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
53	7.400	7.46	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	1.06	1.06	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.43	0.06	0.06	0.00	0.01	0.00	0.00	0.30			0.05	0.01	0.10	0.00	0.00	0.00		3.00	0.00	0.00	

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m^3	CHL A	MACRO	COLI #/100mL	NCM
44	10.100	30.89	0.00	0.00	0.00	4.97	4.48	0.00	4.48	0.00	0.00	0.25	0.39	0.64	0.06	4.51	0.00	0.	0.00
45	9.800	30.88	0.00	0.00	0.00	5.01	4.37	0.00	4.37	0.00	0.00	0.24	0.39	0.63	0.06	4.82	0.00	0.	0.00
46	9.500	30.87	0.00	0.00	0.00	5.05	4.27	0.00	4.27	0.00	0.00	0.24	0.39	0.63	0.06	5.13	0.00	0.	0.00
47	9.200	30.86	0.00	0.00	0.00	5.10	4.16	0.00	4.16	0.00	0.00	0.23	0.40	0.63	0.06	5.44	0.00	0.	0.00
48	8.900	30.85	0.00	0.00	0.00	5.16	4.06	0.00	4.06	0.00	0.00	0.22	0.40	0.62	0.06	5.75	0.00	0.	0.00
49	8.600	30.84	0.00	0.00	0.00	5.21	3.97	0.00	3.97	0.00	0.00	0.22	0.40	0.62	0.06	6.06	0.00	0.	0.00
50	8.300	30.83	0.00	0.00	0.00	5.27	3.87	0.00	3.87	0.00	0.00	0.21	0.41	0.62	0.06	6.37	0.00	0.	0.00
51	8.000	30.82	0.00	0.00	0.00	5.33	3.78	0.00	3.78	0.00	0.00	0.20	0.41	0.61	0.06	6.68	0.00	0.	0.00
52	7.700	30.81	0.00	0.00	0.00	5.39	3.68	0.00	3.68	0.00	0.00	0.20	0.41	0.61	0.06	6.99	0.00	0.	0.00
53	7.400	30.80	0.00	0.00	0.00	5.46	3.59	0.00	3.59	0.00	0.00	0.19	0.41	0.60	0.06	7.30	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 9 Below H to Evans Creek COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
54	UPR RCH	2.02008	30.80	0.00	0.00	0.00	5.46	3.59	0.00	3.59	0.00	0.00	0.19	0.41	0.06	7.30	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
54	7.40	7.01	2.02008	0.0	0.00915	0.49	2.25	98.10	86082.75	38259.00	220.72	0.00	0.000	0.008	0.009
55	7.01	6.62	2.02008	0.0	0.00915	0.49	2.25	98.10	86082.75	38259.00	220.72	0.00	0.000	0.008	0.009
56	6.62	6.23	2.02008	0.0	0.00915	0.49	2.25	98.10	86082.75	38259.00	220.72	0.00	0.000	0.008	0.009
57	6.23	5.84	2.02008	0.0	0.00915	0.49	2.25	98.10	86082.75	38259.00	220.72	0.00	0.000	0.008	0.009
58	5.84	5.45	2.02008	0.0	0.00915	0.49	2.25	98.10	86082.75	38259.00	220.72	0.00	0.000	0.008	0.009
TOT					2.47				430413.75	191295.00					
AVG				0.0092			2.25	98.10			220.73				
CUM					35.12										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY *	BKGD SOD *	FULL SOD *	CORR SOD DECAY 1/da	ORGN SETT 1/da	ORGN DECAY *	NH3 SRCE 1/da	NH3 RATE 1/da	DENIT SRCE *	PO4 PROD **	ALG PROD **	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
54	7.010	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.57	3.00	3.00	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
55	6.620	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.57	2.97	2.97	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
56	6.230	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.57	2.94	2.94	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
57	5.840	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.57	2.91	2.91	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
58	5.450	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	2.57	2.89	2.89	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.31	0.06	0.04	0.00	0.01	0.00	0.00	1.30		0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
54	7.010	30.80	0.00	0.00	0.00	5.26	3.34	0.00	3.34	0.00	0.00	0.17	0.42	0.59	0.06	7.30	0.00	0.	0.00
55	6.620	30.80	0.00	0.00	0.00	5.12	3.10	0.00	3.10	0.00	0.00	0.16	0.42	0.57	0.06	7.30	0.00	0.	0.00
56	6.230	30.80	0.00	0.00	0.00	5.02	2.88	0.00	2.88	0.00	0.00	0.14	0.42	0.56	0.06	7.30	0.00	0.	0.00
57	5.840	30.80	0.00	0.00	0.00	4.96	2.67	0.00	2.67	0.00	0.00	0.13	0.42	0.54	0.06	7.30	0.00	0.	0.00
58	5.450	30.80	0.00	0.00	0.00	4.92	2.48	0.00	2.48	0.00	0.00	0.11	0.42	0.53	0.06	7.30	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 10 Evans Creek to Possible Stream COEF-1 Run

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

ELEM	TYPE	FLOW	TEMP	SALN	CM-I	CM-II	DO	BOD#1	BOD#2	EBOD#1	EBOD#2	ORGN	NH3	NO3+2	PHOS	CHL A	COLI	NCM

NO.		deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL
59	UPR RCH	2.02008	30.80	0.00	0.00	0.00	4.92	2.48	0.00	2.48	0.00	0.00	0.11	0.42	0.06	7.30	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	PRISM m³	TIDAL VELO m/s	TIDAL VELO m²/s	DISPRSN m/s	MEAN
59	5.45	5.20	2.02008	0.0	0.00915	0.32	2.25	98.10	55181.25	24525.00	220.72	0.00	0.000	0.008	0.009	
60	5.20	4.95	2.02008	0.0	0.00915	0.32	2.25	98.10	55181.25	24525.00	220.72	0.00	0.000	0.008	0.009	
61	4.95	4.70	2.02008	0.0	0.00915	0.32	2.25	98.10	55181.25	24525.00	220.72	0.00	0.000	0.008	0.009	
TOT						0.95			165543.73	73575.00						
AVG					0.0092		2.25	98.10			220.72					
CUM						36.07										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE 1/da	SRCE PROD **	PROD DECAY **	DENIT DECAY 1/da	PO4 SETT 1/da	ALG	MAC	COLI	NCM	NCM
59	5.200	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.78	2.08	2.08	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00			
60	4.950	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.78	2.07	2.07	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00			
61	4.700	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.78	2.05	2.05	0.06	0.01	0.22	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00			
AVG 20 DEG C RATE			0.31	0.06	0.04	0.00	0.01	0.00	0.00	0.90			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00			

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
59	5.200	30.80	0.00	0.00	0.00	5.01	2.37	0.00	2.37	0.00	0.00	0.11	0.41	0.52	0.06	7.30	0.00	0.	0.00
60	4.950	30.80	0.00	0.00	0.00	5.09	2.25	0.00	2.25	0.00	0.00	0.10	0.41	0.51	0.06	7.30	0.00	0.	0.00
61	4.700	30.80	0.00	0.00	0.00	5.17	2.15	0.00	2.15	0.00	0.00	0.09	0.41	0.50	0.06	7.30	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 11 Possible Stream to Junior High COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
62	UPR RCH	2.02008	30.80	0.00	0.00	0.00	5.17	2.15	0.00	2.15	0.00	0.00	0.09	0.41	0.06	7.30	0.00	0.00

EACH INCR 0.07500 30.00 0.00 0.00 0.00 8.00 15.00 0.00 0.00 0.50 0.10 0.00 0.00 0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
62	4.70	4.38	2.09508	0.0	0.00949	0.40	2.25	98.10	71735.62	31882.50	220.72	0.00	0.000	0.009	0.009
63	4.38	4.05	2.17008	0.0	0.00983	0.38	2.25	98.10	71735.62	31882.50	220.72	0.00	0.000	0.009	0.010
64	4.05	3.73	2.24508	0.0	0.01017	0.37	2.25	98.10	71735.62	31882.50	220.72	0.00	0.000	0.009	0.010
65	3.73	3.40	2.32008	0.0	0.01051	0.36	2.25	98.10	71735.62	31882.50	220.72	0.00	0.000	0.010	0.011
TOT					1.51				286942.50	127530.00					
AVG				0.0100			2.25	98.10			220.72				
CUM					37.57										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O. 1/da	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY *	BKGD SOD *	FULL SOD *	CORR SOD 1/da	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY *	NH3 SRCE 1/da	NH3 RATE *	DENIT SRCE **	PO4 PROD **	ALG PROD 1/da	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
62	4.375	7.45	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.79	2.10	2.10	0.06	0.01	0.22	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	
63	4.050	7.44	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.79	2.15	2.15	0.06	0.01	0.22	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	
64	3.725	7.43	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.80	2.19	2.19	0.06	0.01	0.23	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	
65	3.400	7.42	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.81	2.22	2.22	0.06	0.01	0.23	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.31	0.06	0.04	0.00	0.01	0.00	0.00	0.90			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
62	4.375	30.88	0.00	0.00	0.00	5.34	2.46	0.00	2.46	0.00	0.00	0.10	0.39	0.49	0.06	7.93	0.00	0.	0.00
63	4.050	30.95	0.00	0.00	0.00	5.48	2.73	0.00	2.73	0.00	0.00	0.10	0.38	0.48	0.06	8.55	0.00	0.	0.00
64	3.725	31.02	0.00	0.00	0.00	5.60	2.96	0.00	2.96	0.00	0.00	0.11	0.36	0.47	0.06	9.18	0.00	0.	0.00
65	3.400	31.10	0.00	0.00	0.00	5.69	3.17	0.00	3.17	0.00	0.00	0.11	0.35	0.46	0.06	9.80	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 12 Junior High to Spillway COEF-1 Run

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

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

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 66  UPR RCH   2.32008  31.10    0.00    0.00    0.00  5.69  3.17  0.00  3.17  0.00  0.00  0.11  0.35  0.06  9.80    0.00   0.00
 66  WSTLD     0.00019  30.00    0.00    0.00    0.00  0.00  5.00  0.00  5.00  0.00  0.00  0.70  0.00  0.00  0.00    0.00   0.00

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

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

 66   3.40   3.05   2.32027  0.0  0.02176    0.19   1.81  58.90 37313.15  20615.00 106.61    0.00  0.000    0.017  0.022
 67   3.05   2.70   2.32027  0.0  0.02176    0.19   1.81  58.90 37313.15  20615.00 106.61    0.00  0.000    0.017  0.022

 TOT                                 0.37            74626.30  41230.00
 AVG                            0.0218         1.81  58.90                106.61
 CUM                                37.94

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

ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY SETT DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da

 66   3.050  7.39   0.48  0.10  0.07  0.00  0.01  0.00  0.00  1.63  2.04  2.04  0.06  0.01  0.23  0.00  0.00  0.00  0.51  0.00  0.00  0.00  0.00
 67   2.700  7.35   0.48  0.10  0.07  0.00  0.01  0.00  0.00  1.66  2.05  2.05  0.06  0.01  0.24  0.00  0.00  0.00  0.20  0.00  0.00  0.00  0.00

AVG 20 DEG C RATE    0.39  0.06  0.06  0.00  0.01  0.00  0.00  0.80            0.05  0.01  0.10  0.00  0.00  0.00            3.00  0.00  0.00

*  g/m²/d          **   mg/L/day

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

ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL

 66   3.050  31.35  0.00    0.00    0.00  5.65  3.07  0.00  3.07  0.00  0.00  0.11  0.35  0.46  0.04  6.05  0.00      0.   0.00
 67   2.700  31.60  0.00    0.00    0.00  5.56  2.98  0.00  2.98  0.00  0.00  0.10  0.35  0.46  0.03  2.30  0.00      0.   0.00

FINAL REPORT          Headwater                    Pearl River DO Modeling 090204
REACH NO. 13   Spillway to Lock 1                   COEF-1 Run

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

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

 68  UPR RCH   2.32027  31.60    0.00    0.00    0.00  5.56  2.98  0.00  2.98  0.00  0.00  0.10  0.35  0.03  2.30    0.00   0.00

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

ELEM   BEGIN ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
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NO.	DIST km	DIST km	EFF m³/s	VELO m/s	TIME days	m	m	m³	AREA m²	AREA m²	PRISM m³	VELO m/s	VELO m²/s	m/s	
68	2.70	2.40	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
69	2.40	2.10	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
70	2.10	1.80	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
71	1.80	1.50	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
72	1.50	1.20	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
73	1.20	0.90	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
74	0.90	0.60	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
75	0.60	0.30	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
76	0.30	0.00	2.32027	0.0	0.01198	0.29	2.26	85.70	58104.60	25710.00	193.68	0.00	0.000	0.011	0.012
TOT					2.61				522941.38	231390.00					
AVG				0.0120			2.26	85.70			193.68				
CUM					40.55										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	ABOD#1 SETT 1/da	BOD#2 DECAY *	BOD#2 SETT *	ABOD#2 DECAY *	BKGD SOD 1/da	FULL SOD 1/da	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY *	NH3 SRCE **	DENIT RATE **	PO4 SRCE 1/da	ALG PROD 1/da	MAC PROD 1/da	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
68	2.400	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.37	0.37	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
69	2.100	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.36	0.36	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
70	1.800	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.34	0.34	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
71	1.500	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.33	0.33	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
72	1.200	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.31	0.31	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
73	0.900	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.30	0.30	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
74	0.600	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
75	0.300	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.27	0.27	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
76	0.000	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.26	0.26	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.31	0.06	0.04	0.00	0.01	0.00	0.00	0.00		0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00		

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A	MACRO #/100mL	COLI	NCM
68	2.400	31.60	0.00	0.00	0.00	5.65	2.85	0.00	2.85	0.00	0.00	0.10	0.36	0.45	0.03	2.30	0.00	0.	0.00
69	2.100	31.60	0.00	0.00	0.00	5.73	2.72	0.00	2.72	0.00	0.00	0.09	0.36	0.45	0.03	2.30	0.00	0.	0.00
70	1.800	31.60	0.00	0.00	0.00	5.81	2.60	0.00	2.60	0.00	0.00	0.08	0.36	0.45	0.03	2.30	0.00	0.	0.00
71	1.500	31.60	0.00	0.00	0.00	5.89	2.48	0.00	2.48	0.00	0.00	0.08	0.37	0.44	0.03	2.30	0.00	0.	0.00
72	1.200	31.60	0.00	0.00	0.00	5.97	2.37	0.00	2.37	0.00	0.00	0.07	0.37	0.44	0.03	2.30	0.00	0.	0.00
73	0.900	31.60	0.00	0.00	0.00	6.05	2.27	0.00	2.27	0.00	0.00	0.07	0.37	0.44	0.03	2.30	0.00	0.	0.00
74	0.600	31.60	0.00	0.00	0.00	6.12	2.17	0.00	2.17	0.00	0.00	0.06	0.37	0.44	0.03	2.30	0.00	0.	0.00
75	0.300	31.60	0.00	0.00	0.00	6.19	2.07	0.00	2.07	0.00	0.00	0.06	0.37	0.43	0.03	2.30	0.00	0.	0.00

76 0.000 31.60 0.00 0.00 0.00 6.26 1.97 0.00 1.97 0.00 0.00 0.06 0.37 0.43 0.03 2.30 0.00 0. 0.00

STREAM SUMMARY Pearl River DO Modeling 090204
Headwater COEF-1 Run

TRAVEL TIME = 40.55 DAYS

MAXIMUM EFFLUENT = 0.01 PERCENT

FLOW = 0.28000 TO 2.32027 m^3/s
DISPERSION = 0.0021 TO 0.0174 m^2/s
VELOCITY = 0.00230 TO 0.02483 m/s
DEPTH = 1.64 TO 3.75 m
WIDTH = 49.60 TO 98.10 m

BOD DECAY = 0.09 TO 0.10 per day
NH3 DECAY = 0.18 TO 0.25 per day
SOD = 0.26 TO 6.67 $g/m^2/d$
NH3 SOURCE = 0.00 TO 0.00 $g/m^2/d$
REAERATION = 0.22 TO 0.52 per day
BOD SETTLING = 0.03 TO 0.08 per day
ORG-N DECAY = 0.06 TO 0.06 per day
ORG-N SETTLING = 0.00 TO 0.01 per day

TEMPERATURE = 29.80 TO 32.10 deg C
DISSOLVED OXYGEN = 3.50 TO 6.69 mg/L

Pearl River DO Modeling 090204
COEF-1 Run

REACH SUMMARY REPORT FOR Headwater

RCH NO.	REACH NAME	BEGIN DIST km	ENDING DIST km	REACH LENGTH km	TRAVEL TIME days	FLOW AT EOR m3/s	AVERAGE VELO m/s	AVG DEPTH m	AVG WIDTH m	FLOW AT EOR cfs	AVERAGE VELO fps	AVG DEPTH ft	AVG WIDTH ft
1	Lock 3 to Below A	23.00	21.50	1.50	7.55	0.28000	0.00230	2.210	55.10	9.887	0.008	7.251	180.78
2	Below A to Below B	21.50	20.50	1.00	5.03	0.28000	0.00230	2.210	55.10	9.887	0.008	7.251	180.78
3	Below B to Below C	20.50	19.00	1.50	7.55	0.28000	0.00230	2.210	55.10	9.887	0.008	7.251	180.78
4	Below C to Lock 2	19.00	17.78	1.22	2.36	1.15000	0.00597	2.110	59.30	40.607	0.020	6.923	194.56
5	Lock 2 (Church) to ABTalisheek	17.78	13.43	4.35	4.67	1.43008	0.01077	1.910	62.90	50.496	0.035	6.267	206.37
6	AB to Talisheek	13.43	11.98	1.45	1.41	1.43008	0.01190	1.910	62.90	50.496	0.039	6.267	206.37
7	Talisheek to Below G	11.98	10.40	1.58	2.67	2.02008	0.00684	3.750	69.50	71.329	0.022	12.304	228.03
8	Below G to Below H	10.40	7.40	3.00	1.40	2.02008	0.02483	1.640	49.60	71.329	0.081	5.381	162.74
9	Below H to Evans Creek	7.40	5.45	1.95	2.47	2.02008	0.00915	2.250	98.10	71.329	0.030	7.382	321.87
10	Evans Creek to Possible Stream	5.45	4.70	0.75	0.95	2.02008	0.00915	2.250	98.10	71.329	0.030	7.382	321.87
11	Possible Stream to Junior High	4.70	3.40	1.30	1.51	2.32008	0.00999	2.250	98.10	81.922	0.033	7.382	321.87
12	Junior High to Spillway	3.40	2.70	0.70	0.37	2.32027	0.02176	1.810	58.90	81.929	0.071	5.939	193.25
13	Spillway to Lock 1	2.70	0.00	2.70	2.61	2.32027	0.01198	2.260	85.70	81.929	0.039	7.415	281.18

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N BKGD	ORG-N BOD1	NCM ALG	SOD NCM	SOD PHOT	SOD RESP	SOD PHOT	ALG OUT	ALG IN	MAC	TOT	TOT
1	145.	0.	-137.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-3.	-14.	0.	0.	-18.	-2.	0.	0.	5.	0.	0.	-173.6	173.6	0.01
2	137.	0.	-135.	0.	0.	0.	0.	0.	0.	0.	0.	25.	-2.	-10.	0.	0.	-18.	-1.	0.	0.	5.	0.	0.	-166.5	166.5	0.01
3	135.	0.	-135.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-2.	-8.	0.	0.	-18.	-1.	0.	0.	5.	0.	0.	-163.8	163.8	0.01
4	135.	0.	-138.	0.	0.	0.	0.	0.	0.	0.	0.	23.	-2.	-6.	0.	0.	-18.	-1.	0.	0.	5.	0.	0.	-163.3	163.3	0.00
5	138.	0.	-140.	0.	0.	0.	0.	0.	0.	0.	0.	22.	-1.	-4.	0.	0.	-18.	-1.	0.	0.	5.	0.	0.	-164.0	164.0	0.00
6	140.	0.	-142.	0.	0.	0.	0.	0.	0.	0.	0.	14.	-1.	-2.	0.	0.	-12.	0.	0.	0.	3.	0.	0.	-157.1	157.1	0.00
7	142.	0.	-144.	0.	0.	0.	0.	0.	0.	0.	0.	13.	-1.	-2.	0.	0.	-12.	0.	0.	0.	3.	0.	0.	-158.2	158.2	0.00
8	144.	0.	-145.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-1.	-1.	0.	0.	-12.	0.	0.	0.	3.	0.	0.	-159.3	159.3	0.00
9	145.	0.	-147.	0.	0.	0.	0.	0.	0.	0.	0.	12.	0.	-1.	0.	0.	-12.	0.	0.	0.	3.	0.	0.	-160.3	160.3	0.00
10	147.	0.	-148.	0.	0.	0.	0.	0.	0.	0.	0.	11.	0.	-1.	0.	0.	-12.	0.	0.	0.	3.	0.	0.	-161.2	161.2	0.00
11	148.	0.	-151.	0.	0.	0.	0.	0.	0.	0.	0.	15.	0.	-1.	0.	0.	-14.	0.	0.	0.	4.	0.	0.	-167.2	167.2	0.00
12	151.	0.	-154.	0.	0.	0.	0.	0.	0.	0.	0.	14.	0.	-1.	0.	0.	-14.	0.	0.	0.	4.	0.	0.	-169.1	169.1	0.00
13	154.	0.	-155.	0.	0.	0.	0.	0.	0.	0.	0.	13.	0.	0.	0.	0.	-14.	0.	0.	0.	3.	0.	0.	-170.2	170.2	0.00
14	155.	0.	-156.	0.	0.	0.	0.	0.	0.	0.	0.	13.	0.	0.	0.	0.	-14.	0.	0.	0.	3.	0.	0.	-170.8	170.8	0.00
15	156.	0.	-157.	0.	0.	0.	0.	0.	0.	0.	0.	12.	0.	0.	0.	0.	-14.	0.	0.	0.	3.	0.	0.	-171.1	171.1	0.00
16	157.	0.	-287.	0.	0.	0.	150.	0.	0.	0.	0.	10.	-8.	-7.	0.	0.	-15.	-5.	0.	0.	5.	0.	0.	-322.2	322.2	0.00
17	287.	0.	-413.	0.	0.	0.	150.	0.	0.	0.	0.	10.	-10.	-10.	0.	0.	-15.	-6.	0.	0.	7.	0.	0.	-455.0	455.0	0.00
18	413.	0.	-539.	0.	0.	0.	150.	0.	0.	0.	0.	10.	-12.	-11.	0.	0.	-15.	-7.	0.	0.	10.	0.	0.	-583.4	583.4	0.00
19	539.	0.	-664.	0.	0.	0.	150.	0.	0.	0.	0.	10.	-12.	-12.	0.	0.	-15.	-7.	0.	0.	12.	0.	0.	-710.9	710.9	0.00
20	664.	0.	-667.	0.	0.	0.	13.	0.	0.	0.	0.	11.	-11.	-10.	0.	0.	-4.	-7.	0.	0.	11.	0.	0.	-699.3	699.3	0.00
21	667.	0.	-672.	0.	0.	0.	13.	0.	0.	0.	0.	12.	-11.	-9.	0.	0.	-4.	-7.	0.	0.	11.	0.	0.	-703.2	703.2	0.00
22	672.	0.	-679.	0.	0.	0.	13.	0.	0.	0.	0.	13.	-11.	-9.	0.	0.	-4.	-7.	0.	0.	11.	0.	0.	-708.7	708.7	0.00
23	679.	0.	-686.	0.	0.	0.	13.	0.	0.	0.	0.	13.	-10.	-8.	0.	0.	-4.	-7.	0.	0.	11.	0.	0.	-715.6	715.6	0.00
24	686.	0.	-695.	0.	0.	0.	13.	0.	0.	0.	0.	14.	-10.	-8.	0.	0.	-4.	-7.	0.	0.	11.	0.	0.	-723.6	723.6	0.00
25	695.	0.	-705.	0.	0.	0.	13.	0.	0.	0.	0.	14.	-10.	-7.	0.	0.	-4.	-7.	0.	0.	11.	0.	0.	-732.5	732.5	0.00
26	705.	0.	-715.	0.	0.	0.	13.	0.	0.	0.	0.	14.	-10.	-7.	0.	0.	-4.	-7.	0.	0.	11.	0.	0.	-742.1	742.1	0.00
27	715.	0.	-726.	0.	0.	0.	13.	0.	0.	0.	0.	14.	-10.	-7.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-752.3	752.3	0.00
28	726.	0.	-737.	0.	0.	0.	13.	0.	0.	0.	0.	14.	-10.	-6.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-763.0	763.0	0.00
29	737.	0.	-748.	0.	0.	0.	13.	0.	0.	0.	0.	13.	-9.	-6.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-774.0	774.0	0.00
30	748.	0.	-760.	0.	0.	0.	13.	0.	0.	0.	0.	13.	-9.	-6.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-785.4	785.4	0.00
31	760.	0.	-772.	0.	0.	0.	13.	0.	0.	0.	0.	13.	-9.	-6.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-797.0	797.0	0.00
32	772.	0.	-784.	0.	0.	0.	13.	0.	0.	0.	0.	13.	-9.	-5.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-808.7	808.7	0.00
33	784.	0.	-797.	0.	0.	0.	13.	0.	0.	0.	0.	13.	-9.	-5.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-820.6	820.6	0.00
34	797.	0.	-809.	0.	0.	0.	13.	0.	0.	0.	0.	12.	-9.	-5.	0.	0.	-4.	-6.	0.	0.	11.	0.	0.	-832.7	832.7	0.00
35	809.	0.	-709.	0.	0.	0.	0.	0.	0.	0.	0.	26.	-8.	-4.	0.	0.	-116.	-6.	0.	0.	9.	0.	0.	-843.7	843.7	0.00
36	709.	0.	-623.	0.	0.	0.	0.	0.	0.	0.	0.	37.	-8.	-4.	0.	0.	-113.	-5.	0.	0.	7.	0.	0.	-753.7	753.7	0.00
37	623.	0.	-550.	0.	0.	0.	0.	0.	0.	0.	0.	47.	-7.	-3.	0.	0.	-110.	-5.	0.	0.	5.	0.	0.	-676.0	676.0	0.00
38	550.	0.	-487.	0.	0.	0.	0.	0.	0.	0.	0.	55.	-7.	-3.	0.	0.	-107.	-5.	0.	0.	4.	0.	0.	-609.1	609.1	0.00
39	487.	0.	-433.	0.	0.	0.	0.	0.	0.	0.	0.	62.	-7.	-3.	0.	0.	-105.	-5.	0.	0.	2.	0.	0.	-551.7	551.7	0.00
40	433.	0.	-560.	0.	0.	0.	102.	0.	0.	0.	0.	80.	-29.	-14.	0.	0.	-16.	-10.	0.	0.	13.	0.	0.	-628.3	628.3	-0.01
41	560.	0.	-670.	0.	0.	0.	102.	0.	0.	0.	0.	70.	-36.	-18.	0.	0.	-16.	-13.	0.	0.	21.	0.	0.	-752.9	752.9	-0.01
42	670.	0.	-769.	0.	0.	0.	102.	0.	0.	0.	0.	64.	-42.	-22.	0.	0.	-16.	-15.	0.	0.	28.	0.	0.	-863.6	863.6	0.00
43	769.	0.	-861.	0.	0.	0.	102.	0.	0.	0.	0.	59.	-47.	-25.	0.	0.	-16.	-16.	0.	0.	36.	0.	0.	-965.2	965.2	0.01
44	861.	0.	-867.	0.	0.	0.	0.	0.	0.	0.	0.	32.	-11.	-6.	0.	0.	-9.	-9.	0.	0.	9.	0.	0.	-901.1	901.1	0.00

45	867.	0.	-874.	0.	0.	0.	0.	0.	0.	0.	0.	31.	-11.	-6.	0.	0.	-9.	-8.	0.	0.	10.	0.	0.	-907.7	907.7	0.00
46	874.	0.	-882.	0.	0.	0.	0.	0.	0.	0.	0.	30.	-10.	-5.	0.	0.	-9.	-8.	0.	0.	10.	0.	0.	-915.0	915.0	0.00
47	882.	0.	-891.	0.	0.	0.	0.	0.	0.	0.	0.	30.	-10.	-5.	0.	0.	-9.	-8.	0.	0.	11.	0.	0.	-922.9	922.9	0.00
48	891.	0.	-900.	0.	0.	0.	0.	0.	0.	0.	0.	29.	-10.	-5.	0.	0.	-9.	-8.	0.	0.	12.	0.	0.	-931.5	931.5	0.00
49	900.	0.	-909.	0.	0.	0.	0.	0.	0.	0.	0.	28.	-10.	-5.	0.	0.	-9.	-8.	0.	0.	12.	0.	0.	-940.5	940.5	0.00
50	909.	0.	-920.	0.	0.	0.	0.	0.	0.	0.	0.	28.	-9.	-5.	0.	0.	-9.	-7.	0.	0.	13.	0.	0.	-950.0	950.0	0.00
51	920.	0.	-930.	0.	0.	0.	0.	0.	0.	0.	0.	27.	-9.	-5.	0.	0.	-9.	-7.	0.	0.	13.	0.	0.	-960.0	960.0	0.00
52	930.	0.	-941.	0.	0.	0.	0.	0.	0.	0.	0.	26.	-9.	-5.	0.	0.	-9.	-7.	0.	0.	14.	0.	0.	-970.4	970.4	0.00
53	941.	0.	-952.	0.	0.	0.	0.	0.	0.	0.	0.	25.	-9.	-4.	0.	0.	-9.	-7.	0.	0.	15.	0.	0.	-981.0	981.0	0.00
54	952.	0.	-918.	0.	0.	0.	0.	0.	0.	0.	0.	72.	-28.	-14.	0.	0.	-98.	-17.	0.	0.	52.	0.	0.	-1075.5	1075.5	-0.01
55	918.	0.	-894.	0.	0.	0.	0.	0.	0.	0.	0.	76.	-26.	-13.	0.	0.	-98.	-15.	0.	0.	52.	0.	0.	-1046.3	1046.3	0.00
56	894.	0.	-877.	0.	0.	0.	0.	0.	0.	0.	0.	79.	-24.	-11.	0.	0.	-98.	-14.	0.	0.	52.	0.	0.	-1024.9	1024.9	0.00
57	877.	0.	-866.	0.	0.	0.	0.	0.	0.	0.	0.	82.	-23.	-10.	0.	0.	-98.	-13.	0.	0.	52.	0.	0.	-1009.9	1009.9	0.00
58	866.	0.	-859.	0.	0.	0.	0.	0.	0.	0.	0.	83.	-21.	-9.	0.	0.	-98.	-12.	0.	0.	52.	0.	0.	-999.9	999.9	0.00
59	859.	0.	-874.	0.	0.	0.	0.	0.	0.	0.	0.	51.	-13.	-6.	0.	0.	-44.	-7.	0.	0.	33.	0.	0.	-943.6	943.6	0.00

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	WSLD IN	WITH OUT	REAE DECA	BOD1 DECA	NH3-N DECA	ORG-N BKGD	NCM BOD1	SOD ALG	SOD NCM	SOD PHOT	SOD RESP	ALG PHOT	ALG OUT	MAC IN	TOT	TOT
60	874.	0.	-888.	0.	0.	0.	0.	0.	0.	0.	0.	50.	-12.	-5.	0.	0.	-44.	-7.	0.	0.	33.	0.	0.	-956.7	956.7	0.00
61	888.	0.	-902.	0.	0.	0.	0.	0.	0.	0.	0.	48.	-12.	-5.	0.	0.	-44.	-7.	0.	0.	33.	0.	0.	-969.5	969.5	0.00
62	902.	0.	-967.	0.	0.	0.	52.	0.	0.	0.	0.	57.	-17.	-7.	0.	0.	-57.	-10.	0.	0.	47.	0.	0.	-1058.5	1058.5	0.00
63	967.	0.	-1028.	0.	0.	0.	52.	0.	0.	0.	0.	53.	-19.	-7.	0.	0.	-57.	-11.	0.	0.	51.	0.	0.	-1123.0	1123.0	0.00
64	1028.	0.	-1086.	0.	0.	0.	52.	0.	0.	0.	0.	50.	-21.	-8.	0.	0.	-57.	-12.	0.	0.	55.	0.	0.	-1184.3	1184.3	0.00
65	1086.	0.	-1142.	0.	0.	0.	52.	0.	0.	0.	0.	47.	-23.	-8.	0.	0.	-58.	-13.	0.	0.	59.	0.	0.	-1243.2	1243.2	0.00
66	1142.	0.	-1134.	0.	0.	0.	0.	0.	0.	0.	0.	31.	-12.	-4.	0.	0.	-34.	-8.	0.	0.	19.	0.	0.	-1191.3	1191.3	0.00
67	1134.	0.	-1115.	0.	0.	0.	0.	0.	0.	0.	0.	32.	-11.	-4.	0.	0.	-34.	-8.	0.	0.	7.	0.	0.	-1172.9	1172.9	0.01
68	1115.	0.	-1132.	0.	0.	0.	0.	0.	0.	0.	0.	38.	-17.	-6.	0.	0.	0.	-10.	0.	0.	11.	0.	0.	-1164.7	1164.7	0.01
69	1132.	0.	-1149.	0.	0.	0.	0.	0.	0.	0.	0.	36.	-16.	-5.	0.	0.	0.	-9.	0.	0.	11.	0.	0.	-1179.8	1179.8	0.01
70	1149.	0.	-1165.	0.	0.	0.	0.	0.	0.	0.	0.	34.	-15.	-5.	0.	0.	0.	-9.	0.	0.	11.	0.	0.	-1194.7	1194.7	0.01
71	1165.	0.	-1181.	0.	0.	0.	0.	0.	0.	0.	0.	33.	-15.	-5.	0.	0.	0.	-8.	0.	0.	11.	0.	0.	-1209.3	1209.3	0.00
72	1181.	0.	-1197.	0.	0.	0.	0.	0.	0.	0.	0.	31.	-14.	-4.	0.	0.	0.	-8.	0.	0.	11.	0.	0.	-1223.5	1223.5	0.00
73	1197.	0.	-1212.	0.	0.	0.	0.	0.	0.	0.	0.	29.	-13.	-4.	0.	0.	0.	-8.	0.	0.	11.	0.	0.	-1237.4	1237.4	0.00
74	1212.	0.	-1227.	0.	0.	0.	0.	0.	0.	0.	0.	27.	-13.	-4.	0.	0.	0.	-7.	0.	0.	11.	0.	0.	-1250.9	1250.9	0.00
75	1227.	0.	-1241.	0.	0.	0.	0.	0.	0.	0.	0.	26.	-12.	-4.	0.	0.	0.	-7.	0.	0.	11.	0.	0.	-1264.1	1264.1	0.00
76	1241.	0.	-1255.	0.	0.	1.	0.	0.	0.	0.	0.	24.	-12.	-3.	0.	0.	0.	-7.	0.	0.	11.	0.	0.	-1277.3	1277.3	0.00

Pearl River DO Modeling 090204
COEF-1 Run

INPUT/OUTPUT LOADING SUMMARY

	FLOW m³/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER FLOW	0.28	145.2	24.2	0	0	12.1	2.4	0	0	0
INCREMENTAL INFLOW	2.04	1410	1771.2	0	0	113.6	17.6	0	0	0
INCREMENTAL OUTFLOW	0	0	0	0	0	0	0	0	0	0

WASTELOADS	0	0	0.1	0	0	0	0	0	0	0
WITHDRAWLS	0	0	0	0	0	0	0	0	0	0
FLOW THRU LOWER BNDRY	-2.32	-1255.5	-394.2	0	0	-11.3	-74.5	0	0	0
DISPERSION THRU LOWER BNDRY		0.5	-2.4	0	0	0.1	-0.4	0	0	0
DISPERSION THRU HDWTR BNDRY		0.1	0	0	0	0	0	0	0	0
NON-POINT INPUT		0	0	0	0	0				
NATURAL REAERATION		2359.8								
DAM REAERATION		0								
BACKGROUND SOD		-1958.1								
BOD#1 DECAY		-881	-881							
BOD#1 SETTLING		-517.9	-517.9							
ANAEROBIC BOD#1 DECAY			0							
BOD#2 DECAY		0		0						
BOD#2 SETTLING		0		0						
ANAEROBIC BOD#2 DECAY				0						
ORG-N DECAY		0			0	0				
ORG-N SETTLING					0	0				
NH3 DECAY		-495.7				-114.5	114.5			
BACKGROUND NH3 SOURCE						0				
OTHER DENITRIFICATION							0			
PHOSPHORUS SOURCE								0		
ALGAE PHOTOSYNTHESIS		1192.7				0	-59.6	0	0	
ALGAE RESPIRATION		0				0		0	0	
ALGAE SETTLING		0							0	
MACRO PHOTOSYNTHESIS		0				0	0	0		
NCM DECAY		0								0
NCM SETTLING		0								0
Total inputs	2.32	5108.3	1795.5	0	0	125.8	134.5	0	0	0
Total outputs	-2.32	-5108.2	-1795.5	0	0	-125.8	-134.5	0	0	0
Net convergence error	0	0	0	0	0	0	0	0	0	0

.....EXECUTION COMPLETED

Calibration output file for subsegment 090207

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LA-QUAL Version 8.00
Louisiana Department of Environmental Quality

Input file is D:\Pearl\LAQUAL\S090207\Seg090207.txt
Output produced at 18:15 on 06/28/2007

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

CARD TYPE      CONTROL TITLES

TITLE01        Middle/Middle West Rivers DO Modeling - 090207
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01

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

CARD TYPE      MODEL OPTION

MODOPT    NO   TEMPERATURE
MODOPT    NO   SALINITY
MODOPT    NO   CONSERVATIVE MATERIAL #1 = CHLORIDES          IN  mg/L
MODOPT    NO   CONSERVATIVE MATERIAL #2 = SULFATES           IN  mg/L
MODOPT   YES   DISSOLVED OXYGEN
MODOPT   YES   BOD1
MODOPT    NO   BOD2
MODOPT   YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT    NO   PHOSPHORUS
MODOPT    NO   CHLOROPHYLL A
MODOPT    NO   MACROPHYTES
MODOPT    NO   COLIFORM
MODOPT    NO   NONCONSERVATIVE MATERIAL
ENDATA02

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

CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE

PROGRAM        MAXImum Iteration Limit          =      5000.00000
PROGRAM        HYDRaulic calculation method     =         2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE           =         1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE           =         1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                       =         0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE         =         3.00000 (inhibit all rates but SOD)
PROGRAM        DISPERSION Equation              =         2.00000 (values entered as a function of D,Q,Vtidal)
PROGRAM        OCEAN Exchange Ratio             =         1.00000
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PROGRAM      TIDE Height                =      0.60000 meters
PROGRAM      TIDAL Period               =     25.00000 hours
PROGRAM      PERIOD of Tidal Rise       =     12.50000 hours
PROGRAM      K2 MAXIMUM                 =     10.00000 per day
ENDATA03

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

 CARD TYPE    RATE CODE    THETA VALUE

ENDATA04

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

CARD TYPE     DESCRIPTION OF CONSTANT                VALUE

ENDATA05

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

CARD TYPE     DESCRIPTION OF CONSTANT                VALUE

ENDATA06

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

CARD TYPE     DESCRIPTION OF CONSTANT                VALUE

ENDATA07

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

REACH ID    1  H1  Headwaters-MR-A                  22.11  TO  21.30  0.2700    0.81     3     1     3
REACH ID    2  M1  MR-B before split of MR/MRWest   21.30  TO  20.30  0.2500    1.00     4     4     7
REACH ID    3  M2  MR-C/MRWest-D                    20.30  TO  18.80  0.3000    1.50     5     8    12
REACH ID    4  M3  MR-E/MRWest-G                    18.80  TO  15.20  0.3000    3.60    12    13    24
REACH ID    5  M4  MR-H                             15.20  TO  12.80  0.3000    2.40     8    25    32
REACH ID    6  M5  MRWest-J                         12.80  TO  12.00  0.2000    0.80     4    33    36
REACH ID    7  M6                                   12.00  TO  10.60  0.3500    1.40     4    37    40
REACH ID    8  M7  MREast-(L)/MRWest-(M)/MR-(N)     10.60  TO   8.20  0.2400    2.40    10    41    50
REACH ID    9  M8                                    8.20  TO   6.40  0.3000    1.80     6    51    56
REACH ID   10  M9  MRWest-O                          6.40  TO   4.50  0.3800    1.90     5    57    61
REACH ID   11  N1                                    4.50  TO   4.20  0.1500    0.30     2    62    63
REACH ID   12  N2                                    4.20  TO   3.50  0.3500    0.70     2    64    65
REACH ID   13  N3  MRWest-P                          3.50  TO   1.70  0.3000    1.80     6    66    71
REACH ID   14  N4                                    1.70  TO   1.50  0.1000    0.20     2    72    73
REACH ID   15  N5  MRWest-Q                          1.50  TO   0.15  0.2700    1.35     5    74    78
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REACH ID    16  N6                          0.15  TO   0.00  0.1500    0.15     1     79    79
ENDATA08

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

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

HYDRO-1      1  H1      0.000      0.000     52.600      0.000      0.000      1.710    0.00010   0.025
HYDRO-1      2  M1      0.000      0.000     45.200      0.000      0.000      4.920    0.00010   0.025
HYDRO-1      3  M2      0.000      0.000     63.000      0.000      0.000      2.480    0.00010   0.025
HYDRO-1      4  M3      0.000      0.000    103.500      0.000      0.000      4.050    0.00010   0.025
HYDRO-1      5  M4      0.000      0.000    116.500      0.000      0.000      5.470    0.00010   0.025
HYDRO-1      6  M5      0.000      0.000    116.500      0.000      0.000      5.470    0.00010   0.025
HYDRO-1      7  M6      0.000      0.000    116.500      0.000      0.000      5.470    0.00010   0.025
HYDRO-1      8  M7      0.000      0.000    224.750      0.000      0.000      6.650    0.00010   0.025
HYDRO-1      9  M8      0.000      0.000    224.750      0.000      0.000      6.650    0.00010   0.025
HYDRO-1     10  M9      0.000      0.000    260.200      0.000      0.000      4.330    0.00010   0.025
HYDRO-1     11  N1      0.000      0.000    236.940      0.000      0.000      5.700    0.00010   0.025
HYDRO-1     12  N2      0.000      0.000    236.940      0.000      0.000      5.700    0.00010   0.025
HYDRO-1     13  N3      0.000      0.000    236.940      0.000      0.000      5.700    0.00010   0.025
HYDRO-1     14  N4      0.000      0.000    110.000      0.000      0.000      5.700    0.00010   0.025
HYDRO-1     15  N5      0.000      0.000    110.000      0.000      0.000      5.700    0.00010   0.025
HYDRO-1     16  N6      0.000      0.000    110.000      0.000      0.000      5.700    0.00010   0.025
ENDATA09

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

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

HYDR         1  H1     1.00       1.000         0.000         0.000         0.000
HYDR         2  M1     1.00       1.000         0.000         0.000         0.000
HYDR         3  M2     1.00       1.000         0.000         0.000         0.000
HYDR         4  M3     1.00       1.000         0.000         0.000         0.000
HYDR         5  M4     1.00       1.000         0.000         0.000         0.000
HYDR         6  M5     1.00       1.000         0.000         0.000         0.000
HYDR         7  M6     1.00       1.000         0.000         0.000         0.000
HYDR         8  M7     1.00       1.000         0.000         0.000         0.000
HYDR         9  M8     1.00       1.000         0.000         0.000         0.000
HYDR        10  M9     1.00       1.000         0.000         0.000         0.000
HYDR        11  N1     1.00       1.000         0.000         0.000         0.000
HYDR        12  N2     1.00       1.000         0.000         0.000         0.000
HYDR        13  N3     1.00       1.000         0.000         0.000         0.000
HYDR        14  N4     1.00       1.000         0.000         0.000         0.000
HYDR        15  N5     1.00       1.000         0.000         0.000         0.000
HYDR        16  N6     1.00       1.000         0.000         0.000         0.000
ENDATA10

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

CARD TYPE	REACH ID		TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	H1	27.80	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	2	M1	28.60	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	3	M2	30.60	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	4	M3	30.40	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	5	M4	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	6	M5	31.00	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	7	M6	31.00	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	8	M7	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	9	M8	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	10	M9	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	11	N1	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	12	N2	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	13	N3	30.70	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	14	N4	30.70	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	15	N5	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00
INITIAL	16	N6	30.50	0.00	5.00	0.10	0.04	0.05	1.00	0.00

ENDATA11

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

CARD TYPE	RCH NUM	RCH ID	K2 OPT	K2 "A"	K2 "B" g/m²/d	K2 "C" per day	BOD BKGRND SOD m/d	ANAER BOD DECAY per day	BOD SETT per day	CONV TO SOD per day	BOD2 DECAY m/d	ANAER BOD2 DECAY per day	BOD2 SETT	CONV TO SOD	BOD2 DECAY
COEF-1	1	H1	3 OCONNER-DOBB	0.000	0.000	0.000	3.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	2	M1	3 OCONNER-DOBB	0.000	0.000	0.000	4.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	3	M2	3 OCONNER-DOBB	0.000	0.000	0.000	1.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	4	M3	3 OCONNER-DOBB	0.000	0.000	0.000	3.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	5	M4	3 OCONNER-DOBB	0.000	0.000	0.000	3.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	6	M5	3 OCONNER-DOBB	0.000	0.000	0.000	2.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	7	M6	3 OCONNER-DOBB	0.000	0.000	0.000	2.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	8	M7	3 OCONNER-DOBB	0.000	0.000	0.000	2.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	9	M8	3 OCONNER-DOBB	0.000	0.000	0.000	2.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	10	M9	3 OCONNER-DOBB	0.000	0.000	0.000	2.000	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	11	N1	3 OCONNER-DOBB	0.000	0.000	0.000	0.100	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	12	N2	3 OCONNER-DOBB	0.000	0.000	0.000	0.100	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	13	N3	3 OCONNER-DOBB	0.000	0.000	0.000	0.100	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	14	N4	3 OCONNER-DOBB	0.000	0.000	0.000	0.100	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	15	N5	3 OCONNER-DOBB	0.000	0.000	0.000	0.100	0.040	0.100	1.000	0.001	0.010	0.000	0.000	0.000
COEF-1	16	N6	3 OCONNER-DOBB	0.000	0.000	0.000	0.100	0.040	0.100	1.000	0.001	0.010	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	NH3 SRCE	NH3 DECA	NH3 SRCE	PHOS SRCE	DENIT RATE

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COEF-2      1  H1    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      2  M1    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      3  M2    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      4  M3    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      5  M4    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      6  M5    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      7  M6    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      8  M7    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2      9  M8    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2     10  M9    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2     11  N1    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2     12  N2    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2     13  N3    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2     14  N4    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2     15  N5    0.050   0.010   1.000    0.100   0.000   0.000   0.001
COEF-2     16  N6    0.050   0.010   1.000    0.100   0.000   0.000   0.001
ENDATA13

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

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

COEF-3      1  H1    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      2  M1    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      3  M2    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      4  M3    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      5  M4    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      6  M5    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      7  M6    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      8  M7    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      9  M8    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     10  M9    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     11  N1    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     12  N2    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     13  N3    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     14  N4    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     15  N5    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     16  N6    3.00   0.000   0.00    0.00     0.00    0.00    0.00    0.00
ENDATA14

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

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

COEF-4      1  H1    0.000   0.000   0.000   0.000
COEF-4      2  M1    0.000   0.000   0.000   0.000
COEF-4      3  M2    0.000   0.000   0.000   0.000
COEF-4      4  M3    0.000   0.000   0.000   0.000
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COEF-4      5  M4    0.000   0.000   0.000   0.000
COEF-4      6  M5    0.000   0.000   0.000   0.000
COEF-4      7  M6    0.000   0.000   0.000   0.000
COEF-4      8  M7    0.000   0.000   0.000   0.000
COEF-4      9  M8    0.000   0.000   0.000   0.000
COEF-4     10  M9    0.000   0.000   0.000   0.000
COEF-4     11  N1    0.000   0.000   0.000   0.000
COEF-4     12  N2    0.000   0.000   0.000   0.000
COEF-4     13  N3    0.000   0.000   0.000   0.000
COEF-4     14  N4    0.000   0.000   0.000   0.000
COEF-4     15  N5    0.000   0.000   0.000   0.000
COEF-4     16  N6    0.000   0.000   0.000   0.000
ENDATA15

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

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

INCR-1       1  H1    0.00000   0.69700   30.00   0.00   0.00   0.00   0.86049   0.00000
INCR-1       2  M1    0.00000   2.48700   30.00   0.00   0.00   0.00   2.48700   0.00000
INCR-1       3  M2    0.00000   4.45500   30.00   0.00   0.00   0.00   2.97000   0.00000
INCR-1       4  M3    0.00000   3.08400   30.00   0.00   0.00   0.00   0.85667   0.00000
INCR-1       5  M4    0.00000   1.50000   30.00   0.00   0.00   0.00   0.62500   0.00000
INCR-1       6  M5    0.00000   1.50000   30.00   0.00   0.00   0.00   1.87500   0.00000
INCR-1       7  M6    0.00000   1.50000   30.00   0.00   0.00   0.00   1.07143   0.00000
INCR-1       8  M7    0.00000   1.50000   30.00   0.00   0.00   0.00   0.62500   0.00000
INCR-1       9  M8    0.00000   1.50000   30.00   0.00   0.00   0.00   0.83333   0.00000
INCR-1      10  M9    0.00000   1.50000   30.00   0.00   0.00   0.00   0.78947   0.00000
INCR-1      11  N1    0.00000   1.50000   30.00   0.00   0.00   0.00   5.00000   0.00000
INCR-1      12  N2    0.00000   1.50000   30.00   0.00   0.00   0.00   2.14286   0.00000
INCR-1      13  N3    0.00000   1.50000   30.00   0.00   0.00   0.00   0.83333   0.00000
INCR-1      14  N4    0.00000   1.50000   30.00   0.00   0.00   0.00   7.50000   0.00000
INCR-1      15  N5    0.00000   1.50000   30.00   0.00   0.00   0.00   1.11111   0.00000
INCR-1      16  N6    0.00000   1.50000   30.00   0.00   0.00   0.00  10.00000   0.00000
ENDATA16

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

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

INCR-2       1  H1    4.00   0.50   0.30   0.00   0.20   0.00
INCR-2       2  M1    4.00   0.50   0.30   0.00   0.20   0.00
INCR-2       3  M2    4.00   0.50   0.30   0.00   0.20   0.00
INCR-2       4  M3    4.00   4.00   0.30   0.00   0.20   0.00
INCR-2       5  M4    4.00   4.00   0.30   0.00   0.20   0.00
INCR-2       6  M5    4.00  10.00   0.30   0.00   0.20   0.00
INCR-2       7  M6    4.00  10.00   0.30   0.00   0.20   0.00
INCR-2       8  M7    4.00  10.00   0.30   0.00   0.20   0.00
INCR-2       9  M8    4.00  10.00   0.30   0.00   0.20   0.00
INCR-2      10  M9    4.00  10.00   0.30   0.00   0.20   0.00
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INCR-2      11  N1     8.00    6.00    0.30    0.00    0.20    0.00
INCR-2      12  N2     8.00    6.00    0.30    0.00    0.20    0.00
INCR-2      13  N3     8.00    6.00    0.30    0.00    0.20    0.00
INCR-2      14  N4     8.00    6.00    0.30    0.00    0.20    0.00
INCR-2      15  N5     8.00    8.00    0.30    0.00    0.20    0.00
INCR-2      16  N6     8.00    8.00    0.30    0.00    0.20    0.00
ENDATA17

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

 CARD TYPE    REACH  ID     PHOS    CHL A    COLI     NCM

INCR-3       1  H1     0.00    0.00    0.00    0.00
INCR-3       2  M1     0.00    0.00    0.00    0.00
INCR-3       3  M2     0.00    0.00    0.00    0.00
INCR-3       4  M3     0.00    0.00    0.00    0.00
INCR-3       5  M4     0.00    0.00    0.00    0.00
INCR-3       6  M5     0.00    0.00    0.00    0.00
INCR-3       7  M6     0.00    0.00    0.00    0.00
INCR-3       8  M7     0.00    0.00    0.00    0.00
INCR-3       9  M8     0.00    0.00    0.00    0.00
INCR-3      10  M9     0.00    0.00    0.00    0.00
INCR-3      11  N1     0.00    0.00    0.00    0.00
INCR-3      12  N2     0.00    0.00    0.00    0.00
INCR-3      13  N3     0.00    0.00    0.00    0.00
INCR-3      14  N4     0.00    0.00    0.00    0.00
INCR-3      15  N5     0.00    0.00    0.00    0.00
INCR-3      16  N6     0.00    0.00    0.00    0.00
ENDATA18

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

CARD TYPE    REACH  ID    BOD#1    ORG-N    COLI     NCM      DO    BOD#2

ENDATA19

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

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

HDWTR-1        1          Headwater    0   3.32000  117.232   30.00    0.00    0.000    0.000
ENDATA20

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

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

HDWTR-2        1          Headwater     2.50     4.00     0.00     0.10     0.10     0.00
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ENDATA21

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

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

HDWTR-3         1             Headwater        0.00     0.00     0.00     0.00
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM    RIVER    NAME
         ELEMENT  ELEMENT    KILOM

ENDATA23

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

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

WSTLD-1       1      22.11  test                0.00000   0.00000   0.000   20.00     0.00     0.000     0.000
ENDATA24

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

WSTLD-2         1     test                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
ENDATA25

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

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

WSTLD-3         1     test                   0.00     0.00     0.00     0.00
ENDATA26

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

CARD TYPE    CONSTITUENT                  CONCENTRATION

LOWER BC    TEMPERATURE                    =     26.250     deg C
LOWER BC    SALINITY                       =      0.000     ppt
LOWER BC    CONSERVATIVE MATERIAL I        =      7.625     mg/L
LOWER BC    CONSERVATIVE MATERIAL II       =      0.000     mg/L
LOWER BC    DISSOLVED OXYGEN               =      6.000     mg/L
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LOWER BC    BIOCHEMICAL OXYGEN DEMAND        =     4.000     mg/L
LOWER BC    ORGANIC NITROGEN                 =     0.000     mg/L
LOWER BC    AMMONIA NITROGEN                 =     0.000     mg/L
LOWER BC    NITRATE + NITRITE                =     0.000     mg/L
LOWER BC    PHOSPHORUS                       =     0.000     mg/L
LOWER BC    CHLOROPHYLL A                    =     0.000     µg/L
LOWER BC    COLIFORM                         =     0.000     #/100 mL
LOWER BC    NONCONSERVATIVE MATERIAL         =    11.160
ENDATA27

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

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

ENDATA28

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

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

SENSITIV      TRANGE      -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV      OXR         -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV      VELOCITY    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV      DISPERSI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV      REAERATI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV      BOD DECA    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV      BOD SETT    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV      BENTHAL     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
ENDATA29

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

NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =  16
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
ENDATA30

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

OVERLAY 1        S3.OVL              :Middle/Middle West Rivers DO
ENDATA31

    .....NO ERRORS DETECTED IN INPUT DATA
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN   8 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED

INTERMEDIATE REPORT
 Dissolved Oxygen                          Middle/Middle West Rivers DO Modeling - 090207
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mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	2.53	2.55	2.58							
M1	2	4	2.66	2.71	2.75	2.79						
M2	3	8	2.97	3.12	3.23	3.33	3.40					
M3	4	13	3.33	3.26	3.20	3.15	3.09	3.04	2.99	2.95	2.90	2.86
M3	4	23	2.82	2.78								
M4	5	25	2.73	2.68	2.63	2.59	2.54	2.50	2.46	2.43		
M5	6	33	2.46	2.48	2.50	2.52						
M6	7	37	2.53	2.54	2.55	2.56						
M7	8	41	2.53	2.51	2.49	2.48	2.46	2.44	2.42	2.41	2.39	2.38
M8	9	51	2.37	2.35	2.34	2.33	2.31	2.30				
M9	10	57	2.30	2.29	2.29	2.29	2.32					
N1	11	62	2.57	2.76								
N2	12	64	2.98	3.19								
N3	13	66	3.30	3.40	3.49	3.59	3.68	3.78				
N4	14	72	3.89	3.99								
N5	15	74	4.04	4.10	4.15	4.20	4.29					
N6	16	79	4.75									

INTERMEDIATE REPORT
Effective BOD Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	3.76	3.52	3.28							
M1	2	4	2.87	2.57	2.33	2.14						
M2	3	8	1.94	1.77	1.64	1.53	1.44					
M3	4	13	1.49	1.52	1.56	1.59	1.62	1.65	1.68	1.71	1.74	1.76
M3	4	23	1.78	1.80								
M4	5	25	1.81	1.81	1.82	1.82	1.82	1.83	1.83	1.86		
M5	6	33	2.04	2.20	2.36	2.50						
M6	7	37	2.62	2.74	2.85	2.95						
M7	8	41	2.95	2.95	2.95	2.96	2.96	2.96	2.96	2.96	2.96	2.97
M8	9	51	2.99	3.01	3.03	3.05	3.07	3.09				
M9	10	57	3.11	3.14	3.17	3.19	3.22					
N1	11	62	3.29	3.33								
N2	12	64	3.34	3.35								
N3	13	66	3.33	3.30	3.27	3.25	3.23	3.22				
N4	14	72	3.29	3.34								
N5	15	74	3.37	3.39	3.42	3.45	3.49					
N6	16	79	3.74									

INTERMEDIATE REPORT
Biochemical Oxygen Demand Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	3.76	3.52	3.28							
M1	2	4	2.87	2.57	2.33	2.14						
M2	3	8	1.94	1.77	1.64	1.53	1.44					
M3	4	13	1.49	1.52	1.56	1.59	1.62	1.65	1.68	1.71	1.74	1.76
M3	4	23	1.78	1.80								
M4	5	25	1.81	1.81	1.82	1.82	1.82	1.83	1.83	1.86		
M5	6	33	2.04	2.20	2.36	2.50						
M6	7	37	2.62	2.74	2.85	2.95						
M7	8	41	2.95	2.95	2.95	2.96	2.96	2.96	2.96	2.96	2.96	2.97
M8	9	51	2.99	3.01	3.03	3.05	3.07	3.09				
M9	10	57	3.11	3.14	3.17	3.19	3.22					
N1	11	62	3.29	3.33								
N2	12	64	3.34	3.35								
N3	13	66	3.33	3.30	3.27	3.25	3.23	3.22				
N4	14	72	3.29	3.34								
N5	15	74	3.37	3.39	3.42	3.45	3.49					
N6	16	79	3.74									

INTERMEDIATE REPORT
Organic Nitrogen — Middle/Middle West Rivers DO Modeling - 090207
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.02	0.04	0.05							
M1	2	4	0.09	0.11	0.13	0.14						
M2	3	8	0.16	0.18	0.19	0.20	0.20					
M3	4	13	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21
M3	4	23	0.21	0.21								
M4	5	25	0.21	0.21	0.21	0.20	0.20	0.20	0.20	0.20		
M5	6	33	0.20	0.20	0.21	0.21						
M6	7	37	0.21	0.21	0.21	0.21						
M7	8	41	0.20	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.19
M8	9	51	0.19	0.18	0.18	0.18	0.18	0.18				
M9	10	57	0.18	0.18	0.18	0.18	0.17					
N1	11	62	0.18	0.18								
N2	12	64	0.18	0.18								
N3	13	66	0.18	0.18	0.18	0.18	0.18	0.18				
N4	14	72	0.18	0.18								
N5	15	74	0.18	0.18	0.18	0.18	0.18					
N6	16	79	0.15									

INTERMEDIATE REPORT
Ammonia Nitrogen — Middle/Middle West Rivers DO Modeling - 090207
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9

H1	1	1	0.09	0.09	0.08							
M1	2	4	0.07	0.06	0.05	0.05						
M2	3	8	0.04	0.04	0.04	0.03	0.03					
M3	4	13	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
M3	4	23	0.03	0.03								
M4	5	25	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04		
M5	6	33	0.04	0.04	0.04	0.04						
M6	7	37	0.04	0.04	0.04	0.04						
M7	8	41	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
M8	9	51	0.05	0.05	0.05	0.05	0.05	0.05				
M9	10	57	0.05	0.05	0.05	0.05	0.05					
N1	11	62	0.05	0.05								
N2	12	64	0.04	0.04								
N3	13	66	0.04	0.04	0.04	0.04	0.04	0.04				
N4	14	72	0.04	0.04								
N5	15	74	0.04	0.04	0.04	0.04	0.04					
N6	16	79	0.03									

INTERMEDIATE REPORT
Nitrate+Nitrite Nitrogen — Middle/Middle West Rivers DO Modeling - 090207
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.11	0.11	0.12							
M1	2	4	0.13	0.14	0.15	0.15						
M2	3	8	0.16	0.16	0.17	0.17	0.17					
M3	4	13	0.17	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18
M3	4	23	0.18	0.18								
M4	5	25	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.19		
M5	6	33	0.19	0.19	0.19	0.19						
M6	7	37	0.19	0.19	0.19	0.19						
M7	8	41	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.20
M8	9	51	0.20	0.20	0.20	0.20	0.20	0.20				
M9	10	57	0.20	0.20	0.21	0.21	0.21					
N1	11	62	0.21	0.21								
N2	12	64	0.21	0.21								
N3	13	66	0.21	0.21	0.21	0.21	0.21	0.21				
N4	14	72	0.21	0.21								
N5	15	74	0.21	0.21	0.21	0.21	0.21					
N6	16	79	0.17									

INTERMEDIATE REPORT
Total Nitrogen — Middle/Middle West Rivers DO Modeling - 090207
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.22	0.23	0.25							
M1	2	4	0.29	0.31	0.33	0.34						

M2	3	8	0.36	0.38	0.39	0.40	0.41					
M3	4	13	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42
M3	4	23	0.42	0.42								
M4	5	25	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42		
M5	6	33	0.43	0.43	0.43	0.43						
M6	7	37	0.43	0.43	0.43	0.43						
M7	8	41	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
M8	9	51	0.43	0.43	0.43	0.43	0.43	0.43				
M9	10	57	0.43	0.43	0.43	0.43	0.43					
N1	11	62	0.43	0.43								
N2	12	64	0.43	0.43								
N3	13	66	0.43	0.43	0.43	0.43	0.43	0.43				
N4	14	72	0.44	0.44								
N5	15	74	0.44	0.44	0.44	0.44	0.43					
N6	16	79	0.35									

INTERMEDIATE REPORT
Chlorophyll a — Middle/Middle West Rivers DO Modeling - 090207
µg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.00	1.00	1.00							
M1	2	4	1.00	1.00	1.00	1.00						
M2	3	8	1.00	1.00	1.00	1.00	1.00					
M3	4	13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
M3	4	23	1.00	1.00								
M4	5	25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
M5	6	33	1.00	1.00	1.00	1.00						
M6	7	37	1.00	1.00	1.00	1.00						
M7	8	41	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
M8	9	51	1.00	1.00	1.00	1.00	1.00	1.00				
M9	10	57	1.00	1.00	1.00	1.00	1.00					
N1	11	62	1.00	1.00								
N2	12	64	1.00	1.00								
N3	13	66	1.00	1.00	1.00	1.00	1.00	1.00				
N4	14	72	1.00	1.00								
N5	15	74	1.00	1.00	1.00	1.00	1.00					
N6	16	79	0.00									

INTERMEDIATE REPORT
Temperature — Middle/Middle West Rivers DO Modeling - 090207
deg C — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	28.07	28.33	28.60							
M1	2	4	29.10	29.60	30.10	30.60						
M2	3	8	30.56	30.52	30.48	30.44	30.40					
M3	4	13	30.41	30.42	30.42	30.43	30.44	30.45	30.46	30.47	30.48	30.48

M3	4	23	30.49	30.50								
M4	5	25	30.56	30.62	30.69	30.75	30.81	30.88	30.94	31.00		
M5	6	33	31.00	31.00	31.00	31.00						
M6	7	37	30.88	30.75	30.62	30.50						
M7	8	41	30.50	30.50	30.50	30.50	30.50	30.50	30.50	30.50	30.50	30.50
M8	9	51	30.50	30.50	30.50	30.50	30.50	30.50				
M9	10	57	30.50	30.50	30.50	30.50	30.50					
N1	11	62	30.50	30.50								
N2	12	64	30.60	30.70								
N3	13	66	30.70	30.70	30.70	30.70	30.70	30.70				
N4	14	72	30.60	30.50								
N5	15	74	30.50	30.50	30.50	30.50	30.50					
N6	16	79	26.25									

INTERMEDIATE REPORT

Salinity — Middle/Middle West Rivers DO Modeling - 090207

ppt — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.00	0.00	0.00							
M1	2	4	0.00	0.00	0.00	0.00						
M2	3	8	0.00	0.00	0.00	0.00	0.00					
M3	4	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M3	4	23	0.00	0.00								
M4	5	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
M5	6	33	0.00	0.00	0.00	0.00						
M6	7	37	0.00	0.00	0.00	0.00						
M7	8	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M8	9	51	0.00	0.00	0.00	0.00	0.00	0.00				
M9	10	57	0.00	0.00	0.00	0.00	0.00					
N1	11	62	0.00	0.00								
N2	12	64	0.00	0.00								
N3	13	66	0.00	0.00	0.00	0.00	0.00	0.00				
N4	14	72	0.00	0.00								
N5	15	74	0.00	0.00	0.00	0.00	0.00					
N6	16	79	0.00									

INTERMEDIATE REPORT

River Distance — Middle/Middle West Rivers DO Modeling - 090207

km — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	22.	22.	21.							
M1	2	4	21.	21.	21.	20.						
M2	3	8	20.	20.	19.	19.	19.					
M3	4	13	18.	18.	18.	18.	17.	17.	17.	16.	16.	16.
M3	4	23	16.	15.								
M4	5	25	15.	15.	14.	14.	14.	13.	13.	13.		

M5	6	33	13.	12.	12.	12.						
M6	7	37	12.	11.	11.	11.						
M7	8	41	10.	10.	10.	10.	9.	9.	9.	9.	8.	8.
M8	9	51	8.	8.	7.	7.	7.	6.				
M9	10	57	6.	6.	5.	5.	4.					
N1	11	62	4.	4.								
N2	12	64	4.	4.								
N3	13	66	3.	3.	3.	2.	2.	2.				
N4	14	72	2.	2.								
N5	15	74	1.	1.	1.	0.	0.					
N6	16	79	0.									

INTERMEDIATE REPORT

Flow — Middle/Middle West Rivers DO Modeling - 090207

m^3/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	3.6	3.8	4.0							
M1	2	4	4.6	5.3	5.9	6.5						
M2	3	8	7.4	8.3	9.2	10.1	11.0					
M3	4	13	11.2	11.5	11.7	12.0	12.2	12.5	12.8	13.0	13.3	13.5
M3	4	23	13.8	14.0								
M4	5	25	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.5		
M5	6	33	15.9	16.3	16.7	17.0						
M6	7	37	17.4	17.8	18.2	18.5						
M7	8	41	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	20.0
M8	9	51	20.3	20.5	20.8	21.0	21.3	21.5				
M9	10	57	21.8	22.1	22.4	22.7	23.0					
N1	11	62	23.8	24.5								
N2	12	64	25.3	26.0								
N3	13	66	26.3	26.5	26.8	27.0	27.3	27.5				
N4	14	72	28.3	29.0								
N5	15	74	29.3	29.6	29.9	30.2	30.5					
N6	16	79	32.0									

INTERMEDIATE REPORT

Dispersion — Middle/Middle West Rivers DO Modeling - 090207

m^2/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.0	1.0	1.0							
M1	2	4	1.0	1.0	1.0	1.0						
M2	3	8	1.0	1.0	1.0	1.0	1.0					
M3	4	13	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
M3	4	23	1.0	1.0								
M4	5	25	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
M5	6	33	1.0	1.0	1.0	1.0						
M6	7	37	1.0	1.0	1.0	1.0						

M7	8	41	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
M8	9	51	1.0	1.0	1.0	1.0	1.0	1.0				
M9	10	57	1.0	1.0	1.0	1.0	1.0					
N1	11	62	1.0	1.0								
N2	12	64	1.0	1.0								
N3	13	66	1.0	1.0	1.0	1.0	1.0	1.0				
N4	14	72	1.0	1.0								
N5	15	74	1.0	1.0	1.0	1.0	1.0					
N6	16	79	1.0									

INTERMEDIATE REPORT
Advective Velocity — Middle/Middle West Rivers DO Modeling - 090207
m/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.0	0.0	0.0							
M1	2	4	0.0	0.0	0.0	0.0						
M2	3	8	0.0	0.1	0.1	0.1	0.1					
M3	4	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M3	4	23	0.0	0.0								
M4	5	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
M5	6	33	0.0	0.0	0.0	0.0						
M6	7	37	0.0	0.0	0.0	0.0						
M7	8	41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M8	9	51	0.0	0.0	0.0	0.0	0.0	0.0				
M9	10	57	0.0	0.0	0.0	0.0	0.0					
N1	11	62	0.0	0.0								
N2	12	64	0.0	0.0								
N3	13	66	0.0	0.0	0.0	0.0	0.0	0.0				
N4	14	72	0.0	0.0								
N5	15	74	0.0	0.0	0.0	0.0	0.0					
N6	16	79	0.1									

INTERMEDIATE REPORT
Depth — Middle/Middle West Rivers DO Modeling - 090207
m — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.7	1.7	1.7							
M1	2	4	4.9	4.9	4.9	4.9						
M2	3	8	2.5	2.5	2.5	2.5	2.5					
M3	4	13	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
M3	4	23	4.1	4.1								
M4	5	25	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5		
M5	6	33	5.5	5.5	5.5	5.5						
M6	7	37	5.5	5.5	5.5	5.5						
M7	8	41	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
M8	9	51	6.7	6.7	6.7	6.7	6.7	6.7				

M9	10	57	4.3	4.3	4.3	4.3	4.3	
N1	11	62	5.7	5.7				
N2	12	64	5.7	5.7				
N3	13	66	5.7	5.7	5.7	5.7	5.7	5.7
N4	14	72	5.7	5.7				
N5	15	74	5.7	5.7	5.7	5.7	5.7	
N6	16	79	5.7					

INTERMEDIATE REPORT
Width — Middle/Middle West Rivers DO Modeling - 090207
m — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	52.6	52.6	52.6							
M1	2	4	45.2	45.2	45.2	45.2						
M2	3	8	63.0	63.0	63.0	63.0	63.0					
M3	4	13	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
M3	4	23	103.5	103.5								
M4	5	25	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5		
M5	6	33	116.5	116.5	116.5	116.5						
M6	7	37	116.5	116.5	116.5	116.5						
M7	8	41	224.8	224.8	224.8	224.8	224.8	224.8	224.8	224.8	224.8	224.8
M8	9	51	224.8	224.8	224.8	224.8	224.8	224.8				
M9	10	57	260.2	260.2	260.2	260.2	260.2					
N1	11	62	236.9	236.9								
N2	12	64	236.9	236.9								
N3	13	66	236.9	236.9	236.9	236.9	236.9	236.9				
N4	14	72	110.0	110.0								
N5	15	74	110.0	110.0	110.0	110.0	110.0					
N6	16	79	110.0									

INTERMEDIATE REPORT
Cross-Sectional Area — Middle/Middle West Rivers DO Modeling - 090207
m^2 — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	89.9	89.9	89.9							
M1	2	4	222.4	222.4	222.4	222.4						
M2	3	8	156.2	156.2	156.2	156.2	156.2					
M3	4	13	419.2	419.2	419.2	419.2	419.2	419.2	419.2	419.2	419.2	419.2
M3	4	23	419.2	419.2								
M4	5	25	637.3	637.3	637.3	637.3	637.3	637.3	637.3	637.3		
M5	6	33	637.3	637.3	637.3	637.3						
M6	7	37	637.3	637.3	637.3	637.3						
M7	8	41	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6
M8	9	51	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6				
M9	10	57	1126.7	1126.7	1126.7	1126.7	1126.7					
N1	11	62	1350.6	1350.6								

N2	12	64	1350.6	1350.6					
N3	13	66	1350.6	1350.6	1350.6	1350.6	1350.6	1350.6	
N4	14	72	627.0	627.0					
N5	15	74	627.0	627.0	627.0	627.0	627.0		
N6	16	79	627.0						

INTERMEDIATE REPORT

Reaeration Rate per day — Middle/Middle West Rivers DO Modeling - 090207 COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.476	0.478	0.481							
M1	2	4	0.168	0.170	0.171	0.173						
M2	3	8	0.343	0.343	0.342	0.342	0.342					
M3	4	13	0.209	0.209	0.209	0.209	0.209	0.210	0.210	0.210	0.210	0.210
M3	4	23	0.210	0.210								
M4	5	25	0.155	0.156	0.156	0.156	0.156	0.156	0.156	0.157		
M5	6	33	0.157	0.157	0.157	0.157						
M6	7	37	0.156	0.156	0.156	0.155						
M7	8	41	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128
M8	9	51	0.128	0.128	0.128	0.128	0.128	0.128				
M9	10	57	0.196	0.196	0.196	0.196	0.196					
N1	11	62	0.149	0.149								
N2	12	64	0.149	0.150								
N3	13	66	0.150	0.150	0.150	0.150	0.150	0.150				
N4	14	72	0.149	0.149								
N5	15	74	0.149	0.149	0.149	0.149	0.149					
N6	16	79	0.138									

INTERMEDIATE REPORT

BOD Decay Rate per day — Middle/Middle West Rivers DO Modeling - 090207 COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.06	0.06	0.06							
M1	2	4	0.06	0.06	0.06	0.07						
M2	3	8	0.06	0.06	0.06	0.06	0.06					
M3	4	13	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
M3	4	23	0.06	0.06								
M4	5	25	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07		
M5	6	33	0.07	0.07	0.07	0.07						
M6	7	37	0.07	0.07	0.07	0.06						
M7	8	41	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
M8	9	51	0.06	0.06	0.06	0.06	0.06	0.06				
M9	10	57	0.06	0.06	0.06	0.06	0.06					
N1	11	62	0.06	0.06								
N2	12	64	0.07	0.07								
N3	13	66	0.07	0.07	0.07	0.07	0.07	0.07				

N4	14	72	0.07	0.06								
N5	15	74	0.06	0.06	0.06	0.06	0.06					
N6	16	79	0.05									

INTERMEDIATE REPORT
BOD Settling Rate — Middle/Middle West Rivers DO Modeling - 090207
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.07	0.07	0.07							
M1	2	4	0.03	0.03	0.03	0.03						
M2	3	8	0.05	0.05	0.05	0.05	0.05					
M3	4	13	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
M3	4	23	0.03	0.03								
M4	5	25	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
M5	6	33	0.02	0.02	0.02	0.02						
M6	7	37	0.02	0.02	0.02	0.02						
M7	8	41	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
M8	9	51	0.02	0.02	0.02	0.02	0.02	0.02				
M9	10	57	0.03	0.03	0.03	0.03	0.03					
N1	11	62	0.02	0.02								
N2	12	64	0.02	0.02								
N3	13	66	0.02	0.02	0.02	0.02	0.02	0.02				
N4	14	72	0.02	0.02								
N5	15	74	0.02	0.02	0.02	0.02	0.02					
N6	16	79	0.02									

INTERMEDIATE REPORT
Ammonia Decay Rate — Middle/Middle West Rivers DO Modeling - 090207
per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.14	0.15	0.15							
M1	2	4	0.16	0.17	0.17	0.18						
M2	3	8	0.18	0.19	0.19	0.19	0.19					
M3	4	13	0.19	0.19	0.19	0.19	0.19	0.18	0.18	0.18	0.18	0.18
M3	4	23	0.18	0.18								
M4	5	25	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18		
M5	6	33	0.18	0.18	0.18	0.18						
M6	7	37	0.18	0.18	0.18	0.17						
M7	8	41	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
M8	9	51	0.17	0.17	0.17	0.17	0.17	0.17				
M9	10	57	0.17	0.17	0.17	0.17	0.17					
N1	11	62	0.18	0.18								
N2	12	64	0.19	0.19								
N3	13	66	0.19	0.19	0.20	0.20	0.20	0.20				
N4	14	72	0.20	0.20								
N5	15	74	0.20	0.20	0.20	0.20	0.20					

N6 16 79 0.15

INTERMEDIATE REPORT
Sediment Oxygen Demand Middle/Middle West Rivers DO Modeling - 090207
g/m²/d COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	5.44	5.50	5.56							
M1	2	4	7.45	7.64	7.85	8.07						
M2	3	8	2.19	2.17	2.14	2.13	2.11					
M3	4	13	5.97	5.98	5.98	5.99	6.00	6.01	6.01	6.02	6.02	6.03
M3	4	23	6.04	6.04								
M4	5	25	6.07	6.09	6.11	6.14	6.16	6.19	6.21	6.24		
M5	6	33	4.26	4.28	4.30	4.32						
M6	7	37	4.31	4.29	4.27	4.25						
M7	8	41	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.26
M8	9	51	4.26	4.26	4.26	4.27	4.27	4.27				
M9	10	57	4.27	4.28	4.28	4.28	4.29					
N1	11	62	0.62	0.62								
N2	12	64	0.62	0.63								
N3	13	66	0.62	0.62	0.62	0.62	0.61	0.61				
N4	14	72	0.62	0.62								
N5	15	74	0.63	0.63	0.63	0.64	0.64					
N6	16	79	0.58									

CONDENSED CAPSULE SUMMARY FOR Headwater

DIST	FLOW	TEMP	SALN	DO	REAER EBOD1	BOD1 EBOD2	BOD2 ORGN	NH3	CHLA	RATE	DECA	SETT	DECA	SETT	DECA	SOD
km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L µg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
HDWTR	3.32000	30.00	0.00	2.50	4.00	0.00	0.00 0.10	1.00								
21.84	3.55233	28.07	0.00	2.53	3.76	0.00	0.02 0.09	1.00	0.48	0.06	0.07	0.01	0.00	0.14		5.44
21.57	3.78467	28.33	0.00	2.55	3.52	0.00	0.04 0.09	1.00	0.48	0.06	0.07	0.01	0.00	0.15		5.50
21.30	4.01700	28.60	0.00	2.58	3.28	0.00	0.05 0.08	1.00	0.48	0.06	0.07	0.01	0.00	0.15		5.56
21.05	4.63875	29.10	0.00	2.66	2.87	0.00	0.09 0.07	1.00	0.17	0.06	0.03	0.01	0.00	0.16		7.45
20.80	5.26050	29.60	0.00	2.71	2.57	0.00	0.11 0.06	1.00	0.17	0.06	0.03	0.01	0.00	0.17		7.64
20.55	5.88225	30.10	0.00	2.75	2.33	0.00	0.13 0.05	1.00	0.17	0.06	0.03	0.01	0.00	0.17		7.85
20.30	6.50400	30.60	0.00	2.79	2.14	0.00	0.14 0.05	1.00	0.17	0.07	0.03	0.02	0.00	0.18		8.07
20.00	7.39500	30.56	0.00	2.97	1.94	0.00	0.16 0.04	1.00	0.34	0.06	0.05	0.02	0.00	0.18		2.19
19.70	8.28600	30.52	0.00	3.12	1.77	0.00	0.18 0.04	1.00	0.34	0.06	0.05	0.02	0.00	0.19		2.17
19.40	9.17700	30.48	0.00	3.23	1.64	0.00	0.19 0.04	1.00	0.34	0.06	0.05	0.02	0.00	0.19		2.14
19.10	10.06800	30.44	0.00	3.33	1.53	0.00	0.20 0.03	1.00	0.34	0.06	0.05	0.02	0.00	0.19		2.13
18.80	10.95900	30.40	0.00	3.40	1.44	0.00	0.20 0.03	1.00	0.34	0.06	0.05	0.02	0.00	0.19		2.11
18.50	11.21600	30.41	0.00	3.33	1.49	0.00	0.20 0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.19		5.97
18.20	11.47300	30.42	0.00	3.26	1.52	0.00	0.20 0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.19		5.98
17.90	11.73000	30.42	0.00	3.20	1.56	0.00	0.20 0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.19		5.98
17.60	11.98700	30.43	0.00	3.15	1.59	0.00	0.21 0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.19		5.99
17.30	12.24400	30.44	0.00	3.09	1.62	0.00	0.21 0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.19		6.00

17.00	12.50100	30.45	0.00	3.04	1.65	0.00	0.21	0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.18	6.01
16.70	12.75800	30.46	0.00	2.99	1.68	0.00	0.21	0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.18	6.01
16.40	13.01500	30.47	0.00	2.95	1.71	0.00	0.21	0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.18	6.02
16.10	13.27200	30.48	0.00	2.90	1.74	0.00	0.21	0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.18	6.02
15.80	13.52900	30.48	0.00	2.86	1.76	0.00	0.21	0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.18	6.03
15.50	13.78600	30.49	0.00	2.82	1.78	0.00	0.21	0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.18	6.04
15.20	14.04300	30.50	0.00	2.78	1.80	0.00	0.21	0.03	1.00	0.21	0.06	0.03	0.02	0.00	0.18	6.04
14.90	14.23050	30.56	0.00	2.73	1.81	0.00	0.21	0.03	1.00	0.16	0.06	0.02	0.02	0.00	0.18	6.07
14.60	14.41800	30.62	0.00	2.68	1.81	0.00	0.21	0.03	1.00	0.16	0.07	0.02	0.02	0.00	0.18	6.09
14.30	14.60550	30.69	0.00	2.63	1.82	0.00	0.21	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	6.11
14.00	14.79300	30.75	0.00	2.59	1.82	0.00	0.20	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	6.14
13.70	14.98050	30.81	0.00	2.54	1.82	0.00	0.20	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	6.16
13.40	15.16800	30.88	0.00	2.50	1.83	0.00	0.20	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	6.19
13.10	15.35550	30.94	0.00	2.46	1.83	0.00	0.20	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	6.21
12.80	15.54300	31.00	0.00	2.43	1.86	0.00	0.20	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	6.24
12.60	15.91800	31.00	0.00	2.46	2.04	0.00	0.20	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	4.26
12.40	16.29300	31.00	0.00	2.48	2.20	0.00	0.20	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	4.28
12.20	16.66800	31.00	0.00	2.50	2.36	0.00	0.21	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	4.30
12.00	17.04300	31.00	0.00	2.52	2.50	0.00	0.21	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	4.32
11.65	17.41800	30.88	0.00	2.53	2.62	0.00	0.21	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	4.31
11.30	17.79300	30.75	0.00	2.54	2.74	0.00	0.21	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	4.29
10.95	18.16800	30.62	0.00	2.55	2.85	0.00	0.21	0.04	1.00	0.16	0.07	0.02	0.02	0.00	0.18	4.27
10.60	18.54300	30.50	0.00	2.56	2.95	0.00	0.21	0.04	1.00	0.16	0.06	0.02	0.02	0.00	0.17	4.25
10.36	18.69300	30.50	0.00	2.53	2.95	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
10.12	18.84300	30.50	0.00	2.51	2.95	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
9.88	18.99300	30.50	0.00	2.49	2.95	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
9.64	19.14300	30.50	0.00	2.48	2.96	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
9.40	19.29300	30.50	0.00	2.46	2.96	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
9.16	19.44300	30.50	0.00	2.44	2.96	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
8.92	19.59300	30.50	0.00	2.42	2.96	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
8.68	19.74300	30.50	0.00	2.41	2.96	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
8.44	19.89300	30.50	0.00	2.39	2.96	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.25
8.20	20.04300	30.50	0.00	2.38	2.97	0.00	0.19	0.05	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.26
7.90	20.29300	30.50	0.00	2.37	2.99	0.00	0.19	0.05	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.26
7.60	20.54300	30.50	0.00	2.35	3.01	0.00	0.18	0.05	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.26
7.30	20.79300	30.50	0.00	2.34	3.03	0.00	0.18	0.05	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.26
7.00	21.04300	30.50	0.00	2.33	3.05	0.00	0.18	0.05	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.27
6.70	21.29300	30.50	0.00	2.31	3.07	0.00	0.18	0.05	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.27
6.40	21.54300	30.50	0.00	2.30	3.09	0.00	0.18	0.05	1.00	0.13	0.06	0.02	0.02	0.00	0.17	4.27
6.02	21.84299	30.50	0.00	2.30	3.11	0.00	0.18	0.05	1.00	0.20	0.06	0.03	0.02	0.00	0.17	4.27
5.64	22.14299	30.50	0.00	2.29	3.14	0.00	0.18	0.05	1.00	0.20	0.06	0.03	0.02	0.00	0.17	4.28
5.26	22.44299	30.50	0.00	2.29	3.17	0.00	0.18	0.05	1.00	0.20	0.06	0.03	0.02	0.00	0.17	4.28
4.88	22.74299	30.50	0.00	2.29	3.19	0.00	0.18	0.05	1.00	0.20	0.06	0.03	0.02	0.00	0.17	4.28
4.50	23.04299	30.50	0.00	2.32	3.22	0.00	0.17	0.05	1.00	0.20	0.06	0.03	0.02	0.00	0.17	4.29
4.35	23.79299	30.50	0.00	2.57	3.29	0.00	0.18	0.05	1.00	0.15	0.06	0.02	0.02	0.00	0.18	0.62
4.20	24.54299	30.50	0.00	2.76	3.33	0.00	0.18	0.05	1.00	0.15	0.06	0.02	0.02	0.00	0.18	0.62
3.85	25.29299	30.60	0.00	2.98	3.34	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.19	0.62
3.50	26.04299	30.70	0.00	3.19	3.35	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.19	0.63
3.20	26.29299	30.70	0.00	3.30	3.33	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.19	0.62
2.90	26.54299	30.70	0.00	3.40	3.30	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.19	0.62

2.60	26.79299	30.70	0.00	3.49	3.27	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.20	0.62
2.30	27.04299	30.70	0.00	3.59	3.25	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.20	0.62
2.00	27.29299	30.70	0.00	3.68	3.23	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.20	0.61
1.70	27.54299	30.70	0.00	3.78	3.22	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.20	0.61
1.60	28.29299	30.60	0.00	3.89	3.29	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.02	0.00	0.20	0.62
1.50	29.04299	30.50	0.00	3.99	3.34	0.00	0.18	0.04	1.00	0.15	0.06	0.02	0.02	0.00	0.20	0.62
1.23	29.34299	30.50	0.00	4.04	3.37	0.00	0.18	0.04	1.00	0.15	0.06	0.02	0.02	0.00	0.20	0.63
0.96	29.64299	30.50	0.00	4.10	3.39	0.00	0.18	0.04	1.00	0.15	0.06	0.02	0.02	0.00	0.20	0.63
0.69	29.94299	30.50	0.00	4.15	3.42	0.00	0.18	0.04	1.00	0.15	0.06	0.02	0.02	0.00	0.20	0.63
0.42	30.24299	30.50	0.00	4.20	3.45	0.00	0.18	0.04	1.00	0.15	0.06	0.02	0.02	0.00	0.20	0.64
0.15	30.54299	30.50	0.00	4.29	3.49	0.00	0.18	0.04	1.00	0.15	0.06	0.02	0.02	0.00	0.20	0.64
0.00	32.04299	26.25	0.00	4.75	3.74	0.00	0.15	0.03	0.00	0.14	0.05	0.02	0.01	0.00	0.15	0.58

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	DISP	DEPTH	WIDTH	VELO	VELO	SAT	RATE	DECA	SETT	DECA	SETT	DECA	SOD
		km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	m²/s	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
	HDWTR		3.320	30.0	0.0	2.5	4.0	0.0	0.0	0.1	1.0													
	WASTELOAD # 001 (test) ENTERS HERE WITHOUT ANY FLOW																							
1	H1	1	21.84	3.552	28.1	0.0	2.5	3.8	0.0	0.0	0.1	1.0	1.0	1.71	52.6	0.039	0.039	7.8	0.476	0.06	0.07	0.01	0.00	0.14	5.44
2	H1	1	21.57	3.785	28.3	0.0	2.6	3.5	0.0	0.0	0.1	1.0	1.0	1.71	52.6	0.042	0.042	7.8	0.478	0.06	0.07	0.01	0.00	0.15	5.50
3	H1	1	21.30	4.017	28.6	0.0	2.6	3.3	0.0	0.1	0.1	1.0	1.0	1.71	52.6	0.045	0.045	7.7	0.481	0.06	0.07	0.01	0.00	0.15	5.56
4	M1	2	21.05	4.639	29.1	0.0	2.7	2.9	0.0	0.1	0.1	1.0	1.0	4.92	45.2	0.021	0.021	7.7	0.168	0.06	0.03	0.01	0.00	0.16	7.45
5	M1	2	20.80	5.260	29.6	0.0	2.7	2.6	0.0	0.1	0.1	1.0	1.0	4.92	45.2	0.024	0.024	7.6	0.170	0.06	0.03	0.01	0.00	0.17	7.64
6	M1	2	20.55	5.882	30.1	0.0	2.7	2.3	0.0	0.1	0.1	1.0	1.0	4.92	45.2	0.026	0.026	7.5	0.171	0.06	0.03	0.01	0.00	0.17	7.85
7	M1	2	20.30	6.504	30.6	0.0	2.8	2.1	0.0	0.1	0.0	1.0	1.0	4.92	45.2	0.029	0.029	7.5	0.173	0.07	0.03	0.02	0.00	0.18	8.07
8	M2	3	20.00	7.395	30.6	0.0	3.0	1.9	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.047	0.047	7.5	0.343	0.06	0.05	0.02	0.00	0.18	2.19
9	M2	3	19.70	8.286	30.5	0.0	3.1	1.8	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.053	0.053	7.5	0.343	0.06	0.05	0.02	0.00	0.19	2.17
10	M2	3	19.40	9.177	30.5	0.0	3.2	1.6	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.059	0.059	7.5	0.342	0.06	0.05	0.02	0.00	0.19	2.14
11	M2	3	19.10	10.068	30.4	0.0	3.3	1.5	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.064	0.064	7.5	0.342	0.06	0.05	0.02	0.00	0.19	2.13
12	M2	3	18.80	10.959	30.4	0.0	3.4	1.4	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.070	0.070	7.5	0.342	0.06	0.05	0.02	0.00	0.19	2.11
13	M3	4	18.50	11.216	30.4	0.0	3.3	1.5	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.027	0.027	7.5	0.209	0.06	0.03	0.02	0.00	0.19	5.97
14	M3	4	18.20	11.473	30.4	0.0	3.3	1.5	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.027	0.027	7.5	0.209	0.06	0.03	0.02	0.00	0.19	5.98
15	M3	4	17.90	11.730	30.4	0.0	3.2	1.6	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.028	0.028	7.5	0.209	0.06	0.03	0.02	0.00	0.19	5.98
16	M3	4	17.60	11.987	30.4	0.0	3.1	1.6	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.029	0.029	7.5	0.209	0.06	0.03	0.02	0.00	0.19	5.99
17	M3	4	17.30	12.244	30.4	0.0	3.1	1.6	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.029	0.029	7.5	0.209	0.06	0.03	0.02	0.00	0.19	6.00
18	M3	4	17.00	12.501	30.5	0.0	3.0	1.7	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.030	0.030	7.5	0.210	0.06	0.03	0.02	0.00	0.18	6.01
19	M3	4	16.70	12.758	30.5	0.0	3.0	1.7	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.030	0.030	7.5	0.210	0.06	0.03	0.02	0.00	0.18	6.01
20	M3	4	16.40	13.015	30.5	0.0	2.9	1.7	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.031	0.031	7.5	0.210	0.06	0.03	0.02	0.00	0.18	6.02
21	M3	4	16.10	13.272	30.5	0.0	2.9	1.7	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.032	0.032	7.5	0.210	0.06	0.03	0.02	0.00	0.18	6.02
22	M3	4	15.80	13.529	30.5	0.0	2.9	1.8	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.032	0.032	7.5	0.210	0.06	0.03	0.02	0.00	0.18	6.03
23	M3	4	15.50	13.786	30.5	0.0	2.8	1.8	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.033	0.033	7.5	0.210	0.06	0.03	0.02	0.00	0.18	6.04
24	M3	4	15.20	14.043	30.5	0.0	2.8	1.8	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.034	0.034	7.5	0.210	0.06	0.03	0.02	0.00	0.18	6.04
25	M4	5	14.90	14.230	30.6	0.0	2.7	1.8	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.022	0.022	7.5	0.155	0.06	0.02	0.02	0.00	0.18	6.07
26	M4	5	14.60	14.418	30.6	0.0	2.7	1.8	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.023	0.023	7.5	0.156	0.07	0.02	0.02	0.00	0.18	6.09
27	M4	5	14.30	14.605	30.7	0.0	2.6	1.8	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.023	0.023	7.5	0.156	0.07	0.02	0.02	0.00	0.18	6.11
28	M4	5	14.00	14.793	30.8	0.0	2.6	1.8	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.023	0.023	7.5	0.156	0.07	0.02	0.02	0.00	0.18	6.14
29	M4	5	13.70	14.980	30.8	0.0	2.5	1.8	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.024	0.024	7.5	0.156	0.07	0.02	0.02	0.00	0.18	6.16
30	M4	5	13.40	15.168	30.9	0.0	2.5	1.8	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.024	0.024	7.4	0.156	0.07	0.02	0.02	0.00	0.18	6.19
31	M4	5	13.10	15.355	30.9	0.0	2.5	1.8	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.024	0.024	7.4	0.156	0.07	0.02	0.02	0.00	0.18	6.21
32	M4	5	12.80	15.543	31.0	0.0	2.4	1.9	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.024	0.025	7.4	0.157	0.07	0.02	0.02	0.00	0.18	6.24
33	M5	6	12.60	15.918	31.0	0.0	2.5	2.0	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.025	0.026	7.4	0.157	0.07	0.02	0.02	0.00	0.18	4.26
34	M5	6	12.40	16.293	31.0	0.0	2.5	2.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.026	0.026	7.4	0.157	0.07	0.02	0.02	0.00	0.18	4.28
35	M5	6	12.20	16.668	31.0	0.0	2.5	2.4	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.026	0.027	7.4	0.157	0.07	0.02	0.02	0.00	0.18	4.30
36	M5	6	12.00	17.043	31.0	0.0	2.5	2.5	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.027	0.028	7.4	0.157	0.07	0.02	0.02	0.00	0.18	4.32
37	M6	7	11.65	17.418	30.9	0.0	2.5	2.6	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.027	0.028	7.4	0.156	0.07	0.02	0.02	0.00	0.18	4.31
38	M6	7	11.30	17.793	30.8	0.0	2.5	2.7	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.028	0.029	7.5	0.156	0.07	0.02	0.02	0.00	0.18	4.29
39	M6	7	10.95	18.168	30.6	0.0	2.6	2.9	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.029	0.030	7.5	0.156	0.07	0.02	0.02	0.00	0.18	4.27
40	M6	7	10.60	18.543	30.5	0.0	2.6	2.9	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.029	0.031	7.5	0.155	0.06	0.02	0.02	0.00	0.17	4.25
41	M7	8	10.36	18.693	30.5	0.0	2.5	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.014	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
42	M7	8	10.12	18.843	30.5	0.0	2.5	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.014	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25

43	M7	8	9.88	18.993	30.5	0.0	2.5	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.014	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
44	M7	8	9.64	19.143	30.5	0.0	2.5	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.015	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
45	M7	8	9.40	19.293	30.5	0.0	2.5	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.015	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
46	M7	8	9.16	19.443	30.5	0.0	2.4	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.015	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
47	M7	8	8.92	19.593	30.5	0.0	2.4	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.016	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
48	M7	8	8.68	19.743	30.5	0.0	2.4	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.016	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
49	M7	8	8.44	19.893	30.5	0.0	2.4	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.017	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.25
50	M7	8	8.20	20.043	30.5	0.0	2.4	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.017	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.26
51	M8	9	7.90	20.293	30.5	0.0	2.4	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.014	0.018	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.26
52	M8	9	7.60	20.543	30.5	0.0	2.4	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.014	0.018	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.26
53	M8	9	7.30	20.793	30.5	0.0	2.3	3.0	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.014	0.019	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.26
54	M8	9	7.00	21.043	30.5	0.0	2.3	3.1	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.014	0.019	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.27
55	M8	9	6.70	21.293	30.5	0.0	2.3	3.1	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.014	0.020	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.27
56	M8	9	6.40	21.543	30.5	0.0	2.3	3.1	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.014	0.021	7.5	0.128	0.06	0.02	0.02	0.00	0.17	4.27
57	M9	10	6.02	21.843	30.5	0.0	2.3	3.1	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.019	0.028	7.5	0.196	0.06	0.03	0.02	0.00	0.17	4.27
58	M9	10	5.64	22.143	30.5	0.0	2.3	3.1	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.020	0.029	7.5	0.196	0.06	0.03	0.02	0.00	0.17	4.28
59	M9	10	5.26	22.443	30.5	0.0	2.3	3.2	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.020	0.031	7.5	0.196	0.06	0.03	0.02	0.00	0.17	4.28
60	M9	10	4.88	22.743	30.5	0.0	2.3	3.2	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.020	0.032	7.5	0.196	0.06	0.03	0.02	0.00	0.17	4.28
61	M9	10	4.50	23.043	30.5	0.0	2.3	3.2	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.020	0.033	7.5	0.196	0.06	0.03	0.02	0.00	0.17	4.29
62	N1	11	4.35	23.793	30.5	0.0	2.6	3.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.018	0.028	7.5	0.149	0.06	0.02	0.02	0.00	0.18	0.62
63	N1	11	4.20	24.543	30.5	0.0	2.8	3.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.018	0.028	7.5	0.149	0.06	0.02	0.02	0.00	0.18	0.62
64	N2	12	3.85	25.293	30.6	0.0	3.0	3.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.019	0.029	7.5	0.149	0.07	0.02	0.02	0.00	0.19	0.62
65	N2	12	3.50	26.043	30.7	0.0	3.2	3.4	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.019	0.030	7.5	0.150	0.07	0.02	0.02	0.00	0.19	0.63
66	N3	13	3.20	26.293	30.7	0.0	3.3	3.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.019	0.031	7.5	0.150	0.07	0.02	0.02	0.00	0.19	0.62
67	N3	13	2.90	26.543	30.7	0.0	3.4	3.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.020	0.031	7.5	0.150	0.07	0.02	0.02	0.00	0.19	0.62
68	N3	13	2.60	26.793	30.7	0.0	3.5	3.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.020	0.032	7.5	0.150	0.07	0.02	0.02	0.00	0.20	0.62
69	N3	13	2.30	27.043	30.7	0.0	3.6	3.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.020	0.033	7.5	0.150	0.07	0.02	0.02	0.00	0.20	0.62
70	N3	13	2.00	27.293	30.7	0.0	3.7	3.2	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.020	0.034	7.5	0.150	0.07	0.02	0.02	0.00	0.20	0.61
71	N3	13	1.70	27.543	30.7	0.0	3.8	3.2	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.020	0.034	7.5	0.150	0.07	0.02	0.02	0.00	0.20	0.61
72	N4	14	1.60	28.293	30.6	0.0	3.9	3.3	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.045	0.074	7.5	0.149	0.07	0.02	0.02	0.00	0.20	0.62

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST km	FLOW m³/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N µg/L	NH3 m²/s	CHLA m	DISP m	DEPTH m/s	WIDTH m/s	VELO mg/L	VELO 1/da	SAT 1/da	RATE 1/da	DECA 1/da	SETT 1/da	DECA 1/da	SETT 1/da	DECA 1/da	SOD g/m²/d
										ADVEC	MEAN	DO	REAER	BOD1	BOD1	BOD2	BOD2	NH3						
73	N4 14	1.50	29.043	30.5	0.0	4.0	3.3	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.046	0.075	7.5	0.149	0.06	0.02	0.02	0.00	0.20	0.62
74	N5 15	1.23	29.343	30.5	0.0	4.0	3.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.047	0.076	7.5	0.149	0.06	0.02	0.02	0.00	0.20	0.63
75	N5 15	0.96	29.643	30.5	0.0	4.1	3.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.047	0.076	7.5	0.149	0.06	0.02	0.02	0.00	0.20	0.63
76	N5 15	0.69	29.943	30.5	0.0	4.2	3.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.048	0.077	7.5	0.149	0.06	0.02	0.02	0.00	0.20	0.63
77	N5 15	0.42	30.243	30.5	0.0	4.2	3.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.048	0.078	7.5	0.149	0.06	0.02	0.02	0.00	0.20	0.64
78	N5 15	0.15	30.543	30.5	0.0	4.3	3.5	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.049	0.078	7.5	0.149	0.06	0.02	0.02	0.00	0.20	0.64
79	N6 16	0.00	32.043	26.2	0.0	4.8	3.7	0.0	0.2	0.0	0.0	1.0	5.70	110.0	0.051	0.079	8.1	0.138	0.05	0.02	0.01	0.00	0.15	0.58

SPECIAL REPORT: Headwater
WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING km	TEMP deg C	SALN ppt	CM-I *	CM-II *	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N µg/L	TOTN **	PHOS	CHL A #/100mL	MACRO *	COLI	NCM
1	21.840	28.07	0.0	0.0	0.0	2.53	3.76	0.00	3.76	0.00	0.02	0.09	0.11	0.22	0.05	1.0	0.0	0.	0.00
2	21.570	28.33	0.0	0.0	0.0	2.55	3.52	0.00	3.52	0.00	0.04	0.09	0.11	0.23	0.05	1.0	0.0	0.	0.00
3	21.300	28.60	0.0	0.0	0.0	2.58	3.28	0.00	3.28	0.00	0.05	0.08	0.12	0.25	0.05	1.0	0.0	0.	0.00
4	21.050	29.10	0.0	0.0	0.0	2.66	2.87	0.00	2.87	0.00	0.09	0.07	0.13	0.29	0.05	1.0	0.0	0.	0.00
5	20.800	29.60	0.0	0.0	0.0	2.71	2.57	0.00	2.57	0.00	0.11	0.06	0.14	0.31	0.05	1.0	0.0	0.	0.00
6	20.550	30.10	0.0	0.0	0.0	2.75	2.33	0.00	2.33	0.00	0.13	0.05	0.15	0.33	0.05	1.0	0.0	0.	0.00
7	20.300	30.60	0.0	0.0	0.0	2.79	2.14	0.00	2.14	0.00	0.14	0.05	0.15	0.34	0.05	1.0	0.0	0.	0.00
8	20.000	30.56	0.0	0.0	0.0	2.97	1.94	0.00	1.94	0.00	0.16	0.04	0.16	0.36	0.05	1.0	0.0	0.	0.00
9	19.700	30.52	0.0	0.0	0.0	3.12	1.77	0.00	1.77	0.00	0.18	0.04	0.16	0.38	0.05	1.0	0.0	0.	0.00
10	19.400	30.48	0.0	0.0	0.0	3.23	1.64	0.00	1.64	0.00	0.19	0.04	0.17	0.39	0.05	1.0	0.0	0.	0.00
11	19.100	30.44	0.0	0.0	0.0	3.33	1.53	0.00	1.53	0.00	0.20	0.03	0.17	0.40	0.05	1.0	0.0	0.	0.00
12	18.800	30.40	0.0	0.0	0.0	3.40	1.44	0.00	1.44	0.00	0.20	0.03	0.17	0.41	0.05	1.0	0.0	0.	0.00
13	18.500	30.41	0.0	0.0	0.0	3.33	1.49	0.00	1.49	0.00	0.20	0.03	0.17	0.41	0.05	1.0	0.0	0.	0.00
14	18.200	30.42	0.0	0.0	0.0	3.26	1.52	0.00	1.52	0.00	0.20	0.03	0.17	0.41	0.05	1.0	0.0	0.	0.00
15	17.900	30.42	0.0	0.0	0.0	3.20	1.56	0.00	1.56	0.00	0.20	0.03	0.17	0.41	0.05	1.0	0.0	0.	0.00
16	17.600	30.43	0.0	0.0	0.0	3.15	1.59	0.00	1.59	0.00	0.21	0.03	0.18	0.41	0.05	1.0	0.0	0.	0.00
17	17.300	30.44	0.0	0.0	0.0	3.09	1.62	0.00	1.62	0.00	0.21	0.03	0.18	0.41	0.05	1.0	0.0	0.	0.00
18	17.000	30.45	0.0	0.0	0.0	3.04	1.65	0.00	1.65	0.00	0.21	0.03	0.18	0.41	0.05	1.0	0.0	0.	0.00
19	16.700	30.46	0.0	0.0	0.0	2.99	1.68	0.00	1.68	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
20	16.400	30.47	0.0	0.0	0.0	2.95	1.71	0.00	1.71	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
21	16.100	30.48	0.0	0.0	0.0	2.90	1.74	0.00	1.74	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
22	15.800	30.48	0.0	0.0	0.0	2.86	1.76	0.00	1.76	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
23	15.500	30.49	0.0	0.0	0.0	2.82	1.78	0.00	1.78	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
24	15.200	30.50	0.0	0.0	0.0	2.78	1.80	0.00	1.80	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
25	14.900	30.56	0.0	0.0	0.0	2.73	1.81	0.00	1.81	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
26	14.600	30.62	0.0	0.0	0.0	2.68	1.81	0.00	1.81	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
27	14.300	30.69	0.0	0.0	0.0	2.63	1.82	0.00	1.82	0.00	0.21	0.04	0.18	0.42	0.05	1.0	0.0	0.	0.00
28	14.000	30.75	0.0	0.0	0.0	2.59	1.82	0.00	1.82	0.00	0.20	0.04	0.18	0.42	0.05	1.0	0.0	0.	0.00
29	13.700	30.81	0.0	0.0	0.0	2.54	1.82	0.00	1.82	0.00	0.20	0.04	0.18	0.42	0.05	1.0	0.0	0.	0.00
30	13.400	30.88	0.0	0.0	0.0	2.50	1.83	0.00	1.83	0.00	0.20	0.04	0.18	0.42	0.05	1.0	0.0	0.	0.00

31	13.100	30.94	0.0	0.0	0.0	2.46	1.83	0.00	1.83	0.00	0.20	0.04	0.18	0.42	0.05	1.0	0.0	0.	0.00
32	12.800	31.00	0.0	0.0	0.0	2.43	1.86	0.00	1.86	0.00	0.20	0.04	0.19	0.42	0.05	1.0	0.0	0.	0.00
33	12.600	31.00	0.0	0.0	0.0	2.46	2.04	0.00	2.04	0.00	0.20	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
34	12.400	31.00	0.0	0.0	0.0	2.48	2.20	0.00	2.20	0.00	0.20	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
35	12.200	31.00	0.0	0.0	0.0	2.50	2.36	0.00	2.36	0.00	0.21	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
36	12.000	31.00	0.0	0.0	0.0	2.52	2.50	0.00	2.50	0.00	0.21	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
37	11.650	30.88	0.0	0.0	0.0	2.53	2.62	0.00	2.62	0.00	0.21	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
38	11.300	30.75	0.0	0.0	0.0	2.54	2.74	0.00	2.74	0.00	0.21	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
39	10.950	30.62	0.0	0.0	0.0	2.55	2.85	0.00	2.85	0.00	0.21	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
40	10.600	30.50	0.0	0.0	0.0	2.56	2.95	0.00	2.95	0.00	0.21	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
41	10.360	30.50	0.0	0.0	0.0	2.53	2.95	0.00	2.95	0.00	0.20	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
42	10.120	30.50	0.0	0.0	0.0	2.51	2.95	0.00	2.95	0.00	0.20	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
43	9.880	30.50	0.0	0.0	0.0	2.49	2.95	0.00	2.95	0.00	0.20	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
44	9.640	30.50	0.0	0.0	0.0	2.48	2.96	0.00	2.96	0.00	0.20	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
45	9.400	30.50	0.0	0.0	0.0	2.46	2.96	0.00	2.96	0.00	0.20	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
46	9.160	30.50	0.0	0.0	0.0	2.44	2.96	0.00	2.96	0.00	0.19	0.04	0.19	0.43	0.05	1.0	0.0	0.	0.00
47	8.920	30.50	0.0	0.0	0.0	2.42	2.96	0.00	2.96	0.00	0.19	0.04	0.20	0.43	0.05	1.0	0.0	0.	0.00
48	8.680	30.50	0.0	0.0	0.0	2.41	2.96	0.00	2.96	0.00	0.19	0.04	0.20	0.43	0.05	1.0	0.0	0.	0.00
49	8.440	30.50	0.0	0.0	0.0	2.39	2.96	0.00	2.96	0.00	0.19	0.04	0.20	0.43	0.05	1.0	0.0	0.	0.00
50	8.200	30.50	0.0	0.0	0.0	2.38	2.97	0.00	2.97	0.00	0.19	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
51	7.900	30.50	0.0	0.0	0.0	2.37	2.99	0.00	2.99	0.00	0.19	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
52	7.600	30.50	0.0	0.0	0.0	2.35	3.01	0.00	3.01	0.00	0.18	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
53	7.300	30.50	0.0	0.0	0.0	2.34	3.03	0.00	3.03	0.00	0.18	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
54	7.000	30.50	0.0	0.0	0.0	2.33	3.05	0.00	3.05	0.00	0.18	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
55	6.700	30.50	0.0	0.0	0.0	2.31	3.07	0.00	3.07	0.00	0.18	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
56	6.400	30.50	0.0	0.0	0.0	2.30	3.09	0.00	3.09	0.00	0.18	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
57	6.020	30.50	0.0	0.0	0.0	2.30	3.11	0.00	3.11	0.00	0.18	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
58	5.640	30.50	0.0	0.0	0.0	2.29	3.14	0.00	3.14	0.00	0.18	0.05	0.20	0.43	0.05	1.0	0.0	0.	0.00
59	5.260	30.50	0.0	0.0	0.0	2.29	3.17	0.00	3.17	0.00	0.18	0.05	0.21	0.43	0.05	1.0	0.0	0.	0.00
60	4.880	30.50	0.0	0.0	0.0	2.29	3.19	0.00	3.19	0.00	0.18	0.05	0.21	0.43	0.05	1.0	0.0	0.	0.00
61	4.500	30.50	0.0	0.0	0.0	2.32	3.22	0.00	3.22	0.00	0.17	0.05	0.21	0.43	0.05	1.0	0.0	0.	0.00
62	4.350	30.50	0.0	0.0	0.0	2.57	3.29	0.00	3.29	0.00	0.18	0.05	0.21	0.43	0.05	1.0	0.0	0.	0.00
63	4.200	30.50	0.0	0.0	0.0	2.76	3.33	0.00	3.33	0.00	0.18	0.05	0.21	0.43	0.05	1.0	0.0	0.	0.00
64	3.850	30.60	0.0	0.0	0.0	2.98	3.34	0.00	3.34	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
65	3.500	30.70	0.0	0.0	0.0	3.19	3.35	0.00	3.35	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
66	3.200	30.70	0.0	0.0	0.0	3.30	3.33	0.00	3.33	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
67	2.900	30.70	0.0	0.0	0.0	3.40	3.30	0.00	3.30	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
68	2.600	30.70	0.0	0.0	0.0	3.49	3.27	0.00	3.27	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
69	2.300	30.70	0.0	0.0	0.0	3.59	3.25	0.00	3.25	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
70	2.000	30.70	0.0	0.0	0.0	3.68	3.23	0.00	3.23	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
71	1.700	30.70	0.0	0.0	0.0	3.78	3.22	0.00	3.22	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
72	1.600	30.60	0.0	0.0	0.0	3.89	3.29	0.00	3.29	0.00	0.18	0.04	0.21	0.44	0.05	1.0	0.0	0.	0.00
73	1.500	30.50	0.0	0.0	0.0	3.99	3.34	0.00	3.34	0.00	0.18	0.04	0.21	0.44	0.05	1.0	0.0	0.	0.00
74	1.230	30.50	0.0	0.0	0.0	4.04	3.37	0.00	3.37	0.00	0.18	0.04	0.21	0.44	0.05	1.0	0.0	0.	0.00
75	0.960	30.50	0.0	0.0	0.0	4.10	3.39	0.00	3.39	0.00	0.18	0.04	0.21	0.44	0.05	1.0	0.0	0.	0.00
76	0.690	30.50	0.0	0.0	0.0	4.15	3.42	0.00	3.42	0.00	0.18	0.04	0.21	0.44	0.05	1.0	0.0	0.	0.00
77	0.420	30.50	0.0	0.0	0.0	4.20	3.45	0.00	3.45	0.00	0.18	0.04	0.21	0.44	0.05	1.0	0.0	0.	0.00
78	0.150	30.50	0.0	0.0	0.0	4.29	3.49	0.00	3.49	0.00	0.18	0.04	0.21	0.43	0.05	1.0	0.0	0.	0.00
79	0.000	26.25	0.0	0.0	0.0	4.75	3.74	0.00	3.74	0.00	0.15	0.03	0.17	0.35	0.00	0.0	0.0	0.	0.00

SPECIAL REPORT: Headwater
BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST km	SAT D.O. mg/L	REAER RATE 1/da	DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#1 SETT *	BOD#2 DECAY *	ABOD#2 SOD 1/da	FULL SOD *	CORR DECAY 1/da	ORG-N SETT *	ORG-N DECAY **	NH3 SRCE **	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM DECAY	NCM SETT
1	21.840	7.82	0.48	0.06	0.07	0.00	0.01	0.00	0.00	5.44	5.44	0.06	0.01	0.14	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
2	21.570	7.78	0.48	0.06	0.07	0.00	0.01	0.00	0.00	5.50	5.50	0.06	0.01	0.15	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
3	21.300	7.75	0.48	0.06	0.07	0.00	0.01	0.00	0.00	5.56	5.56	0.06	0.01	0.15	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
4	21.050	7.68	0.17	0.06	0.03	0.00	0.01	0.00	0.00	7.45	7.45	0.06	0.00	0.16	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
5	20.800	7.61	0.17	0.06	0.03	0.00	0.01	0.00	0.00	7.64	7.64	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
6	20.550	7.55	0.17	0.06	0.03	0.00	0.01	0.00	0.00	7.85	7.85	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
7	20.300	7.48	0.17	0.07	0.03	0.00	0.02	0.00	0.00	8.07	8.07	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
8	20.000	7.49	0.34	0.06	0.05	0.00	0.02	0.00	0.00	2.19	2.19	0.06	0.01	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
9	19.700	7.49	0.34	0.06	0.05	0.00	0.02	0.00	0.00	2.17	2.17	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
10	19.400	7.50	0.34	0.06	0.05	0.00	0.02	0.00	0.00	2.14	2.14	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
11	19.100	7.50	0.34	0.06	0.05	0.00	0.02	0.00	0.00	2.13	2.13	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
12	18.800	7.51	0.34	0.06	0.05	0.00	0.02	0.00	0.00	2.11	2.11	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
13	18.500	7.51	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.97	5.97	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
14	18.200	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.98	5.98	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
15	17.900	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.98	5.98	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
16	17.600	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.99	5.99	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
17	17.300	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.00	6.00	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
18	17.000	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.01	6.01	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
19	16.700	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.01	6.01	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
20	16.400	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.02	6.02	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
21	16.100	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.02	6.02	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
22	15.800	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.03	6.03	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
23	15.500	7.49	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.04	6.04	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
24	15.200	7.49	0.21	0.06	0.03	0.00	0.02	0.00	0.00	6.04	6.04	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
25	14.900	7.49	0.16	0.06	0.02	0.00	0.02	0.00	0.00	6.07	6.07	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
26	14.600	7.48	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.09	6.09	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
27	14.300	7.47	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.11	6.11	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
28	14.000	7.46	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.14	6.14	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
29	13.700	7.45	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.16	6.16	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
30	13.400	7.45	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.19	6.19	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
31	13.100	7.44	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.21	6.21	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
32	12.800	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.24	6.24	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
33	12.600	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.26	4.26	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
34	12.400	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.28	4.28	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
35	12.200	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.30	4.30	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
36	12.000	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.32	4.32	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
37	11.650	7.45	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.31	4.31	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
38	11.300	7.46	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.29	4.29	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
39	10.950	7.48	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.27	4.27	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
40	10.600	7.49	0.16	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
41	10.360	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
42	10.120	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
43	9.880	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	

44	9.640	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
45	9.400	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
46	9.160	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
47	8.920	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
48	8.680	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
49	8.440	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
50	8.200	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
51	7.900	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
52	7.600	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
53	7.300	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
54	7.000	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.27	4.27	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
55	6.700	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.27	4.27	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
56	6.400	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	4.27	4.27	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
57	6.020	7.49	0.20	0.06	0.03	0.00	0.02	0.00	0.00	4.27	4.27	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
58	5.640	7.49	0.20	0.06	0.03	0.00	0.02	0.00	0.00	4.28	4.28	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
59	5.260	7.49	0.20	0.06	0.03	0.00	0.02	0.00	0.00	4.28	4.28	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
60	4.880	7.49	0.20	0.06	0.03	0.00	0.02	0.00	0.00	4.28	4.28	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
61	4.500	7.49	0.20	0.06	0.03	0.00	0.02	0.00	0.00	4.29	4.29	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
62	4.350	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
63	4.200	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
64	3.850	7.48	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
65	3.500	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.63	0.63	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
66	3.200	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
67	2.900	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
68	2.600	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
69	2.300	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
70	2.000	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.61	0.61	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
71	1.700	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.61	0.61	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
72	1.600	7.48	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
73	1.500	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.62	0.62	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
74	1.230	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.63	0.63	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
75	0.960	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.63	0.63	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
76	0.690	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.63	0.63	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
77	0.420	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.64	0.64	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
78	0.150	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.64	0.64	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
79	0.000	8.08	0.14	0.05	0.02	0.00	0.01	0.00	0.00	0.58	0.58	0.06	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SPECIAL REPORT: Headwater
HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/s	ADVCTV VELO m/s	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
1	22.11	21.84	3.5523	0.039	1.71	52.6	24285.	14202.0	89.9	8521.	0.002	1.000	0.039
2	21.84	21.57	3.7847	0.042	1.71	52.6	24285.	14202.0	89.9	17042.	0.004	1.000	0.042
3	21.57	21.30	4.0170	0.045	1.71	52.6	24285.	14202.0	89.9	25564.	0.006	1.000	0.045
4	21.30	21.05	4.6388	0.021	4.92	45.2	55596.	11300.0	222.4	32344.	0.003	1.000	0.021
5	21.05	20.80	5.2605	0.024	4.92	45.2	55596.	11300.0	222.4	39124.	0.004	1.000	0.024
6	20.80	20.55	5.8822	0.026	4.92	45.2	55596.	11300.0	222.4	45904.	0.005	1.000	0.026

7	20.55	20.30	6.5040	0.029	4.92	45.2	55596.	11300.0	222.4	52684.	0.005	1.000	0.029
8	20.30	20.00	7.3950	0.047	2.48	63.0	46872.	18900.0	156.2	64024.	0.009	1.000	0.047
9	20.00	19.70	8.2860	0.053	2.48	63.0	46872.	18900.0	156.2	75364.	0.011	1.000	0.053
10	19.70	19.40	9.1770	0.059	2.48	63.0	46872.	18900.0	156.2	86704.	0.012	1.000	0.059
11	19.40	19.10	10.0680	0.064	2.48	63.0	46872.	18900.0	156.2	98044.	0.014	1.000	0.064
12	19.10	18.80	10.9590	0.070	2.48	63.0	46872.	18900.0	156.2	109384.	0.016	1.000	0.070
13	18.80	18.50	11.2160	0.027	4.05	103.5	125753.	31050.0	419.2	128014.	0.007	1.000	0.027
14	18.50	18.20	11.4730	0.027	4.05	103.5	125753.	31050.0	419.2	146644.	0.008	1.000	0.027
15	18.20	17.90	11.7300	0.028	4.05	103.5	125753.	31050.0	419.2	165274.	0.009	1.000	0.028
16	17.90	17.60	11.9870	0.029	4.05	103.5	125753.	31050.0	419.2	183904.	0.010	1.000	0.029
17	17.60	17.30	12.2440	0.029	4.05	103.5	125753.	31050.0	419.2	202534.	0.011	1.000	0.029
18	17.30	17.00	12.5010	0.030	4.05	103.5	125753.	31050.0	419.2	221164.	0.012	1.000	0.030
19	17.00	16.70	12.7580	0.030	4.05	103.5	125753.	31050.0	419.2	239794.	0.013	1.000	0.030
20	16.70	16.40	13.0150	0.031	4.05	103.5	125753.	31050.0	419.2	258424.	0.014	1.000	0.031
21	16.40	16.10	13.2720	0.032	4.05	103.5	125753.	31050.0	419.2	277054.	0.015	1.000	0.032
22	16.10	15.80	13.5290	0.032	4.05	103.5	125753.	31050.0	419.2	295684.	0.016	1.000	0.032
23	15.80	15.50	13.7860	0.033	4.05	103.5	125753.	31050.0	419.2	314314.	0.017	1.000	0.033
24	15.50	15.20	14.0430	0.034	4.05	103.5	125753.	31050.0	419.2	332944.	0.018	1.000	0.034
25	15.20	14.90	14.2305	0.022	5.47	116.5	191176.	34950.0	637.3	353914.	0.012	1.000	0.022
26	14.90	14.60	14.4180	0.023	5.47	116.5	191176.	34950.0	637.3	374884.	0.013	1.000	0.023
27	14.60	14.30	14.6055	0.023	5.47	116.5	191176.	34950.0	637.3	395854.	0.014	1.000	0.023
28	14.30	14.00	14.7930	0.023	5.47	116.5	191176.	34950.0	637.3	416824.	0.015	1.000	0.023
29	14.00	13.70	14.9805	0.024	5.47	116.5	191176.	34950.0	637.3	437794.	0.015	1.000	0.024
30	13.70	13.40	15.1680	0.024	5.47	116.5	191176.	34950.0	637.3	458764.	0.016	1.000	0.024
31	13.40	13.10	15.3555	0.024	5.47	116.5	191176.	34950.0	637.3	479734.	0.017	1.000	0.024
32	13.10	12.80	15.5430	0.024	5.47	116.5	191176.	34950.0	637.3	500704.	0.017	1.000	0.025
33	12.80	12.60	15.9180	0.025	5.47	116.5	127451.	23300.0	637.3	514684.	0.018	1.000	0.026
34	12.60	12.40	16.2930	0.026	5.47	116.5	127451.	23300.0	637.3	528664.	0.018	1.000	0.026
35	12.40	12.20	16.6680	0.026	5.47	116.5	127451.	23300.0	637.3	542644.	0.019	1.000	0.027
36	12.20	12.00	17.0430	0.027	5.47	116.5	127451.	23300.0	637.3	556624.	0.019	1.000	0.028
37	12.00	11.65	17.4180	0.027	5.47	116.5	223039.	40775.0	637.3	581089.	0.020	1.000	0.028
38	11.65	11.30	17.7930	0.028	5.47	116.5	223039.	40775.0	637.3	605554.	0.021	1.000	0.029
39	11.30	10.95	18.1680	0.029	5.47	116.5	223039.	40775.0	637.3	630019.	0.022	1.000	0.030
40	10.95	10.60	18.5430	0.029	5.47	116.5	223039.	40775.0	637.3	654484.	0.023	1.000	0.031
41	10.60	10.36	18.6930	0.013	6.65	224.8	358701.	53940.0	1494.6	686848.	0.010	1.000	0.014
42	10.36	10.12	18.8430	0.013	6.65	224.8	358701.	53940.0	1494.6	719212.	0.011	1.000	0.014
43	10.12	9.88	18.9930	0.013	6.65	224.8	358701.	53940.0	1494.6	751576.	0.011	1.000	0.014
44	9.88	9.64	19.1430	0.013	6.65	224.8	358701.	53940.0	1494.6	783940.	0.012	1.000	0.015
45	9.64	9.40	19.2930	0.013	6.65	224.8	358701.	53940.0	1494.6	816304.	0.012	1.000	0.015
46	9.40	9.16	19.4430	0.013	6.65	224.8	358701.	53940.0	1494.6	848668.	0.013	1.000	0.015
47	9.16	8.92	19.5930	0.013	6.65	224.8	358701.	53940.0	1494.6	881032.	0.013	1.000	0.016
48	8.92	8.68	19.7430	0.013	6.65	224.8	358701.	53940.0	1494.6	913396.	0.014	1.000	0.016
49	8.68	8.44	19.8930	0.013	6.65	224.8	358701.	53940.0	1494.6	945760.	0.014	1.000	0.017
50	8.44	8.20	20.0430	0.013	6.65	224.8	358701.	53940.0	1494.6	978124.	0.015	1.000	0.017
51	8.20	7.90	20.2930	0.014	6.65	224.8	448376.	67425.0	1494.6	1018579.	0.015	1.000	0.018
52	7.90	7.60	20.5430	0.014	6.65	224.8	448376.	67425.0	1494.6	1059034.	0.016	1.000	0.018
53	7.60	7.30	20.7930	0.014	6.65	224.8	448376.	67425.0	1494.6	1099489.	0.016	1.000	0.019
54	7.30	7.00	21.0430	0.014	6.65	224.8	448376.	67425.0	1494.6	1139944.	0.017	1.000	0.019
55	7.00	6.70	21.2930	0.014	6.65	224.8	448376.	67425.0	1494.6	1180399.	0.018	1.000	0.020
56	6.70	6.40	21.5430	0.014	6.65	224.8	448376.	67425.0	1494.6	1220854.	0.018	1.000	0.021

57	6.40	6.02	21.8430	0.019	4.33	260.2	428133.	98876.0	1126.7	1280179.	0.025	1.000	0.028
58	6.02	5.64	22.1430	0.020	4.33	260.2	428133.	98876.0	1126.7	1339505.	0.026	1.000	0.029
59	5.64	5.26	22.4430	0.020	4.33	260.2	428133.	98876.0	1126.7	1398830.	0.028	1.000	0.031
60	5.26	4.88	22.7430	0.020	4.33	260.2	428133.	98876.0	1126.7	1458156.	0.029	1.000	0.032
61	4.88	4.50	23.0430	0.020	4.33	260.2	428133.	98876.0	1126.7	1517482.	0.030	1.000	0.033
62	4.50	4.35	23.7930	0.018	5.70	236.9	202584.	35541.0	1350.6	1538806.	0.025	1.000	0.028
63	4.35	4.20	24.5430	0.018	5.70	236.9	202584.	35541.0	1350.6	1560131.	0.026	1.000	0.028
64	4.20	3.85	25.2930	0.019	5.70	236.9	472695.	82929.0	1350.6	1609888.	0.026	1.000	0.029
65	3.85	3.50	26.0430	0.019	5.70	236.9	472695.	82929.0	1350.6	1659646.	0.027	1.000	0.030
66	3.50	3.20	26.2930	0.019	5.70	236.9	405167.	71082.0	1350.6	1702295.	0.028	1.000	0.031
67	3.20	2.90	26.5430	0.020	5.70	236.9	405167.	71082.0	1350.6	1744944.	0.029	1.000	0.031
68	2.90	2.60	26.7930	0.020	5.70	236.9	405167.	71082.0	1350.6	1787594.	0.029	1.000	0.032
69	2.60	2.30	27.0430	0.020	5.70	236.9	405167.	71082.0	1350.6	1830243.	0.030	1.000	0.033
70	2.30	2.00	27.2930	0.020	5.70	236.9	405167.	71082.0	1350.6	1872892.	0.031	1.000	0.034
71	2.00	1.70	27.5430	0.020	5.70	236.9	405167.	71082.0	1350.6	1915541.	0.032	1.000	0.034
72	1.70	1.60	28.2930	0.045	5.70	110.0	62700.	11000.0	627.0	1922141.	0.068	1.000	0.074
73	1.60	1.50	29.0430	0.046	5.70	110.0	62700.	11000.0	627.0	1928741.	0.068	1.000	0.075
74	1.50	1.23	29.3430	0.047	5.70	110.0	169290.	29700.0	627.0	1946561.	0.069	1.000	0.076
75	1.23	0.96	29.6430	0.047	5.70	110.0	169290.	29700.0	627.0	1964381.	0.070	1.000	0.076
76	0.96	0.69	29.9430	0.048	5.70	110.0	169290.	29700.0	627.0	1982201.	0.070	1.000	0.077
77	0.69	0.42	30.2430	0.048	5.70	110.0	169290.	29700.0	627.0	2000021.	0.071	1.000	0.078
78	0.42	0.15	30.5430	0.049	5.70	110.0	169290.	29700.0	627.0	2017841.	0.072	1.000	0.078
79	0.15	0.00	32.0430	0.051	5.70	110.0	94050.	16500.0	627.0	2027741.	0.072	1.000	0.079

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 1 Headwaters-MR-A COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS	CHL A	COLI #/100mL	NCM
1	HDWTR	3.32000	30.00	0.00	0.00	0.00	2.50	4.00	0.00	4.00	0.00	0.00	0.10	0.10	0.00	1.00	0.00	0.00
EACH	INCR	0.23233	30.00	0.00	0.00	0.00	4.00	0.50	0.00			0.30	0.00	0.20	0.00	0.00	0.00	

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
1	22.11	21.84	3.55233	0.0	0.03949	0.08	1.71	52.60	24285.42	14202.00	89.95	8521.20	0.002	1.000	0.039
2	21.84	21.57	3.78467	0.0	0.04208	0.07	1.71	52.60	24285.42	14202.00	89.95	17042.40	0.004	1.000	0.042
3	21.57	21.30	4.01700	0.0	0.04466	0.07	1.71	52.60	24285.42	14202.00	89.95	25563.60	0.006	1.000	0.045
TOT					0.22				72856.26	42606.00					
AVG				0.0420			1.71	52.60			89.95				
CUM					0.22										

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	DENIT RATE	PO4 SRCE	ALG PROD	MAC PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da
1	21.840	7.82	0.48	0.06	0.07	0.00	0.01	0.00	0.00	4.99	5.44	5.44	0.06	0.01	0.14	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
2	21.570	7.78	0.48	0.06	0.07	0.00	0.01	0.00	0.00	5.07	5.50	5.50	0.06	0.01	0.15	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
3	21.300	7.75	0.48	0.06	0.07	0.00	0.01	0.00	0.00	5.16	5.56	5.56	0.06	0.01	0.15	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.41	0.04	0.06	0.00	0.01	0.00	0.00	3.00			0.05	0.01	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
1	21.840	28.07	0.00	0.00	0.00	2.53	3.76	0.00	3.76	0.00	0.02	0.09	0.11	0.22	0.05	1.00	0.00	0.	0.00
2	21.570	28.33	0.00	0.00	0.00	2.55	3.52	0.00	3.52	0.00	0.04	0.09	0.11	0.23	0.05	1.00	0.00	0.	0.00
3	21.300	28.60	0.00	0.00	0.00	2.58	3.28	0.00	3.28	0.00	0.05	0.08	0.12	0.25	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 2 MR-B before split of MR/MRWest COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A µg/L	COLI #/100mL	NCM
4	UPR RCH	4.01700	28.60	0.00	0.00	0.00	2.58	3.28	0.00	3.28	0.00	0.05	0.08	0.12	0.05	1.00	0.00	0.00
EACH	INCR	0.62175	30.00	0.00	0.00	0.00	4.00	0.50	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT m/s	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
4	21.30	21.05	4.63875	0.0	0.02086	0.14	4.92	45.20	55596.00	11300.00	222.38	32343.60	0.003	1.000	0.021
5	21.05	20.80	5.26050	0.0	0.02366	0.12	4.92	45.20	55596.00	11300.00	222.38	39123.60	0.004	1.000	0.024
6	20.80	20.55	5.88225	0.0	0.02645	0.11	4.92	45.20	55596.00	11300.00	222.38	45903.60	0.005	1.000	0.026
7	20.55	20.30	6.50400	0.0	0.02925	0.10	4.92	45.20	55596.00	11300.00	222.38	52683.60	0.005	1.000	0.029
TOT					0.47				222384.00	45200.00					
AVG				0.0247		4.92	45.20				222.38				
CUM					0.69										

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	DENIT RATE	PO4 SRCE	ALG PROD	MAC PROD	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da
4	21.050	7.68	0.17	0.06	0.03	0.00	0.01	0.00	0.00	7.09	7.45	7.45	0.06	0.00	0.16	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
5	20.800	7.61	0.17	0.06	0.03	0.00	0.01	0.00	0.00	7.32	7.64	7.64	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
6	20.550	7.55	0.17	0.06	0.03	0.00	0.01	0.00	0.00	7.56	7.85	7.85	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
7	20.300	7.48	0.17	0.07	0.03	0.00	0.02	0.00	0.00	7.80	8.07	8.07	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.14	0.04	0.02	0.00	0.01	0.00	0.00	4.00			0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
4	21.050	29.10	0.00	0.00	0.00	2.66	2.87	0.00	2.87	0.00	0.09	0.07	0.13	0.29	0.05	1.00	0.00	0.	0.00
5	20.800	29.60	0.00	0.00	0.00	2.71	2.57	0.00	2.57	0.00	0.11	0.06	0.14	0.31	0.05	1.00	0.00	0.	0.00
6	20.550	30.10	0.00	0.00	0.00	2.75	2.33	0.00	2.33	0.00	0.13	0.05	0.15	0.33	0.05	1.00	0.00	0.	0.00
7	20.300	30.60	0.00	0.00	0.00	2.79	2.14	0.00	2.14	0.00	0.14	0.05	0.15	0.34	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 3 MR-C/MRWest-D COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
8	UPR RCH	6.50400	30.60	0.00	0.00	0.00	2.79	2.14	0.00	2.14	0.00	0.14	0.05	0.15	0.05	1.00	0.00	0.00
EACH	INCR	0.89100	30.00	0.00	0.00	0.00	4.00	0.50	0.00			0.30	0.00	0.20	0.00	0.00	0.00	

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m³	VOLUME m²	SURFACE AREA m²	X-SECT AREA m³	TIDAL PRISM m/s	TIDAL VELO m²/s	DISPRSN m/s	MEAN VELO
8	20.30	20.00	7.39500	0.0	0.04733	0.07	2.48	63.00	46872.00	18900.00	156.24	64023.60	0.009	1.000	0.047
9	20.00	19.70	8.28600	0.0	0.05303	0.07	2.48	63.00	46872.00	18900.00	156.24	75363.60	0.011	1.000	0.053
10	19.70	19.40	9.17700	0.0	0.05874	0.06	2.48	63.00	46872.00	18900.00	156.24	86703.60	0.012	1.000	0.059
11	19.40	19.10	10.06800	0.0	0.06444	0.05	2.48	63.00	46872.00	18900.00	156.24	98043.60	0.014	1.000	0.064
12	19.10	18.80	10.95900	0.0	0.07014	0.05	2.48	63.00	46872.00	18900.00	156.24	109383.60	0.016	1.000	0.070
TOT								0.30			234360.00	94500.00			
AVG								0.0576		2.48	63.00			156.24	
CUM								0.99							

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE **	ALG PROD **	MAC PROD **	COLI DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da
8	20.000	7.49	0.34	0.06	0.05	0.00	0.02	0.00	0.00	1.94	2.19	2.19	0.06	0.01	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
9	19.700	7.49	0.34	0.06	0.05	0.00	0.02	0.00	0.00	1.94	2.17	2.17	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
10	19.400	7.50	0.34	0.06	0.05	0.00	0.02	0.00	0.00	1.93	2.14	2.14	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
11	19.100	7.50	0.34	0.06	0.05	0.00	0.02	0.00	0.00	1.93	2.13	2.13	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
12	18.800	7.51	0.34	0.06	0.05	0.00	0.02	0.00	0.00	1.93	2.11	2.11	0.06	0.01	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE		0.28	0.04	0.04	0.00	0.01	0.00	0.00	1.00		0.05	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00			

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
8	20.000	30.56	0.00	0.00	0.00	2.97	1.94	0.00	1.94	0.00	0.16	0.04	0.16	0.36	0.05	1.00	0.00	0.	0.00
9	19.700	30.52	0.00	0.00	0.00	3.12	1.77	0.00	1.77	0.00	0.18	0.04	0.16	0.38	0.05	1.00	0.00	0.	0.00
10	19.400	30.48	0.00	0.00	0.00	3.23	1.64	0.00	1.64	0.00	0.19	0.04	0.17	0.39	0.05	1.00	0.00	0.	0.00
11	19.100	30.44	0.00	0.00	0.00	3.33	1.53	0.00	1.53	0.00	0.20	0.03	0.17	0.40	0.05	1.00	0.00	0.	0.00
12	18.800	30.40	0.00	0.00	0.00	3.40	1.44	0.00	1.44	0.00	0.20	0.03	0.17	0.41	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 4 MR-E/MRWest-G COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
13	UPR RCH	10.95900	30.40	0.00	0.00	0.00	3.40	1.44	0.00	1.44	0.00	0.20	0.03	0.17	0.05	1.00	0.00	0.00
EACH	INCR	0.25700	30.00	0.00	0.00	0.00	4.00	4.00	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN VELO m²/s	MEAN VELO m/s
13	18.80	18.50	11.21600	0.0	0.02676	0.13	4.05	103.50	125752.51	31050.00	419.18	128013.60	0.007	1.000	0.027
14	18.50	18.20	11.47300	0.0	0.02737	0.13	4.05	103.50	125752.51	31050.00	419.18	146643.61	0.008	1.000	0.027
15	18.20	17.90	11.73000	0.0	0.02798	0.12	4.05	103.50	125752.51	31050.00	419.18	165273.61	0.009	1.000	0.028
16	17.90	17.60	11.98700	0.0	0.02860	0.12	4.05	103.50	125752.51	31050.00	419.18	183903.61	0.010	1.000	0.029
17	17.60	17.30	12.24400	0.0	0.02921	0.12	4.05	103.50	125752.51	31050.00	419.18	202533.61	0.011	1.000	0.029
18	17.30	17.00	12.50100	0.0	0.02982	0.12	4.05	103.50	125752.51	31050.00	419.18	221163.61	0.012	1.000	0.030

19	17.00	16.70	12.75800	0.0	0.03044	0.11	4.05	103.50	125752.51	31050.00	419.18	239793.61	0.013	1.000	0.030
20	16.70	16.40	13.01500	0.0	0.03105	0.11	4.05	103.50	125752.51	31050.00	419.18	258423.61	0.014	1.000	0.031
21	16.40	16.10	13.27200	0.0	0.03166	0.11	4.05	103.50	125752.51	31050.00	419.18	277053.62	0.015	1.000	0.032
22	16.10	15.80	13.52900	0.0	0.03228	0.11	4.05	103.50	125752.51	31050.00	419.18	295683.62	0.016	1.000	0.032
23	15.80	15.50	13.78600	0.0	0.03289	0.11	4.05	103.50	125752.51	31050.00	419.18	314313.62	0.017	1.000	0.033
24	15.50	15.20	14.04300	0.0	0.03350	0.10	4.05	103.50	125752.51	31050.00	419.18	332943.62	0.018	1.000	0.034

TOT			1.39	1509030.12	372600.00
AVG		0.0300	4.05	103.50	419.17
CUM			2.38		

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT 1/da	BOD#2 DECAY 1/da	ABOD#2 SOD *	BKGD SOD *	FULL SOD *	CORR DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE 1/da	DENIT SRCE *	PO4 PROD **	ALG PROD **	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da
13	18.500	7.51	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.78	5.97	5.97	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
14	18.200	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.78	5.98	5.98	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
15	17.900	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.78	5.98	5.98	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
16	17.600	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.79	5.99	5.99	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
17	17.300	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.79	6.00	6.00	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
18	17.000	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.79	6.01	6.01	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
19	16.700	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.80	6.01	6.01	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
20	16.400	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.80	6.02	6.02	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
21	16.100	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.80	6.02	6.02	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
22	15.800	7.50	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.81	6.03	6.03	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
23	15.500	7.49	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.81	6.04	6.04	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
24	15.200	7.49	0.21	0.06	0.03	0.00	0.02	0.00	0.00	5.81	6.04	6.04	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.17	0.04	0.02	0.00	0.01	0.00	0.00	3.00			0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN µg/L	PHOS g/m³	CHL A #/100mL	MACRO	COLI	NCM
13	18.500	30.41	0.00	0.00	0.00	3.33	1.49	0.00	1.49	0.00	0.20	0.03	0.17	0.41	0.05	1.00	0.00	0.	0.00
14	18.200	30.42	0.00	0.00	0.00	3.26	1.52	0.00	1.52	0.00	0.20	0.03	0.17	0.41	0.05	1.00	0.00	0.	0.00
15	17.900	30.42	0.00	0.00	0.00	3.20	1.56	0.00	1.56	0.00	0.20	0.03	0.17	0.41	0.05	1.00	0.00	0.	0.00
16	17.600	30.43	0.00	0.00	0.00	3.15	1.59	0.00	1.59	0.00	0.21	0.03	0.18	0.41	0.05	1.00	0.00	0.	0.00
17	17.300	30.44	0.00	0.00	0.00	3.09	1.62	0.00	1.62	0.00	0.21	0.03	0.18	0.41	0.05	1.00	0.00	0.	0.00
18	17.000	30.45	0.00	0.00	0.00	3.04	1.65	0.00	1.65	0.00	0.21	0.03	0.18	0.41	0.05	1.00	0.00	0.	0.00
19	16.700	30.46	0.00	0.00	0.00	2.99	1.68	0.00	1.68	0.00	0.21	0.03	0.18	0.42	0.05	1.00	0.00	0.	0.00
20	16.400	30.47	0.00	0.00	0.00	2.95	1.71	0.00	1.71	0.00	0.21	0.03	0.18	0.42	0.05	1.00	0.00	0.	0.00
21	16.100	30.48	0.00	0.00	0.00	2.90	1.74	0.00	1.74	0.00	0.21	0.03	0.18	0.42	0.05	1.00	0.00	0.	0.00
22	15.800	30.48	0.00	0.00	0.00	2.86	1.76	0.00	1.76	0.00	0.21	0.03	0.18	0.42	0.05	1.00	0.00	0.	0.00
23	15.500	30.49	0.00	0.00	0.00	2.82	1.78	0.00	1.78	0.00	0.21	0.03	0.18	0.42	0.05	1.00	0.00	0.	0.00

24 15.200 30.50 0.00 0.00 0.00 2.78 1.80 0.00 1.80 0.00 0.21 0.03 0.18 0.42 0.05 1.00 0.00 0. 0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 5 MR-H COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS #/100mL	CHL A	COLI	NCM
25	UPR RCH	14.04300	30.50	0.00	0.00	0.00	2.78	1.80	0.00	1.80	0.00	0.21	0.03	0.18	0.05	1.00	0.00	0.00
EACH	INCR	0.18750	30.00	0.00	0.00	0.00	4.00	4.00	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
25	15.20	14.90	14.23050	0.0	0.02233	0.16	5.47	116.50	191176.50	34950.00	637.26	353913.62	0.012	1.000	0.022
26	14.90	14.60	14.41800	0.0	0.02263	0.15	5.47	116.50	191176.50	34950.00	637.26	374883.62	0.013	1.000	0.023
27	14.60	14.30	14.60550	0.0	0.02292	0.15	5.47	116.50	191176.50	34950.00	637.26	395853.62	0.014	1.000	0.023
28	14.30	14.00	14.79300	0.0	0.02321	0.15	5.47	116.50	191176.50	34950.00	637.26	416823.62	0.015	1.000	0.023
29	14.00	13.70	14.98050	0.0	0.02351	0.15	5.47	116.50	191176.50	34950.00	637.26	437793.62	0.015	1.000	0.024
30	13.70	13.40	15.16800	0.0	0.02380	0.15	5.47	116.50	191176.50	34950.00	637.26	458763.62	0.016	1.000	0.024
31	13.40	13.10	15.35550	0.0	0.02410	0.14	5.47	116.50	191176.50	34950.00	637.26	479733.62	0.017	1.000	0.024
32	13.10	12.80	15.54300	0.0	0.02439	0.14	5.47	116.50	191176.50	34950.00	637.26	500703.62	0.017	1.000	0.025
TOT					1.19				1529412.00	279600.00					
AVG				0.0233		5.47	116.50				637.25				
CUM					3.57										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	ABOD#1 SETT 1/da	BOD#2 DECAY *	BOD#2 SETT *	ABOD#2 DECAY *	BKGD SOD 1/da	FULL SOD 1/da	CORR SOD 1/da	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY *	NH3 SRCE 1/da	DENIT RATE *	PO4 SRCE **	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
25	14.900	7.49	0.16	0.06	0.02	0.00	0.02	0.00	0.00	5.83	6.07	6.07	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
26	14.600	7.48	0.16	0.07	0.02	0.00	0.02	0.00	0.00	5.86	6.09	6.09	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
27	14.300	7.47	0.16	0.07	0.02	0.00	0.02	0.00	0.00	5.88	6.11	6.11	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
28	14.000	7.46	0.16	0.07	0.02	0.00	0.02	0.00	0.00	5.90	6.14	6.14	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
29	13.700	7.45	0.16	0.07	0.02	0.00	0.02	0.00	0.00	5.93	6.16	6.16	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
30	13.400	7.45	0.16	0.07	0.02	0.00	0.02	0.00	0.00	5.95	6.19	6.19	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
31	13.100	7.44	0.16	0.07	0.02	0.00	0.02	0.00	0.00	5.97	6.21	6.21	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
32	12.800	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	6.00	6.24	6.24	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.13	0.04	0.02	0.00	0.01	0.00	0.00	3.00		0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00		

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
25	14.900	30.56	0.00	0.00	0.00	2.73	1.81	0.00	1.81	0.00	0.21	0.03	0.18	0.42	0.05	1.00	0.00	0.	0.00
26	14.600	30.62	0.00	0.00	0.00	2.68	1.81	0.00	1.81	0.00	0.21	0.03	0.18	0.42	0.05	1.00	0.00	0.	0.00
27	14.300	30.69	0.00	0.00	0.00	2.63	1.82	0.00	1.82	0.00	0.21	0.04	0.18	0.42	0.05	1.00	0.00	0.	0.00
28	14.000	30.75	0.00	0.00	0.00	2.59	1.82	0.00	1.82	0.00	0.20	0.04	0.18	0.42	0.05	1.00	0.00	0.	0.00
29	13.700	30.81	0.00	0.00	0.00	2.54	1.82	0.00	1.82	0.00	0.20	0.04	0.18	0.42	0.05	1.00	0.00	0.	0.00
30	13.400	30.88	0.00	0.00	0.00	2.50	1.83	0.00	1.83	0.00	0.20	0.04	0.18	0.42	0.05	1.00	0.00	0.	0.00
31	13.100	30.94	0.00	0.00	0.00	2.46	1.83	0.00	1.83	0.00	0.20	0.04	0.18	0.42	0.05	1.00	0.00	0.	0.00
32	12.800	31.00	0.00	0.00	0.00	2.43	1.86	0.00	1.86	0.00	0.20	0.04	0.19	0.42	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 6 MRWest-J COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS #/100mL	CHL A	COLI	NCM
33	UPR RCH	15.54300	31.00	0.00	0.00	0.00	2.43	1.86	0.00	1.86	0.00	0.20	0.04	0.19	0.05	1.00	0.00	0.00
EACH	INCR	0.37500	30.00	0.00	0.00	0.00	4.00	10.00	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	PRISM m³	VELO m/s	TIDAL VELO m²/s	TIDAL m/s	DISPRSN	MEAN
33	12.80	12.60	15.91800	0.0	0.02498	0.09	5.47	116.50	127451.00	23300.00	637.26	514683.62	0.018	1.000	0.026		
34	12.60	12.40	16.29300	0.0	0.02557	0.09	5.47	116.50	127451.00	23300.00	637.26	528663.62	0.018	1.000	0.026		
35	12.40	12.20	16.66800	0.0	0.02616	0.09	5.47	116.50	127451.00	23300.00	637.26	542643.62	0.019	1.000	0.027		
36	12.20	12.00	17.04300	0.0	0.02674	0.09	5.47	116.50	127451.00	23300.00	637.26	556623.62	0.019	1.000	0.028		
TOT					0.36				509804.00	93200.00							
AVG				0.0258			5.47	116.50			637.26						
CUM					3.93												

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
33	12.600	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.00	4.26	4.26	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
34	12.400	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.00	4.28	4.28	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
35	12.200	7.43	0.16	0.07	0.02	0.00	0.02	0.00	0.00	4.00	4.30	4.30	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

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 36  12.000  7.43   0.16   0.07  0.02   0.00   0.02  0.00   0.00  4.00  4.32  4.32   0.06  0.00   0.18  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00

AVG 20 DEG C RATE    0.13   0.04  0.02   0.00   0.01  0.00   0.00  2.00             0.05  0.00   0.10  0.00   0.00  0.00             0.00   0.00   0.00

*  g/m²/d          **   mg/L/day

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

ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C  PPT     mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL

 33  12.600  31.00  0.00    0.00    0.00  2.46  2.04  0.00  2.04  0.00  0.20  0.04  0.19  0.43  0.05  1.00  0.00     0.   0.00
 34  12.400  31.00  0.00    0.00    0.00  2.48  2.20  0.00  2.20  0.00  0.20  0.04  0.19  0.43  0.05  1.00  0.00     0.   0.00
 35  12.200  31.00  0.00    0.00    0.00  2.50  2.36  0.00  2.36  0.00  0.21  0.04  0.19  0.43  0.05  1.00  0.00     0.   0.00
 36  12.000  31.00  0.00    0.00    0.00  2.52  2.50  0.00  2.50  0.00  0.21  0.04  0.19  0.43  0.05  1.00  0.00     0.   0.00

FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  7                                 COEF-1 Run

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

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

 37  UPR RCH  17.04300  31.00    0.00    0.00    0.00  2.52  2.50  0.00  2.50  0.00  0.21  0.04  0.19  0.05  1.00    0.00   0.00
EACH  INCR     0.37500  30.00    0.00    0.00    0.00  4.00 10.00  0.00             0.30  0.00  0.20  0.00    0.00   0.00

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

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

 37   12.00  11.65  17.41800  0.0  0.02733   0.15   5.47  116.50 223039.25  40775.00  637.26 581088.62  0.020   1.000  0.028
 38   11.65  11.30  17.79300  0.0  0.02792   0.15   5.47  116.50 223039.25  40775.00  637.26 605553.62  0.021   1.000  0.029
 39   11.30  10.95  18.16800  0.0  0.02851   0.14   5.47  116.50 223039.25  40775.00  637.26 630018.62  0.022   1.000  0.030
 40   10.95  10.60  18.54300  0.0  0.02910   0.14   5.47  116.50 223039.25  40775.00  637.26 654483.62  0.023   1.000  0.031

TOT                                  0.57            892157.00  163100.00
AVG                            0.0282          5.47  116.50                637.26
CUM                                  4.51

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

ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY SETT DECAY DECAY  SETT DECAY   SOD   SOD   SOD DECAY  SETT DECAY SRCE   RATE SRCE PROD PROD DECAY DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da 1/da  1/da   *     *     *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da

 37  11.650  7.45   0.16   0.07  0.02   0.00   0.02  0.00   0.00  3.97  4.31  4.31   0.06  0.00   0.18  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 38  11.300  7.46   0.16   0.07  0.02   0.00   0.02  0.00   0.00  3.94  4.29  4.29   0.06  0.00   0.18  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
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39	10.950	7.48	0.16	0.07	0.02	0.00	0.02	0.00	0.00	3.90	4.27	4.27	0.06	0.00	0.18	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
40	10.600	7.49	0.16	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

AVG 20 DEG C RATE 0.13 0.04 0.02 0.00 0.01 0.00 0.00 2.00 0.05 0.00 0.10 0.00 0.00 0.00 0.00 0.00 0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
37	11.650	30.88	0.00	0.00	0.00	2.53	2.62	0.00	2.62	0.00	0.21	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
38	11.300	30.75	0.00	0.00	0.00	2.54	2.74	0.00	2.74	0.00	0.21	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
39	10.950	30.62	0.00	0.00	0.00	2.55	2.85	0.00	2.85	0.00	0.21	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
40	10.600	30.50	0.00	0.00	0.00	2.56	2.95	0.00	2.95	0.00	0.21	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 8 MREast-(L)/MRWest-(M)/MR-(N) COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
41	UPR RCH	18.54300	30.50	0.00	0.00	0.00	2.56	2.95	0.00	2.95	0.00	0.21	0.04	0.19	0.05	1.00	0.00	0.00
EACH	INCR	0.15000	30.00	0.00	0.00	0.00	4.00	10.00	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
41	10.60	10.36	18.69300	0.0	0.01251	0.22	6.65	224.75	358701.00	53940.00	1494.59	686847.62	0.010	1.000	0.014
42	10.36	10.12	18.84300	0.0	0.01261	0.22	6.65	224.75	358701.00	53940.00	1494.59	719211.62	0.011	1.000	0.014
43	10.12	9.88	18.99300	0.0	0.01271	0.22	6.65	224.75	358701.00	53940.00	1494.59	751575.62	0.011	1.000	0.014
44	9.88	9.64	19.14300	0.0	0.01281	0.22	6.65	224.75	358701.00	53940.00	1494.59	783939.62	0.012	1.000	0.015
45	9.64	9.40	19.29300	0.0	0.01291	0.22	6.65	224.75	358701.00	53940.00	1494.59	816303.62	0.012	1.000	0.015
46	9.40	9.16	19.44300	0.0	0.01301	0.21	6.65	224.75	358701.00	53940.00	1494.59	848667.62	0.013	1.000	0.015
47	9.16	8.92	19.59300	0.0	0.01311	0.21	6.65	224.75	358701.00	53940.00	1494.59	881031.62	0.013	1.000	0.016
48	8.92	8.68	19.74300	0.0	0.01321	0.21	6.65	224.75	358701.00	53940.00	1494.59	913395.62	0.014	1.000	0.016
49	8.68	8.44	19.89300	0.0	0.01331	0.21	6.65	224.75	358701.00	53940.00	1494.59	945759.62	0.014	1.000	0.017
50	8.44	8.20	20.04300	0.0	0.01341	0.21	6.65	224.75	358701.00	53940.00	1494.59	978123.62	0.015	1.000	0.017
TOT						2.14			3587010.00	539400.00					
AVG					0.0130		6.65	224.75			1494.59				
CUM						6.65									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	DENIT RATE	PO4 SRCE	ALG PROD	MAC PROD	COLI DECAY	NCM DECAY	NCM SETT
	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da	
41	10.360	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
42	10.120	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
43	9.880	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
44	9.640	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
45	9.400	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
46	9.160	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
47	8.920	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
48	8.680	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
49	8.440	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.25	4.25	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
50	8.200	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.11	0.04	0.02	0.00	0.01	0.00	0.00	2.00			0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
41	10.360	30.50	0.00	0.00	0.00	2.53	2.95	0.00	2.95	0.00	0.20	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
42	10.120	30.50	0.00	0.00	0.00	2.51	2.95	0.00	2.95	0.00	0.20	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
43	9.880	30.50	0.00	0.00	0.00	2.49	2.95	0.00	2.95	0.00	0.20	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
44	9.640	30.50	0.00	0.00	0.00	2.48	2.96	0.00	2.96	0.00	0.20	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
45	9.400	30.50	0.00	0.00	0.00	2.46	2.96	0.00	2.96	0.00	0.20	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
46	9.160	30.50	0.00	0.00	0.00	2.44	2.96	0.00	2.96	0.00	0.19	0.04	0.19	0.43	0.05	1.00	0.00	0.	0.00
47	8.920	30.50	0.00	0.00	0.00	2.42	2.96	0.00	2.96	0.00	0.19	0.04	0.20	0.43	0.05	1.00	0.00	0.	0.00
48	8.680	30.50	0.00	0.00	0.00	2.41	2.96	0.00	2.96	0.00	0.19	0.04	0.20	0.43	0.05	1.00	0.00	0.	0.00
49	8.440	30.50	0.00	0.00	0.00	2.39	2.96	0.00	2.96	0.00	0.19	0.04	0.20	0.43	0.05	1.00	0.00	0.	0.00
50	8.200	30.50	0.00	0.00	0.00	2.38	2.97	0.00	2.97	0.00	0.19	0.05	0.20	0.43	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 9 COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
51	UPR RCH	20.04300	30.50	0.00	0.00	0.00	2.38	2.97	0.00	2.97	0.00	0.19	0.05	0.20	0.05	1.00	0.00	0.00
EACH	INCR	0.25000	30.00	0.00	0.00	0.00	4.00	10.00	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

ELEM	BEGIN	ENDING	FLOW	PCT	ADVCTV	TRAVEL	DEPTH	WIDTH	VOLUME	SURFACE	X-SECT	TIDAL	TIDAL	DISPRSN	MEAN

NO.	DIST km	DIST km	EFF m³/s	VELO m/s	TIME days	m	m	m³	AREA m²	AREA m²	PRISM m³	VELO m/s	VELO m²/s	VELO m/s	
51	8.20	7.90	20.29300	0.0	0.01358	0.26	6.65	224.75	448376.25	67425.00	1494.591018	578.62	0.015	1.000	0.018
52	7.90	7.60	20.54300	0.0	0.01374	0.25	6.65	224.75	448376.25	67425.00	1494.591059	033.62	0.016	1.000	0.018
53	7.60	7.30	20.79300	0.0	0.01391	0.25	6.65	224.75	448376.25	67425.00	1494.591099	488.62	0.016	1.000	0.019
54	7.30	7.00	21.04300	0.0	0.01408	0.25	6.65	224.75	448376.25	67425.00	1494.591139	943.62	0.017	1.000	0.019
55	7.00	6.70	21.29300	0.0	0.01425	0.24	6.65	224.75	448376.25	67425.00	1494.591180	398.62	0.018	1.000	0.020
56	6.70	6.40	21.54300	0.0	0.01441	0.24	6.65	224.75	448376.25	67425.00	1494.591220	853.62	0.018	1.000	0.021
TOT					1.49			2690257.50	404550.00						
AVG				0.0140		6.65	224.75			1494.59					
CUM					8.14										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	DECAY 1/da	SETT 1/da	DECAY 1/da	DECAY 1/da	SETT 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT 1/da	BOD#2 DECAY 1/da	ABOD#2 SETT 1/da	BKGD *	FULL *	CORR *	ORGN SOD 1/da	ORGN SOD 1/da	NH3 SOD 1/da	NH3 SETT 1/da	DENIT DECAY *	PO4 SRCE **	ALG RATE **	MAC SRCE 1/da	MAC PROD 1/da	COLI PROD 1/da	NCM DECAY 1/da	NCM SETT 1/da
51	7.900	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00						
52	7.600	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00						
53	7.300	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.26	4.26	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00						
54	7.000	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.27	4.27	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00						
55	6.700	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.27	4.27	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00						
56	6.400	7.49	0.13	0.06	0.02	0.00	0.02	0.00	0.00	3.87	4.27	4.27	0.06	0.00	0.17	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00						
AVG 20 DEG C RATE			0.11	0.04	0.02	0.00	0.01	0.00	0.00	2.00			0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00						

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
51	7.900	30.50	0.00	0.00	0.00	2.37	2.99	0.00	2.99	0.00	0.19	0.05	0.20	0.43	0.05	1.00	0.00	0.	0.00
52	7.600	30.50	0.00	0.00	0.00	2.35	3.01	0.00	3.01	0.00	0.18	0.05	0.20	0.43	0.05	1.00	0.00	0.	0.00
53	7.300	30.50	0.00	0.00	0.00	2.34	3.03	0.00	3.03	0.00	0.18	0.05	0.20	0.43	0.05	1.00	0.00	0.	0.00
54	7.000	30.50	0.00	0.00	0.00	2.33	3.05	0.00	3.05	0.00	0.18	0.05	0.20	0.43	0.05	1.00	0.00	0.	0.00
55	6.700	30.50	0.00	0.00	0.00	2.31	3.07	0.00	3.07	0.00	0.18	0.05	0.20	0.43	0.05	1.00	0.00	0.	0.00
56	6.400	30.50	0.00	0.00	0.00	2.30	3.09	0.00	3.09	0.00	0.18	0.05	0.20	0.43	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 10 MRWest-O COEF-1 Run

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

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

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 57  UPR RCH  21.54300  30.50    0.00    0.00    0.00  2.30  3.09  0.00  3.09  0.00  0.18  0.05  0.20  0.05  1.00    0.00    0.00
EACH  INCR     0.30000  30.00    0.00    0.00    0.00  4.00 10.00  0.00             0.30  0.00  0.20  0.00    0.00    0.00

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

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

 57   6.40   6.02  21.84299  0.0  0.01939   0.23   4.33  260.20 428133.09  98876.01 1126.671280179.25  0.025   1.000  0.028
 58   6.02   5.64  22.14299  0.0  0.01965   0.22   4.33  260.20 428133.09  98876.01 1126.671339504.88  0.026   1.000  0.029
 59   5.64   5.26  22.44299  0.0  0.01992   0.22   4.33  260.20 428133.09  98876.01 1126.671398830.50  0.028   1.000  0.031
 60   5.26   4.88  22.74299  0.0  0.02019   0.22   4.33  260.20 428133.09  98876.01 1126.671458156.12  0.029   1.000  0.032
 61   4.88   4.50  23.04299  0.0  0.02045   0.22   4.33  260.20 428133.09  98876.01 1126.671517481.75  0.030   1.000  0.033

 TOT                                  1.10            2140665.50  494380.03
 AVG                          0.0199          4.33  260.20                1126.67
 CUM                                  9.24

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

ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY SETT DECAY  DECAY SETT  DECAY  SOD   SOD   SOD  DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da

 57   6.020  7.49   0.20  0.06  0.03  0.00  0.02  0.00  0.00  3.87  4.27  4.27  0.06  0.00  0.17  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 58   5.640  7.49   0.20  0.06  0.03  0.00  0.02  0.00  0.00  3.87  4.28  4.28  0.06  0.00  0.17  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 59   5.260  7.49   0.20  0.06  0.03  0.00  0.02  0.00  0.00  3.87  4.28  4.28  0.06  0.00  0.17  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 60   4.880  7.49   0.20  0.06  0.03  0.00  0.02  0.00  0.00  3.87  4.28  4.28  0.06  0.00  0.17  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 61   4.500  7.49   0.20  0.06  0.03  0.00  0.02  0.00  0.00  3.87  4.29  4.29  0.06  0.00  0.17  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00

AVG 20 DEG C RATE    0.16   0.04  0.02   0.00   0.01  0.00   0.00  2.00             0.05  0.00   0.10  0.00   0.00  0.00             0.00   0.00   0.00

*  g/m²/d          **   mg/L/day

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

ELEM  ENDING   TEMP  SALN    CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    g/m³  #/100mL

 57   6.020  30.50  0.00    0.00    0.00   2.30   3.11   0.00   3.11   0.00   0.18   0.05   0.20   0.43   0.05   1.00   0.00      0.   0.00
 58   5.640  30.50  0.00    0.00    0.00   2.29   3.14   0.00   3.14   0.00   0.18   0.05   0.20   0.43   0.05   1.00   0.00      0.   0.00
 59   5.260  30.50  0.00    0.00    0.00   2.29   3.17   0.00   3.17   0.00   0.18   0.05   0.21   0.43   0.05   1.00   0.00      0.   0.00
 60   4.880  30.50  0.00    0.00    0.00   2.29   3.19   0.00   3.19   0.00   0.18   0.05   0.21   0.43   0.05   1.00   0.00      0.   0.00
 61   4.500  30.50  0.00    0.00    0.00   2.32   3.22   0.00   3.22   0.00   0.17   0.05   0.21   0.43   0.05   1.00   0.00      0.   0.00

FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 11                                   COEF-1 Run
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********************************************************** REACH INPUTS **********************************************************

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

 62  UPR RCH  23.04299  30.50    0.00    0.00    0.00  2.32  3.22  0.00  3.22  0.00  0.17  0.05  0.21  0.05  1.00    0.00    0.00
EACH  INCR     0.75000  30.00    0.00    0.00    0.00  8.00  6.00  0.00             0.30  0.00  0.20  0.00    0.00    0.00

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

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

 62   4.50   4.35   23.79299  0.0  0.01762    0.10   5.70  236.94 202583.70  35541.00 1350.561538806.38  0.025    1.000  0.028
 63   4.35   4.20   24.54299  0.0  0.01817    0.10   5.70  236.94 202583.70  35541.00 1350.561560131.00  0.026    1.000  0.028

 TOT                                  0.19            405167.41  71082.00
 AVG                            0.0179          5.70  236.94                1350.56
 CUM                                  9.44

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

ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da

 62   4.350  7.49   0.15  0.06  0.02  0.00  0.02  0.00  0.00  0.19  0.62  0.62  0.06  0.00  0.18  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 63   4.200  7.49   0.15  0.06  0.02  0.00  0.02  0.00  0.00  0.19  0.62  0.62  0.06  0.00  0.18  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00

AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.10            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00

*  g/m²/d          **   mg/L/day

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

ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL

 62   4.350  30.50  0.00    0.00    0.00  2.57  3.29  0.00  3.29  0.00  0.18  0.05  0.21  0.43  0.05  1.00    0.00      0.   0.00
 63   4.200  30.50  0.00    0.00    0.00  2.76  3.33  0.00  3.33  0.00  0.18  0.05  0.21  0.43  0.05  1.00    0.00      0.   0.00

FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 12                                   COEF-1 Run

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

ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
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 64  UPR RCH  24.54299   30.50    0.00    0.00    0.00  2.76  3.33  0.00  3.33  0.00  0.18  0.05  0.21  0.05  1.00    0.00    0.00
EACH  INCR     0.75000   30.00    0.00    0.00    0.00  8.00  6.00  0.00             0.30  0.00  0.20  0.00    0.00    0.00

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

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

 64   4.20   3.85  25.29299  0.0  0.01873    0.22   5.70  236.94 472695.28  82929.00 1350.561609888.38  0.026    1.000  0.029
 65   3.85   3.50  26.04299  0.0  0.01928    0.21   5.70  236.94 472695.28  82929.00 1350.561659645.75  0.027    1.000  0.030

 TOT                                 0.43            945390.56  165858.00
 AVG                            0.0190          5.70  236.94                1350.56
 CUM                                 9.87

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

ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da

 64   3.850  7.48   0.15  0.07  0.02  0.00  0.02  0.00  0.00  0.19  0.62  0.62  0.06  0.00  0.19  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 65   3.500  7.47   0.15  0.07  0.02  0.00  0.02  0.00  0.00  0.20  0.63  0.63  0.06  0.00  0.19  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00

AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.10             0.05  0.00  0.10  0.00  0.00  0.00             0.00  0.00  0.00

*  g/m²/d          **  mg/L/day

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

ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL

 64   3.850  30.60  0.00    0.00    0.00  2.98  3.34  0.00  3.34  0.00  0.18  0.04  0.21  0.43  0.05  1.00   0.00      0.   0.00
 65   3.500  30.70  0.00    0.00    0.00  3.19  3.35  0.00  3.35  0.00  0.18  0.04  0.21  0.43  0.05  1.00   0.00      0.   0.00

FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 13   MRWest-P                            COEF-1 Run

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

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

 66  UPR RCH  26.04299   30.70    0.00    0.00    0.00  3.19  3.35  0.00  3.35  0.00  0.18  0.04  0.21  0.05  1.00    0.00    0.00
EACH  INCR     0.25000   30.00    0.00    0.00    0.00  8.00  6.00  0.00             0.30  0.00  0.20  0.00    0.00    0.00

************************************************** HYDRAULIC PARAMETER VALUES **************************************************
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ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN VELO m²/s	MEAN m/s
66	3.50	3.20	26.29299	0.0	0.01947	0.18	5.70	236.94	405167.41	71082.00	1350.56	1702295.00	0.028	1.000	0.031
67	3.20	2.90	26.54299	0.0	0.01965	0.18	5.70	236.94	405167.41	71082.00	1350.56	1744944.25	0.029	1.000	0.031
68	2.90	2.60	26.79299	0.0	0.01984	0.18	5.70	236.94	405167.41	71082.00	1350.56	1787593.50	0.029	1.000	0.032
69	2.60	2.30	27.04299	0.0	0.02002	0.17	5.70	236.94	405167.41	71082.00	1350.56	1830242.75	0.030	1.000	0.033
70	2.30	2.00	27.29299	0.0	0.02021	0.17	5.70	236.94	405167.41	71082.00	1350.56	1872892.00	0.031	1.000	0.034
71	2.00	1.70	27.54299	0.0	0.02039	0.17	5.70	236.94	405167.41	71082.00	1350.56	1915541.25	0.032	1.000	0.034
TOT						1.05			2431004.50	426492.00					
AVG				0.0199			5.70	236.94			1350.56				
CUM						10.91									

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD *	FULL SOD *	CORR DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	SRCE *	NH3 RATE 1/da	NH3 SRCE *	DENIT PROD **	PO4 PROD **	ALG DECAY 1/da	MAC DECAY 1/da	COLI SETT 1/da	NCM	NCM
66	3.200	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.20	0.62	0.62	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
67	2.900	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.20	0.62	0.62	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
68	2.600	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.20	0.62	0.62	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
69	2.300	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.20	0.62	0.62	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
70	2.000	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.20	0.61	0.61	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
71	1.700	7.47	0.15	0.07	0.02	0.00	0.02	0.00	0.00	0.20	0.61	0.61	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.12	0.04	0.02	0.00	0.01	0.00	0.00	0.10		0.05	0.00	0.10	0.00	0.00	0.00		0.00	0.00	0.00			

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
66	3.200	30.70	0.00	0.00	0.00	3.30	3.33	0.00	3.33	0.00	0.18	0.04	0.21	0.43	0.05	1.00	0.00	0.	0.00
67	2.900	30.70	0.00	0.00	0.00	3.40	3.30	0.00	3.30	0.00	0.18	0.04	0.21	0.43	0.05	1.00	0.00	0.	0.00
68	2.600	30.70	0.00	0.00	0.00	3.49	3.27	0.00	3.27	0.00	0.18	0.04	0.21	0.43	0.05	1.00	0.00	0.	0.00
69	2.300	30.70	0.00	0.00	0.00	3.59	3.25	0.00	3.25	0.00	0.18	0.04	0.21	0.43	0.05	1.00	0.00	0.	0.00
70	2.000	30.70	0.00	0.00	0.00	3.68	3.23	0.00	3.23	0.00	0.18	0.04	0.21	0.43	0.05	1.00	0.00	0.	0.00
71	1.700	30.70	0.00	0.00	0.00	3.78	3.22	0.00	3.22	0.00	0.18	0.04	0.21	0.43	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 14 COEF-1 Run

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

ELEM	TYPE	FLOW	TEMP	SALN	CM-I	CM-II	DO	BOD#1	BOD#2	EBOD#1	EBOD#2	ORGN	NH3	NO3+2	PHOS	CHL A	COLI	NCM

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NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL

 72  UPR RCH  27.54299  30.70    0.00    0.00    0.00  3.78  3.22  0.00  3.22  0.00  0.18  0.04  0.21  0.05  1.00    0.00    0.00
EACH  INCR     0.75000  30.00    0.00    0.00    0.00  8.00  6.00  0.00            0.30  0.00  0.20  0.00    0.00    0.00

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

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

 72   1.70   1.60  28.29299  0.0  0.04512    0.03   5.70 110.00 62700.00  11000.00 627.001922141.25  0.068    1.000  0.074
 73   1.60   1.50  29.04299  0.0  0.04632    0.02   5.70 110.00 62700.00  11000.00 627.001928741.25  0.068    1.000  0.075

 TOT                                 0.05            125400.00  22000.00
 AVG                            0.0457          5.70 110.00                627.00
 CUM                                 10.96

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

ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da

 72   1.600  7.48   0.15  0.07  0.02  0.00  0.02  0.00  0.00  0.19  0.62  0.62  0.06  0.00  0.20  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 73   1.500  7.49   0.15  0.06  0.02  0.00  0.02  0.00  0.00  0.19  0.62  0.62  0.06  0.00  0.20  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00

AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.10            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00

*  g/m²/d          **   mg/L/day

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

ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL

 72   1.600  30.60  0.00    0.00    0.00  3.89  3.29  0.00  3.29  0.00  0.18  0.04  0.21  0.44  0.05  1.00    0.00      0.   0.00
 73   1.500  30.50  0.00    0.00    0.00  3.99  3.34  0.00  3.34  0.00  0.18  0.04  0.21  0.44  0.05  1.00    0.00      0.   0.00

FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 15   MRWest-Q                           COEF-1 Run

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

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

 74  UPR RCH  29.04299  30.50    0.00    0.00    0.00  3.99  3.34  0.00  3.34  0.00  0.18  0.04  0.21  0.05  1.00    0.00    0.00
EACH  INCR     0.30000  30.00    0.00    0.00    0.00  8.00  8.00  0.00            0.30  0.00  0.20  0.00    0.00    0.00
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********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
74	1.50	1.23	29.34299	0.0	0.04680	0.07	5.70	110.00	169290.00	29700.00	627.00	1946561.25	0.069	1.000	0.076	
75	1.23	0.96	29.64299	0.0	0.04728	0.07	5.70	110.00	169290.00	29700.00	627.00	1964381.25	0.070	1.000	0.076	
76	0.96	0.69	29.94299	0.0	0.04776	0.07	5.70	110.00	169290.00	29700.00	627.00	1982201.25	0.070	1.000	0.077	
77	0.69	0.42	30.24299	0.0	0.04823	0.06	5.70	110.00	169290.00	29700.00	627.00	2000021.25	0.071	1.000	0.078	
78	0.42	0.15	30.54299	0.0	0.04871	0.06	5.70	110.00	169290.00	29700.00	627.00	2017841.25	0.072	1.000	0.078	
TOT					0.33				846450.00	148500.00						
AVG				0.0477			5.70	110.00			627.00					
CUM					11.29											

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	ABOD#1 SETT 1/da	BOD#2 DECAY *	BOD#2 SETT *	ABOD#2 DECAY *	BKGD SOD *	FULL SOD *	CORR SOD 1/da	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY *	NH3 SRCE 1/da	NH3 RATE *	DENIT SRCE **	PO4 PROD **	ALG PROD 1/da	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
74	1.230	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.19	0.63	0.63	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
75	0.960	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.19	0.63	0.63	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
76	0.690	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.19	0.63	0.63	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
77	0.420	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.19	0.64	0.64	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
78	0.150	7.49	0.15	0.06	0.02	0.00	0.02	0.00	0.00	0.19	0.64	0.64	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.12	0.04	0.02	0.00	0.01	0.00	0.00	0.10			0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00		

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
74	1.230	30.50	0.00	0.00	0.00	4.04	3.37	0.00	3.37	0.00	0.18	0.04	0.21	0.44	0.05	1.00	0.00	0.	0.00
75	0.960	30.50	0.00	0.00	0.00	4.10	3.39	0.00	3.39	0.00	0.18	0.04	0.21	0.44	0.05	1.00	0.00	0.	0.00
76	0.690	30.50	0.00	0.00	0.00	4.15	3.42	0.00	3.42	0.00	0.18	0.04	0.21	0.44	0.05	1.00	0.00	0.	0.00
77	0.420	30.50	0.00	0.00	0.00	4.20	3.45	0.00	3.45	0.00	0.18	0.04	0.21	0.44	0.05	1.00	0.00	0.	0.00
78	0.150	30.50	0.00	0.00	0.00	4.29	3.49	0.00	3.49	0.00	0.18	0.04	0.21	0.43	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 16 COEF-1 Run

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

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

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 79  UPR RCH  30.54299   30.50     0.00     0.00     0.00  4.29   3.49   0.00   3.49   0.00   0.18   0.04   0.21   0.05   1.00     0.00    0.00
EACH  INCR     1.50000   30.00     0.00     0.00     0.00  8.00   8.00   0.00                0.30   0.00   0.20   0.00     0.00    0.00

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

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

 79    0.15    0.00   32.04299   0.0   0.05111     0.03    5.70  110.00  94050.00   16500.00  627.002027741.25   0.072     1.000   0.079

 TOT                                     0.03                94050.00   16500.00
 AVG                            0.0511          5.70  110.00                627.00
 CUM                                    11.32

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

ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da     *    1/da     *    **    **   1/da   1/da   1/da

 79    0.000  8.08    0.14   0.05  0.02   0.00   0.01  0.00   0.00  0.15  0.58  0.58   0.06  0.00   0.15  0.00   0.00  0.00  0.00  0.00   0.00   0.00   0.00

AVG 20 DEG C RATE     0.12   0.04  0.02   0.00   0.01  0.00   0.00  0.10              0.05  0.00   0.10  0.00   0.00  0.00              0.00   0.00   0.00

*   g/m²/d          **   mg/L/day

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

ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO     COLI     NCM
NO.    DIST  DEG C   PPT     mg/L     mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    g/m³  #/100mL

 79    0.000  26.25  0.00     0.00     0.00   4.75   3.74   0.00   3.74   0.00   0.15   0.03   0.17   0.35   0.00   0.00   0.00      0.    0.00

STREAM SUMMARY                                    Middle/Middle West Rivers DO Modeling - 090207
        Headwater                                 COEF-1 Run

 TRAVEL TIME      =         11.32 DAYS

 MAXIMUM EFFLUENT  =          0.00 PERCENT

 FLOW            =  3.55233 TO   32.04299   m³/s
 DISPERSION       =  1.0000  TO    1.0000    m²/s
 VELOCITY         =  0.01251 TO    0.07014   m/s
 DEPTH            =  1.71    TO    6.65      m
 WIDTH            =  45.20   TO  260.20      m

 BOD DECAY        =    0.05   TO    0.07      per day
 NH3 DECAY        =    0.14   TO    0.20      per day
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SOD = 0.58 TO 8.07 g/m²/d
NH3 SOURCE = 0.00 TO 0.00 g/m²/d
REAERATION = 0.13 TO 0.48 per day
BOD SETTLING = 0.02 TO 0.07 per day
ORG-N DECAY = 0.06 TO 0.06 per day
ORG-N SETTLING = 0.00 TO 0.01 per day

TEMPERATURE = 26.25 TO 31.00 deg C
DISSOLVED OXYGEN = 2.29 TO 4.75 mg/L

Middle/Middle West Rivers DO Modeling - 090207
COEF-1 Run

REACH SUMMARY REPORT FOR Headwater

RCH NO.	REACH NAME	BEGIN DIST km	ENDING DIST km	REACH LENGTH km	TRAVEL TIME days	FLOW AT EOR m3/s	AVERAGE VELO m/s	AVG DEPTH m	AVG WIDTH m	FLOW AT EOR cfs	AVERAGE VELO fps	AVG DEPTH ft	AVG WIDTH ft
1	Headwaters-MR-A	22.11	21.30	0.81	0.22	4.01700	0.04197	1.710	52.60	141.840	0.138	5.611	172.58
2	MR-B before split of MR/MRWest	21.30	20.30	1.00	0.47	6.50400	0.02466	4.920	45.20	229.656	0.081	16.143	148.30
3	MR-C/MRWest-D	20.30	18.80	1.50	0.30	10.95900	0.05761	2.480	63.00	386.962	0.189	8.137	206.70
4	MR-E/MRWest-G	18.80	15.20	3.60	1.39	14.04300	0.02998	4.050	103.50	495.858	0.098	13.288	339.58
5	MR-H	15.20	12.80	2.40	1.19	15.54300	0.02334	5.470	116.50	548.823	0.077	17.947	382.24
6	MRWest-J	12.80	12.00	0.80	0.36	17.04300	0.02584	5.470	116.50	601.788	0.085	17.947	382.24
7		12.00	10.60	1.40	0.57	18.54300	0.02820	5.470	116.50	654.753	0.093	17.947	382.24
8	MREast-(L)/MRWest-(M)/MR-(N)	10.60	8.20	2.40	2.14	20.04300	0.01295	6.650	224.75	707.718	0.042	21.819	737.40
9		8.20	6.40	1.80	1.49	21.54300	0.01399	6.650	224.75	760.683	0.046	21.819	737.40
10	MRWest-O	6.40	4.50	1.90	1.10	23.04299	0.01991	4.330	260.20	813.648	0.065	14.207	853.72
11		4.50	4.20	0.30	0.19	24.54299	0.01789	5.700	236.94	866.613	0.059	18.702	777.40
12		4.20	3.50	0.70	0.43	26.04299	0.01900	5.700	236.94	919.578	0.062	18.702	777.40
13	MRWest-P	3.50	1.70	1.80	1.05	27.54299	0.01993	5.700	236.94	972.543	0.065	18.702	777.40
14		1.70	1.50	0.20	0.05	29.04299	0.04571	5.700	110.00	1025.508	0.150	18.702	360.91
15	MRWest-Q	1.50	0.15	1.35	0.33	30.54299	0.04775	5.700	110.00	1078.473	0.157	18.702	360.91
16		0.15	0.00	0.15	0.03	32.04299	0.05111	5.700	110.00	1131.438	0.168	18.702	360.91

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	NONP OUT	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N BKGD	ORG-N BOD1	NCM ALG	SOD NCM	SOD PHOT	SOD RESP	SOD PHOT	ALG OUT	ALG IN	MAC	TOT	TOT
1	717.	0.	-776.	-2.	0.	1.	80.	0.	0.	0.	0.	61.	-5.	-1.	0.	0.	-71.	-6.	0.	0.	2.	0.	0.	-861.0	861.0	0.01
2	776.	0.	-834.	-1.	0.	1.	80.	0.	0.	0.	0.	61.	-5.	-1.	0.	0.	-72.	-6.	0.	0.	2.	0.	0.	-919.1	919.1	0.01
3	834.	0.	-895.	-1.	0.	4.	80.	0.	0.	0.	0.	60.	-5.	-1.	0.	0.	-73.	-6.	0.	0.	2.	0.	0.	-980.4	980.4	0.01
4	895.	0.	-1064.	-4.	0.	4.	215.	0.	0.	0.	0.	47.	-10.	-3.	0.	0.	-80.	-4.	0.	0.	4.	0.	0.	-1164.9	1164.9	0.01
5	1064.	0.	-1231.	-4.	0.	3.	215.	0.	0.	0.	0.	46.	-9.	-2.	0.	0.	-83.	-4.	0.	0.	4.	0.	0.	-1333.0	1333.0	0.01
6	1231.	0.	-1397.	-3.	0.	3.	215.	0.	0.	0.	0.	46.	-8.	-2.	0.	0.	-85.	-3.	0.	0.	4.	0.	0.	-1499.4	1499.4	0.01
7	1397.	0.	-1568.	-3.	0.	11.	215.	0.	0.	0.	0.	45.	-8.	-2.	0.	0.	-88.	-3.	0.	0.	5.	0.	0.	-1672.3	1672.3	0.01
8	1568.	0.	-1899.	-11.	0.	7.	308.	0.	0.	0.	0.	73.	-6.	-2.	0.	0.	-37.	-5.	0.	0.	4.	0.	0.	-1958.8	1958.8	0.01
9	1899.	0.	-2232.	-7.	0.	5.	308.	0.	0.	0.	0.	70.	-5.	-1.	0.	0.	-37.	-4.	0.	0.	4.	0.	0.	-2286.3	2286.3	0.00
10	2232.	0.	-2564.	-5.	0.	4.	308.	0.	0.	0.	0.	68.	-5.	-1.	0.	0.	-37.	-4.	0.	0.	4.	0.	0.	-2616.3	2616.3	0.00
11	2564.	0.	-2896.	-4.	0.	3.	308.	0.	0.	0.	0.	67.	-5.	-1.	0.	0.	-36.	-4.	0.	0.	4.	0.	0.	-2946.0	2946.0	0.00
12	2896.	0.	-3219.	-3.	0.	-6.	308.	0.	0.	0.	0.	66.	-4.	-1.	0.	0.	-36.	-3.	0.	0.	4.	0.	0.	-3273.2	3273.2	0.00
13	3219.	0.	-3225.	6.	0.	-8.	89.	0.	0.	0.	0.	110.	-12.	-3.	0.	0.	-179.	-6.	0.	0.	10.	0.	0.	-3433.5	3433.6	0.01
14	3225.	0.	-3235.	8.	0.	-7.	89.	0.	0.	0.	0.	112.	-12.	-3.	0.	0.	-180.	-6.	0.	0.	10.	0.	0.	-3443.6	3443.6	0.01
15	3235.	0.	-3246.	7.	0.	-7.	89.	0.	0.	0.	0.	113.	-13.	-3.	0.	0.	-180.	-6.	0.	0.	10.	0.	0.	-3454.7	3454.7	0.01
16	3246.	0.	-3258.	7.	0.	-7.	89.	0.	0.	0.	0.	115.	-13.	-3.	0.	0.	-180.	-6.	0.	0.	10.	0.	0.	-3466.8	3466.8	0.01
17	3258.	0.	-3271.	7.	0.	-6.	89.	0.	0.	0.	0.	116.	-13.	-3.	0.	0.	-180.	-6.	0.	0.	10.	0.	0.	-3479.8	3479.8	0.01
18	3271.	0.	-3285.	6.	0.	-6.	89.	0.	0.	0.	0.	117.	-13.	-3.	0.	0.	-180.	-7.	0.	0.	10.	0.	0.	-3493.6	3493.6	0.01
19	3285.	0.	-3299.	6.	0.	-6.	89.	0.	0.	0.	0.	119.	-14.	-3.	0.	0.	-180.	-7.	0.	0.	10.	0.	0.	-3508.2	3508.2	0.01
20	3299.	0.	-3314.	6.	0.	-5.	89.	0.	0.	0.	0.	120.	-14.	-3.	0.	0.	-180.	-7.	0.	0.	10.	0.	0.	-3523.5	3523.5	0.01
21	3314.	0.	-3330.	5.	0.	-5.	89.	0.	0.	0.	0.	121.	-14.	-3.	0.	0.	-180.	-7.	0.	0.	10.	0.	0.	-3539.5	3539.5	0.01
22	3330.	0.	-3347.	5.	0.	-5.	89.	0.	0.	0.	0.	122.	-14.	-3.	0.	0.	-180.	-7.	0.	0.	10.	0.	0.	-3556.2	3556.2	0.01
23	3347.	0.	-3363.	5.	0.	-5.	89.	0.	0.	0.	0.	123.	-15.	-3.	0.	0.	-180.	-7.	0.	0.	10.	0.	0.	-3573.5	3573.5	0.01
24	3363.	0.	-3378.	5.	0.	-8.	89.	0.	0.	0.	0.	124.	-15.	-3.	0.	0.	-180.	-7.	0.	0.	10.	0.	0.	-3591.5	3591.5	0.01
25	3378.	0.	-3359.	8.	0.	-9.	65.	0.	0.	0.	0.	141.	-22.	-5.	0.	0.	-204.	-8.	0.	0.	16.	0.	0.	-3607.5	3607.5	0.02
26	3359.	0.	-3342.	9.	0.	-9.	65.	0.	0.	0.	0.	143.	-23.	-5.	0.	0.	-205.	-8.	0.	0.	16.	0.	0.	-3590.9	3590.9	0.02
27	3342.	0.	-3325.	9.	0.	-9.	65.	0.	0.	0.	0.	144.	-23.	-5.	0.	0.	-206.	-8.	0.	0.	16.	0.	0.	-3574.7	3574.7	0.02
28	3325.	0.	-3308.	9.	0.	-8.	65.	0.	0.	0.	0.	145.	-23.	-5.	0.	0.	-206.	-8.	0.	0.	16.	0.	0.	-3558.8	3558.8	0.03
29	3308.	0.	-3292.	8.	0.	-8.	65.	0.	0.	0.	0.	147.	-23.	-5.	0.	0.	-207.	-8.	0.	0.	16.	0.	0.	-3543.2	3543.2	0.03
30	3292.	0.	-3276.	8.	0.	-8.	65.	0.	0.	0.	0.	148.	-23.	-5.	0.	0.	-208.	-8.	0.	0.	16.	0.	0.	-3527.9	3527.9	0.03
31	3276.	0.	-3261.	8.	0.	-6.	65.	0.	0.	0.	0.	149.	-23.	-5.	0.	0.	-209.	-8.	0.	0.	16.	0.	0.	-3512.7	3512.7	0.03
32	3261.	0.	-3257.	6.	0.	7.	65.	0.	0.	0.	0.	150.	-24.	-6.	0.	0.	-210.	-8.	0.	0.	16.	0.	0.	-3504.0	3504.0	0.03
33	3257.	0.	-3377.	-7.	0.	7.	130.	0.	0.	0.	0.	99.	-17.	-4.	0.	0.	-93.	-6.	0.	0.	11.	0.	0.	-3503.4	3503.4	0.02
34	3377.	0.	-3493.	-7.	0.	6.	130.	0.	0.	0.	0.	99.	-19.	-4.	0.	0.	-93.	-7.	0.	0.	11.	0.	0.	-3621.9	3621.9	0.02
35	3493.	0.	-3606.	-6.	0.	5.	130.	0.	0.	0.	0.	98.	-20.	-4.	0.	0.	-93.	-7.	0.	0.	11.	0.	0.	-3736.4	3736.4	0.02
36	3606.	0.	-3716.	-5.	0.	2.	130.	0.	0.	0.	0.	98.	-21.	-4.	0.	0.	-93.	-8.	0.	0.	11.	0.	0.	-3846.4	3846.5	0.02
37	3716.	0.	-3814.	-2.	0.	2.	130.	0.	0.	0.	0.	171.	-38.	-6.	0.	0.	-162.	-14.	0.	0.	18.	0.	0.	-4036.4	4036.4	0.03
38	3814.	0.	-3911.	-2.	0.	1.	130.	0.	0.	0.	0.	171.	-40.	-6.	0.	0.	-160.	-14.	0.	0.	18.	0.	0.	-4134.0	4134.0	0.03
39	3911.	0.	-4007.	-1.	0.	1.	130.	0.	0.	0.	0.	171.	-41.	-6.	0.	0.	-159.	-15.	0.	0.	18.	0.	0.	-4230.5	4230.5	0.03
40	4007.	0.	-4096.	-1.	0.	-7.	130.	0.	0.	0.	0.	171.	-43.	-6.	0.	0.	-158.	-15.	0.	0.	18.	0.	0.	-4325.8	4325.8	0.03
41	4096.	0.	-4092.	7.	0.	-11.	52.	0.	0.	0.	0.	227.	-69.	-10.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4410.9	4410.9	0.05
42	4092.	0.	-4092.	11.	0.	-10.	52.	0.	0.	0.	0.	228.	-69.	-11.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4411.4	4411.5	0.05
43	4092.	0.	-4094.	10.	0.	-10.	52.	0.	0.	0.	0.	229.	-69.	-11.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4412.6	4412.6	0.06
44	4094.	0.	-4096.	10.	0.	-10.	52.	0.	0.	0.	0.	230.	-69.	-11.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4414.3	4414.4	0.06
45	4096.	0.	-4098.	10.	0.	-9.	52.	0.	0.	0.	0.	231.	-69.	-11.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4416.6	4416.7	0.06

46	4098.	0.	-4101.	9.	0.	-9.	52.	0.	0.	0.	0.	231.	-69.	-11.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4419.5	4419.6	0.06
47	4101.	0.	-4105.	9.	0.	-9.	52.	0.	0.	0.	0.	232.	-69.	-12.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4422.9	4423.0	0.06
48	4105.	0.	-4109.	9.	0.	-8.	52.	0.	0.	0.	0.	233.	-69.	-12.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4426.9	4427.0	0.06
49	4109.	0.	-4114.	8.	0.	-8.	52.	0.	0.	0.	0.	234.	-69.	-12.	0.	0.	-209.	-20.	0.	0.	29.	0.	0.	-4431.5	4431.5	0.07
50	4114.	0.	-4120.	8.	0.	-6.	52.	0.	0.	0.	0.	234.	-69.	-12.	0.	0.	-209.	-21.	0.	0.	29.	0.	0.	-4436.5	4436.5	0.07
51	4120.	0.	-4148.	6.	0.	-6.	86.	0.	0.	0.	0.	294.	-87.	-15.	0.	0.	-261.	-26.	0.	0.	36.	0.	0.	-4542.3	4542.4	0.08
52	4148.	0.	-4175.	6.	0.	-6.	86.	0.	0.	0.	0.	294.	-87.	-15.	0.	0.	-261.	-26.	0.	0.	36.	0.	0.	-4570.4	4570.5	0.09
53	4175.	0.	-4202.	6.	0.	-6.	86.	0.	0.	0.	0.	295.	-88.	-15.	0.	0.	-261.	-26.	0.	0.	36.	0.	0.	-4598.4	4598.5	0.09
54	4202.	0.	-4229.	6.	0.	-5.	86.	0.	0.	0.	0.	296.	-89.	-15.	0.	0.	-261.	-26.	0.	0.	36.	0.	0.	-4626.2	4626.3	0.09
55	4229.	0.	-4257.	5.	0.	-5.	86.	0.	0.	0.	0.	297.	-89.	-15.	0.	0.	-261.	-27.	0.	0.	36.	0.	0.	-4654.0	4654.1	0.09
56	4257.	0.	-4287.	5.	0.	-1.	86.	0.	0.	0.	0.	297.	-90.	-15.	0.	0.	-261.	-27.	0.	0.	36.	0.	0.	-4681.6	4681.6	0.09
57	4287.	0.	-4338.	1.	0.	-1.	104.	0.	0.	0.	0.	436.	-86.	-15.	0.	0.	-383.	-40.	0.	0.	35.	0.	0.	-4863.1	4863.1	0.09
58	4338.	0.	-4388.	1.	0.	-1.	104.	0.	0.	0.	0.	437.	-87.	-15.	0.	0.	-383.	-40.	0.	0.	35.	0.	0.	-4914.3	4914.4	0.09
59	4388.	0.	-4439.	1.	0.	0.	104.	0.	0.	0.	0.	437.	-88.	-15.	0.	0.	-383.	-40.	0.	0.	35.	0.	0.	-4964.8	4964.9	0.09

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	INCR IN	INCR IN	NONP OUT	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N BKGD	ORG-N BOD1	NCM ALG	SOD NCM	SOD PHOT	SOD RESP	SOD PHOT	ALG OUT	ALG IN	MAC	TOT	TOT
60	4439.	0.	-4497.	0.	0.	9.	104.	0.	0.	0.	0.	437.	-89.	-15.	0.	0.	-383.	-40.	0.	0.	35.	0.	0.	-5023.6	5023.7	0.09	
61	4497.	0.	-4628.	-9.	0.	96.	104.	0.	0.	0.	0.	434.	-89.	-15.	0.	0.	-383.	-41.	0.	0.	35.	0.	0.	-5165.3	5165.3	0.09	
62	4628.	0.	-5288.	-96.	0.	146.	518.	0.	0.	0.	0.	149.	-43.	-7.	0.	0.	-7.	-15.	0.	0.	16.	0.	0.	-5456.7	5456.7	0.03	
63	5288.	0.	-5852.	-146.	0.	104.	518.	0.	0.	0.	0.	143.	-44.	-7.	0.	0.	-7.	-15.	0.	0.	16.	0.	0.	-6070.3	6070.3	0.03	
64	5852.	0.	-6519.	-104.	0.	69.	518.	0.	0.	0.	0.	317.	-103.	-17.	0.	0.	-16.	-36.	0.	0.	38.	0.	0.	-6794.6	6794.6	0.06	
65	6519.	0.	-7175.	-69.	0.	38.	518.	0.	0.	0.	0.	302.	-104.	-17.	0.	0.	-16.	-36.	0.	0.	39.	0.	0.	-7416.6	7416.6	0.05	
66	7175.	0.	-7487.	-38.	0.	40.	173.	0.	0.	0.	0.	253.	-88.	-15.	0.	0.	-14.	-30.	0.	0.	33.	0.	0.	-7673.1	7673.2	0.04	
67	7487.	0.	-7791.	-40.	0.	38.	173.	0.	0.	0.	0.	247.	-87.	-15.	0.	0.	-14.	-30.	0.	0.	33.	0.	0.	-7977.6	7977.7	0.04	
68	7791.	0.	-8091.	-38.	0.	36.	173.	0.	0.	0.	0.	241.	-87.	-15.	0.	0.	-14.	-30.	0.	0.	33.	0.	0.	-8274.4	8274.5	0.03	
69	8091.	0.	-8385.	-36.	0.	35.	173.	0.	0.	0.	0.	235.	-86.	-15.	0.	0.	-14.	-30.	0.	0.	33.	0.	0.	-8566.9	8566.9	0.03	
70	8385.	0.	-8678.	-35.	0.	37.	173.	0.	0.	0.	0.	229.	-86.	-15.	0.	0.	-14.	-30.	0.	0.	33.	0.	0.	-8857.7	8857.7	0.03	
71	8678.	0.	-8984.	-37.	0.	59.	173.	0.	0.	0.	0.	224.	-85.	-16.	0.	0.	-14.	-30.	0.	0.	33.	0.	0.	-9165.9	9166.0	0.03	
72	8984.	0.	-9513.	-59.	0.	53.	518.	0.	0.	0.	0.	34.	-13.	-2.	0.	0.	-2.	-5.	0.	0.	5.	0.	0.	-9594.3	9594.3	0.00	
73	9513.	0.	-10010.	-53.	0.	16.	518.	0.	0.	0.	0.	33.	-14.	-2.	0.	0.	-2.	-5.	0.	0.	5.	0.	0.	-10085.2	10085.2	0.00	
74	10010.	0.	-10251.	-16.	0.	11.	207.	0.	0.	0.	0.	87.	-37.	-6.	0.	0.	-6.	-13.	0.	0.	14.	0.	0.	-10328.8	10328.8	0.01	
75	10251.	0.	-10495.	-11.	0.	11.	207.	0.	0.	0.	0.	86.	-37.	-6.	0.	0.	-6.	-13.	0.	0.	14.	0.	0.	-10568.5	10568.5	0.01	
76	10495.	0.	-10738.	-11.	0.	11.	207.	0.	0.	0.	0.	84.	-38.	-6.	0.	0.	-6.	-13.	0.	0.	14.	0.	0.	-10811.6	10811.6	0.01	
77	10738.	0.	-10986.	-11.	0.	18.	207.	0.	0.	0.	0.	83.	-38.	-6.	0.	0.	-6.	-13.	0.	0.	14.	0.	0.	-11060.1	11060.1	0.00	
78	10986.	0.	-11326.	-18.	0.	119.	207.	0.	0.	0.	0.	81.	-38.	-6.	0.	0.	-6.	-13.	0.	0.	14.	0.	0.	-11407.1	11407.1	0.00	
79	11326.	0.	-13158.	-119.	0.	901.	1037.	0.	0.	0.	0.	43.	-19.	-2.	0.	0.	-2.	-7.	0.	0.	0.	0.	0.	-13307.1	13307.1	0.00	

Middle/Middle West Rivers DO Modeling - 090207
COEF-1 Run

INPUT/OUTPUT LOADING SUMMARY

	FLOW m^3/s	DO kg/d	BOD#1 kg/d	BOD#2 kg/d	ORG-N kg/d	NH3-N kg/d	NO3-N kg/d	PHOS kg/d	CHL A	NCM
HEADWATER FLOW	3.32	717.1	1147.4	0	0	28.7	28.7	0	0	0
INCREMENTAL INFLOW	28.723	13037.1	13578.2	0	744.5	0	496.3	0	0	0
INCREMENTAL OUTFLOW	0	0	0	0	0	0	0	0	0	0
WASTELOADS	0	0	0	0	0	0	0	0	0	0
WITHDRAWLS	0	0	0	0	0	0	0	0	0	0
FLOW THRU LOWER BNDRY	-32.043	-13158	-10355.4	0	-416.2	-86.7	-467.4	0	0	0
DISPERSION THRU LOWER BNDRY		900.9	187.5	0	-108.6	-22.6	-122	0	0	0
DISPERSION THRU HDWTR BNDRY		-1.5	14	0	-1	0.4	-0.4	0	0	0
NON-POINT INPUT		0	0	0	0	0				
NATURAL REAERATION		13500.6								
DAM REAERATION		0								
BACKGROUND SOD		-11298.5								
BOD#1 DECAY		-3361.8	-3361.8							
BOD#1 SETTLING		-1210	-1210							
ANAEROBIC BOD#1 DECAY			0							
BOD#2 DECAY		0		0						
BOD#2 SETTLING		0		0						
ANAEROBIC BOD#2 DECAY				0						
ORG-N DECAY		0			-210.6	210.6				
ORG-N SETTLING					-8.1	8.1				
NH3 DECAY		-596.8				-137.8	137.8			
BACKGROUND NH3 SOURCE						0				
OTHER DENITRIFICATION							0			
PHOSPHORUS SOURCE								0		
ALGAE PHOTOSYNTHESIS		1473.4				0	-73.7	0	0	
ALGAE RESPIRATION		0				0		0	0	
ALGAE SETTLING		0							0	
MACRO PHOTOSYNTHESIS		0				0	0	0		
NCM DECAY		0								0
NCM SETTLING		0								0
Total inputs	32.043	29629.1	14927.1	0	744.5	247.8	662.8	0	0	0
Total outputs	-32.043	-29626.6	-14927.2	0	-744.5	-247.1	-663.5	0	0	0
Net convergence error	0	2.5	0	0	0	0.7	-0.7	0	0	0

.....EXECUTION COMPLETED

APPENDIX D:
PLOTS OF CALIBRATED AND OBSERVED WATER QUALITY

Figure D-1. Temperature modeling results for subsegment 090105 1
Figure D-2. Ammonia modeling results for subsegment 090105 1
Figure D-3. BOD modeling results for subsegment 090105 2
Figure D-4. DO modeling results for subsegment 090105 2
Figure D-5. Temperature modeling results for subsegment 090204 3
Figure D-6. Ammonia modeling results for subsegment 090204 3
Figure D-7. BOD modeling results for subsegment 090204 4
Figure D-8. DO modeling results for subsegment 090204 4
Figure D-9. Temperature modeling results for subsegment 090207 5
Figure D-10. Ammonia modeling results for subsegment 090207 5
Figure D-11. BOD modeling results for subsegment 090207 6
Figure D-12. DO modeling results for subsegment 090207 6

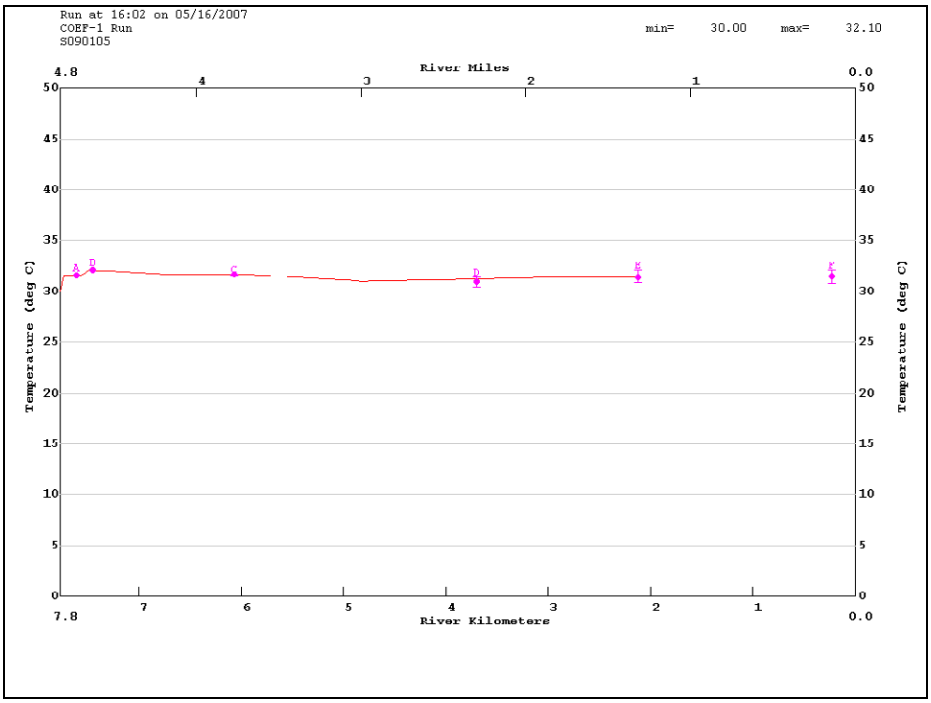

Figure D-1. Temperature modeling results for subsegment 090105

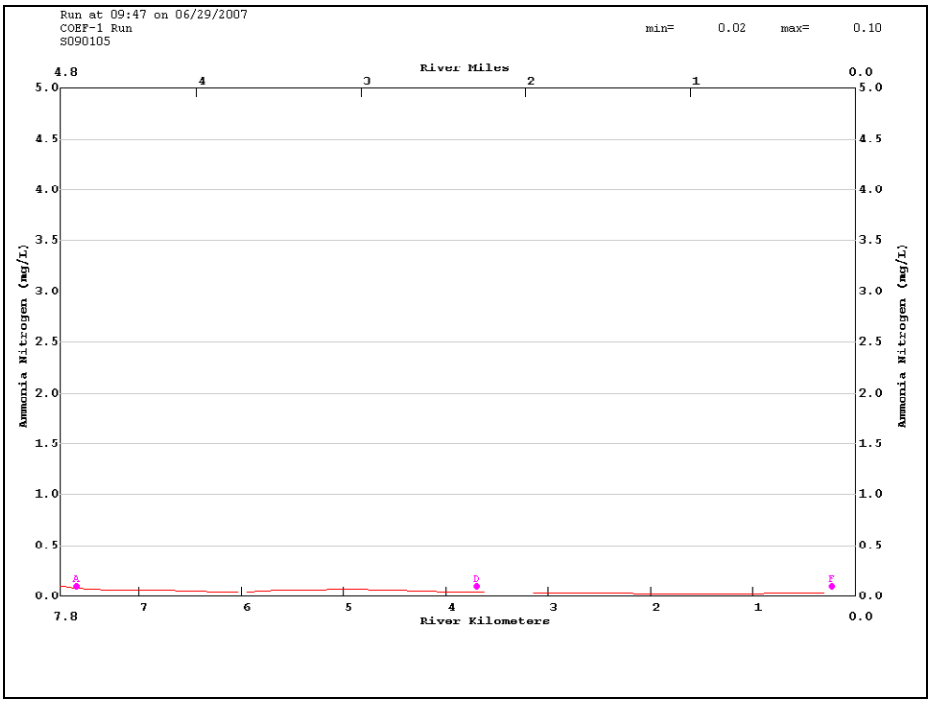

Figure D-2. Ammonia modeling results for subsegment 090105

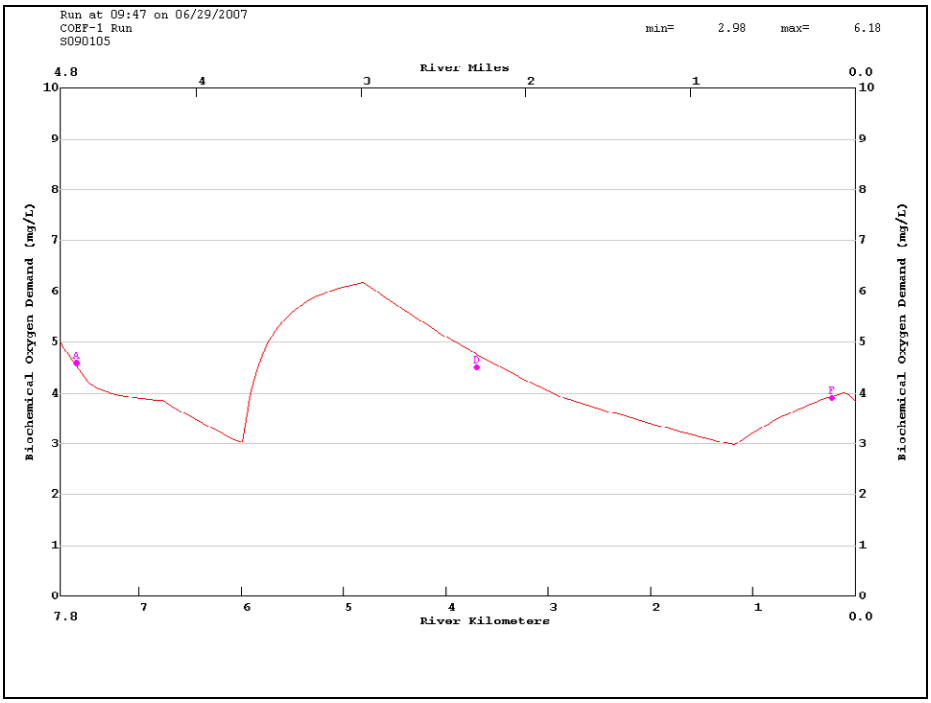

Figure D-3. BOD modeling results for subsegment 090105

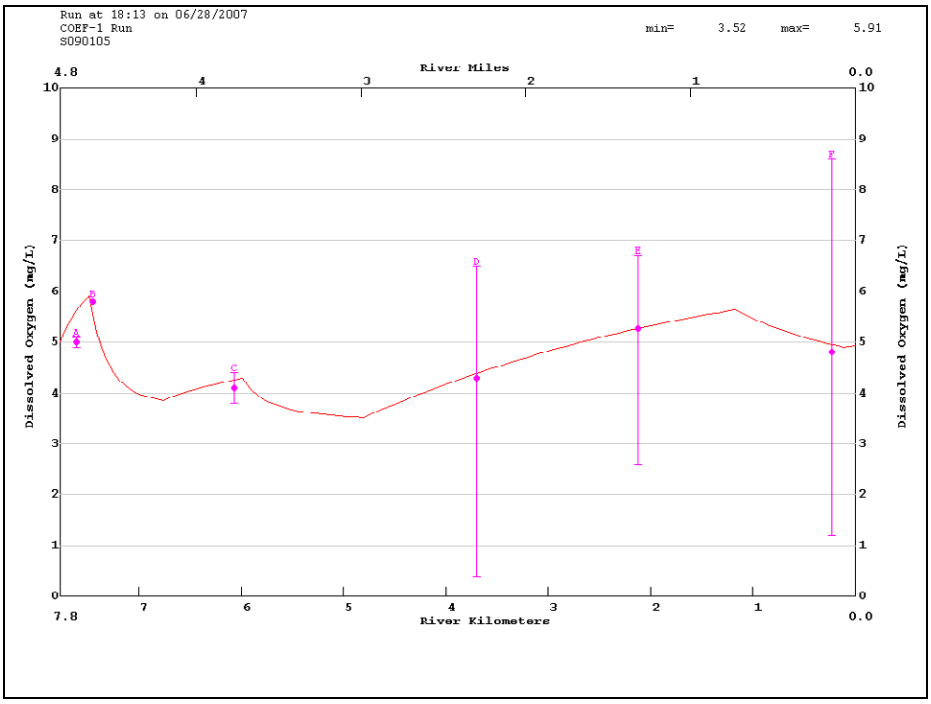

Figure D-4. DO modeling results for subsegment 090105

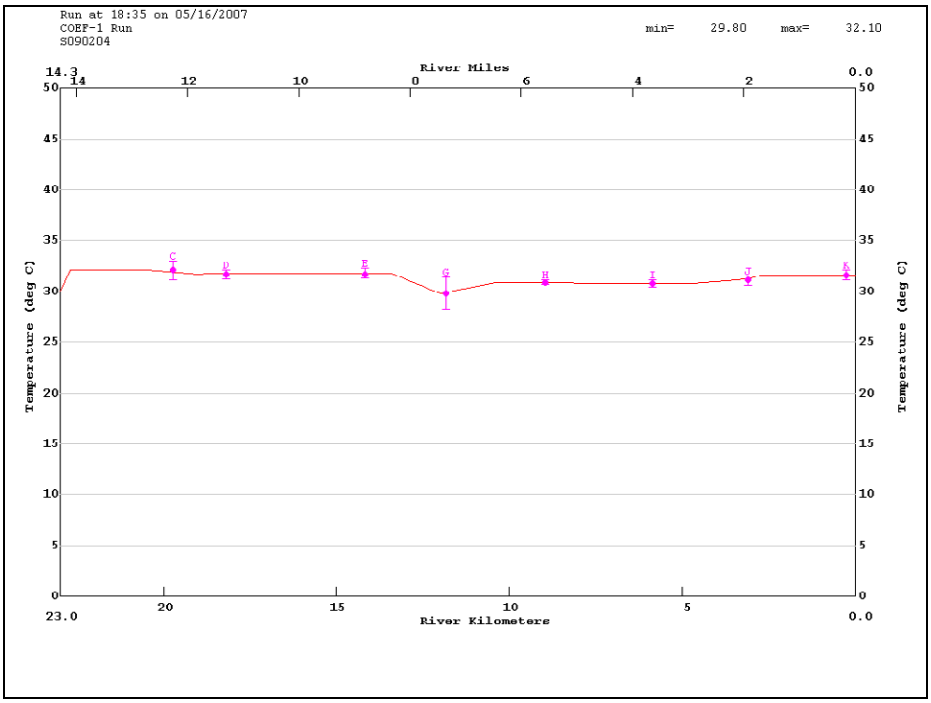

Figure D-5. Temperature modeling results for subsegment 090204

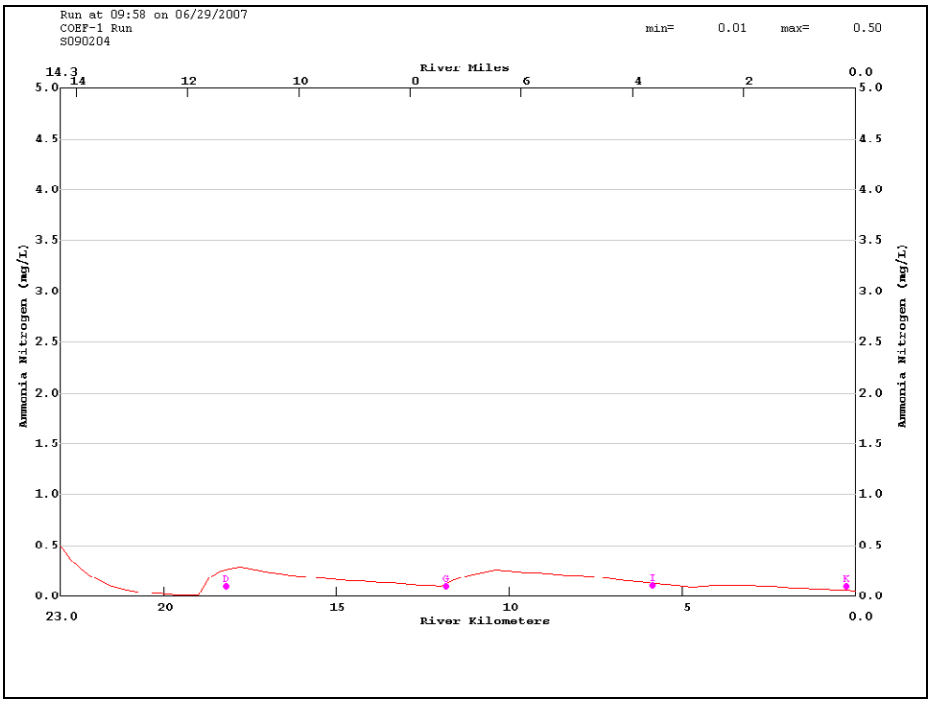

Figure D-6. Ammonia modeling results for subsegment 090204

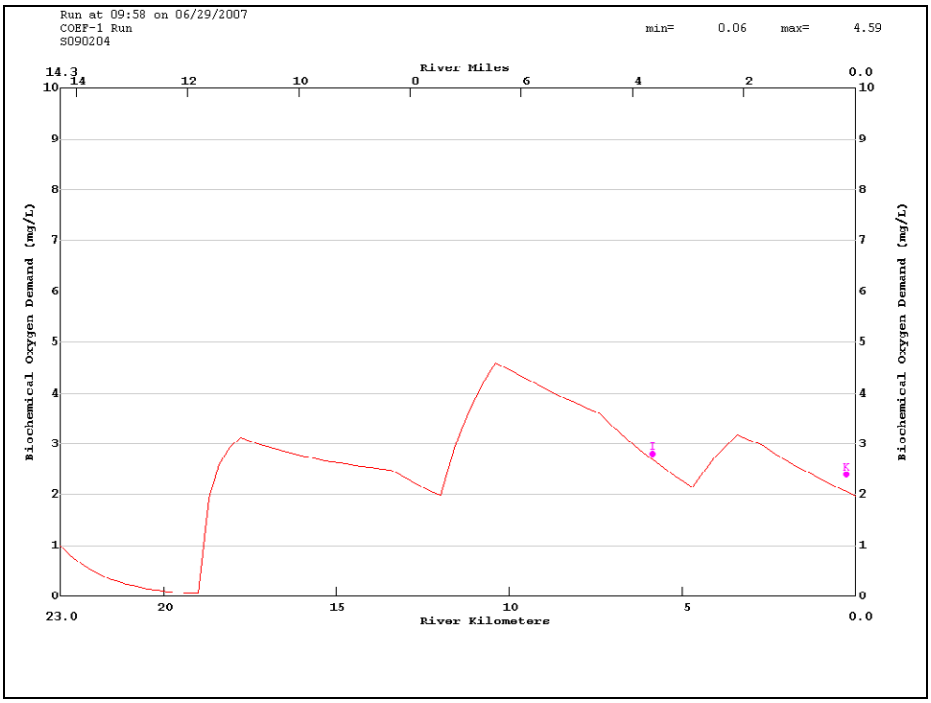

Figure D-7. BOD modeling results for subsegment 090204

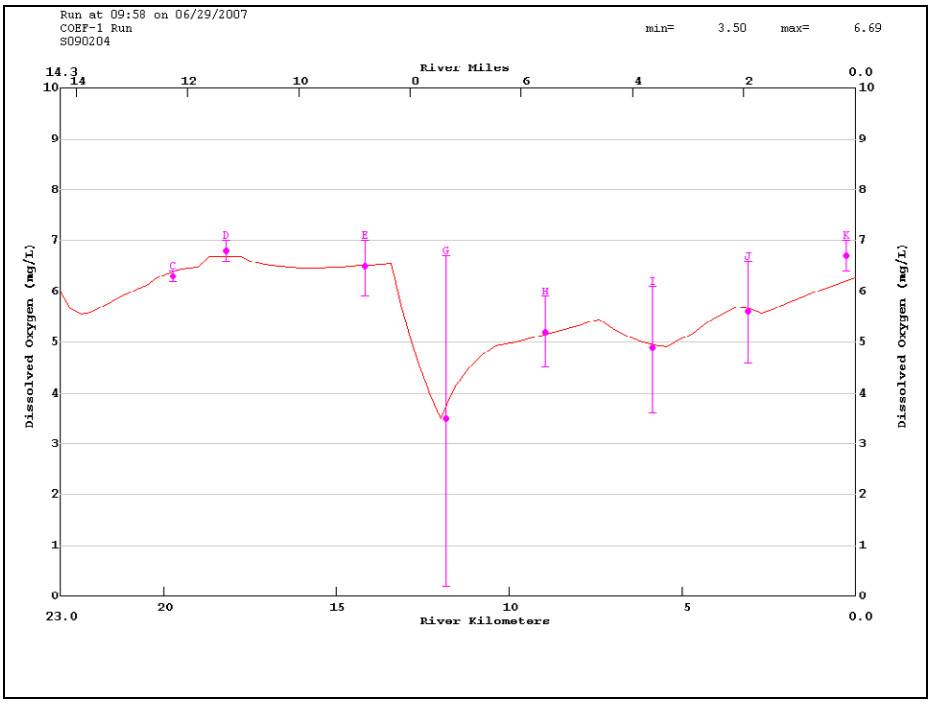

Figure D-8. DO modeling results for subsegment 090204

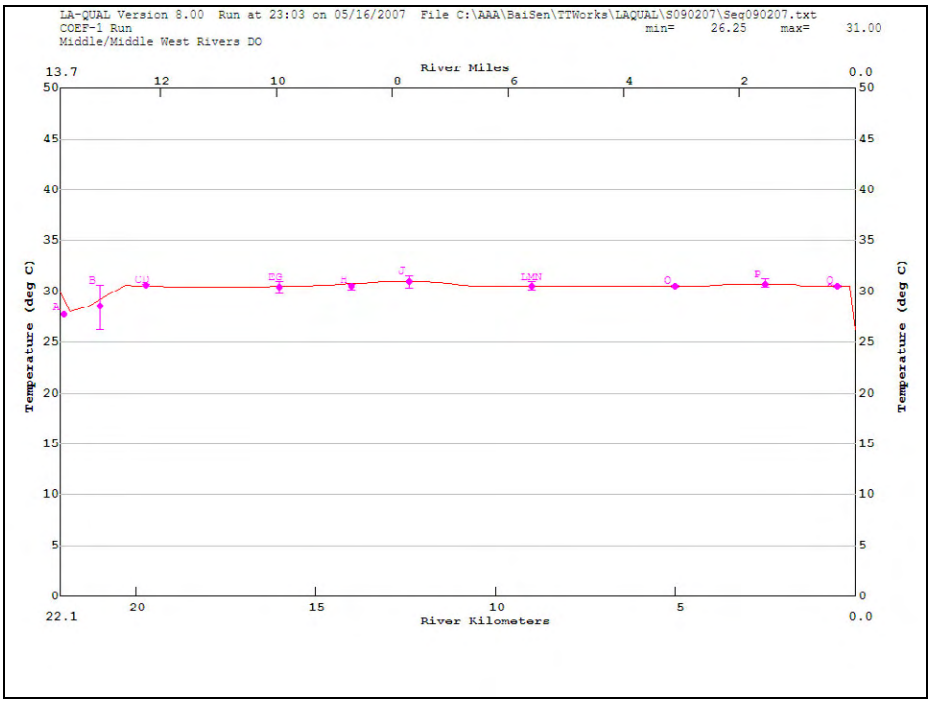

Figure D-9. Temperature modeling results for subsegment 090207

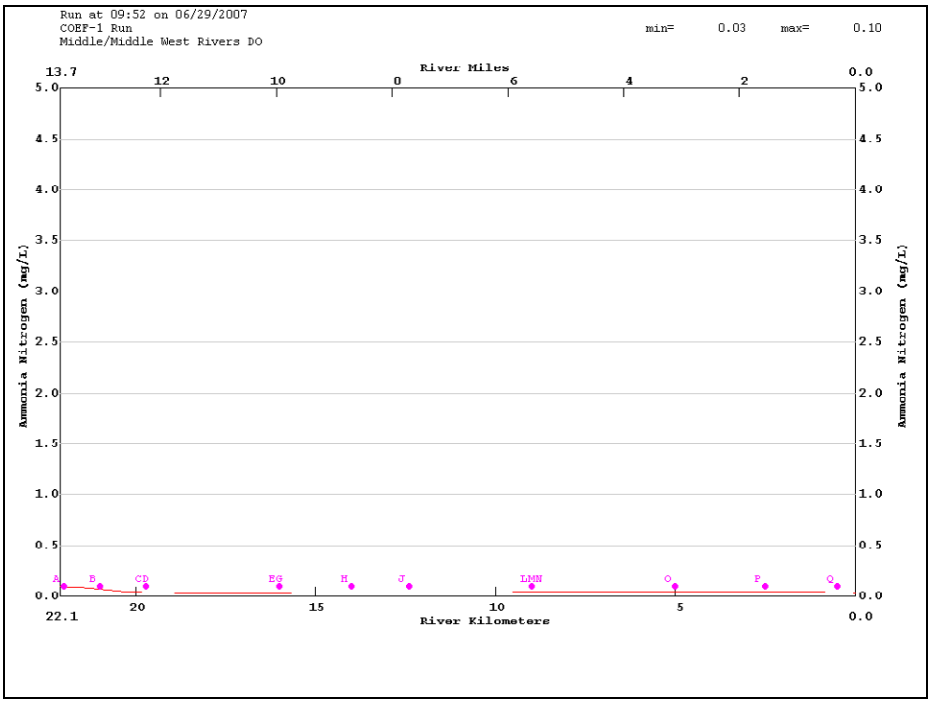

Figure D-10. Ammonia modeling results for subsegment 090207

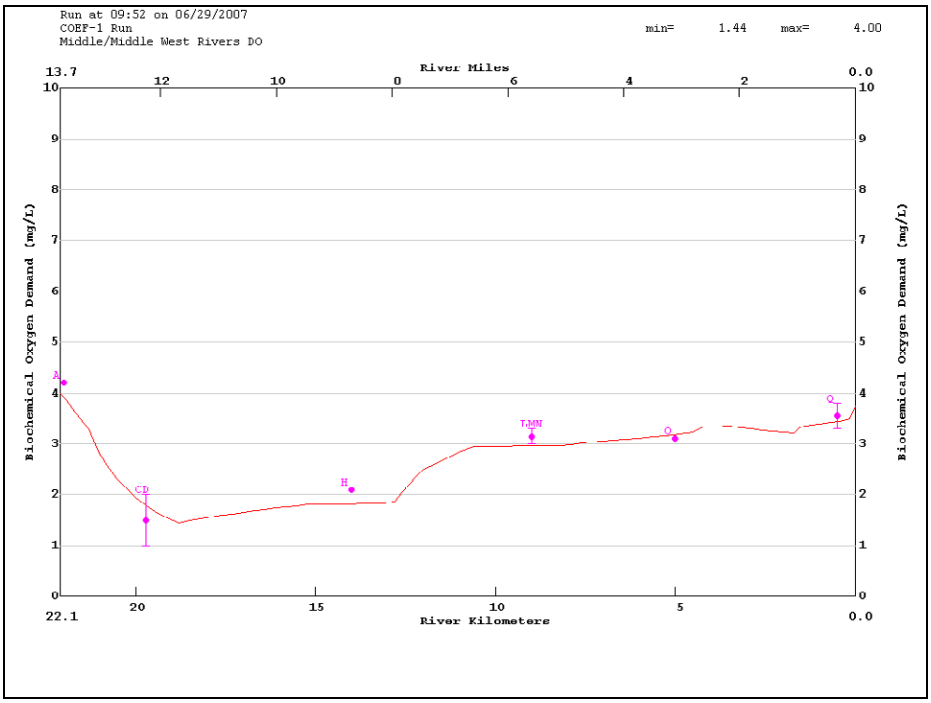

Figure D-11. BOD modeling results for subsegment 090207

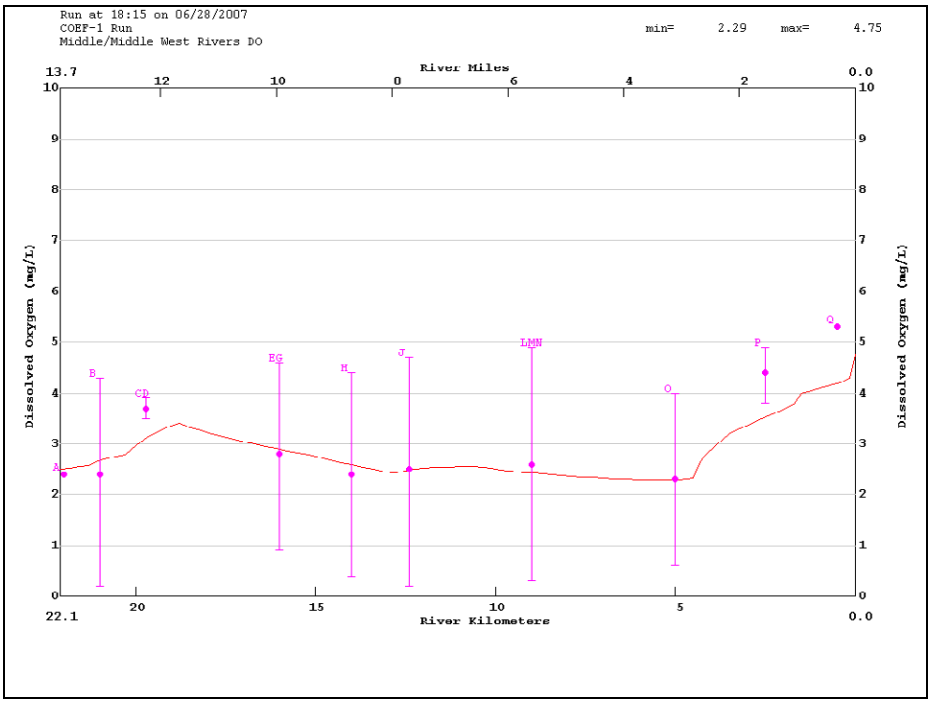

Figure D-12. DO modeling results for subsegment 090207

APPENDIX E:
MODEL OUTPUT FOR TMDL

TMDL output file for subsegment 090105 1
TMDL output file for subsegment 090204 42
TMDL output file for subsegment 090207 81

TMDL output file for subsegment 090105

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality
Input file is D:\Pearl\PEARLRIVERFromH\TMDL\Seg090105_TMDL_Update.txt
Output produced at 15:16 on 11/28/2007
$$$ DATA TYPE 1 (TITLES AND CONTROL CARDS) $$$
CARD TYPE      CONTROL TITLES
TITLE01        Pearl River DO Modeling 090105
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01
$$$ DATA TYPE 2 (MODEL OPTIONS) $$$
CARD TYPE      MODEL OPTION
MODOPT    NO   TEMPERATURE
MODOPT    NO   SALINITY
MODOPT    NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT    NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT   YES   DISSOLVED OXYGEN
MODOPT   YES   BOD1
MODOPT    NO   BOD2
MODOPT   YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT    NO   PHOSPHORUS
MODOPT    NO   CHLOROPHYLL A
MODOPT    NO   MACROPHYTES
MODOPT    NO   COLIFORM
MODOPT    NO   NONCONSERVATIVE MATERIAL
ENDATA02
$$$ DATA TYPE 3 (PROGRAM CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
PROGRAM        MAXImum Iteration Limit          =      5000.00000
PROGRAM        HYDRaulic calculation method      =        2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE            =        1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE            =        1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                        =        0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE          =        3.00000 (inhibit all rates but SOD)
PROGRAM        ORGN OXYGEN UPTAKE RATE           =        0.00000 mg O/mg N
PROGRAM        NH3 OXYGEN UPTAKE RATE            =        0.00000 mg O/mg N
PROGRAM        K2 MAXIMUM                        =       25.00000 per day
PROGRAM        SOD                               =       10.00000 gm/sq m/day
ENDATA03
$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
 CARD TYPE     RATE CODE     THETA VALUE
ENDATA04
$$$ CONSTANTS TYPE 5 (TEMPERATURE DATA) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA05
$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
```

```
ENDATA06
$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA07
$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                        BEGIN      END    ELEM   REACH    ELEMS  BEGIN   END
CARD TYPE  REACH  ID  NAME                          REACH     REACH  LENGTH  LENGTH   PER RCH  ELEM  ELEM
                                          km        km      km      km            NUM    NUM
REACH ID     1  PA  Pearl River to Above   A          7.77  TO   7.69   0.0400    0.08      2      1     2
REACH ID     2  IA  Include A                       7.69  TO   7.57   0.0625    0.12      2      3     4
REACH ID     3  I1  Include Stream 1                 7.57  TO   7.49   0.0400    0.08      2      5     6
REACH ID     4  IB  Include B                       7.49  TO   6.76   0.0725    0.72     10      7    16
REACH ID     5  IC  Include C                       6.76  TO   5.99   0.0770    0.77     10     17    26
REACH ID     6  I2  Include Stream 2                 5.99  TO   4.80   0.0790    1.18     15     27    41
REACH ID     7  ID  Include D                       4.80  TO   2.91   0.0948    1.89     20     42    61
REACH ID     8  IE  Include E                       2.91  TO   1.17   0.0868    1.74     20     62    81
REACH ID     9  IF  Include F                       1.17  TO   0.12   0.0530    1.06     20     82   101
REACH ID    10  TL  To Lock 3                       0.12  TO   0.00   0.0575    0.12      2    102   103
ENDATA08
$$$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID      WIDTH      WIDTH      WIDTH      DEPTH      DEPTH      DEPTH     SLOPE   MANNINGS
                  "A"        "B"        "C"        "D"        "E"        "F"                "N"
HYDRO-1      1  PA      0.000      0.000     44.700      0.000      0.000      0.990    0.00010   0.025
HYDRO-1      2  IA      0.000      0.000     44.700      0.000      0.000      0.990    0.00010   0.025
HYDRO-1      3  I1      0.000      0.000     44.700      0.000      0.000      0.990    0.00010   0.025
HYDRO-1      4  IB      0.000      0.000     44.700      0.000      0.000      0.990    0.00010   0.025
HYDRO-1      5  IC      0.000      0.000     43.750      0.000      0.000      1.180    0.00010   0.025
HYDRO-1      6  I2      0.000      0.000     62.750      0.000      0.000      2.070    0.00010   0.025
HYDRO-1      7  ID      0.000      0.000     82.700      0.000      0.000      2.770    0.00010   0.025
HYDRO-1      8  IE      0.000      0.000     67.700      0.000      0.000      2.290    0.00010   0.025
HYDRO-1      9  IF      0.000      0.000     58.900      0.000      0.000      2.080    0.00010   0.025
HYDRO-1     10  TL      0.000      0.000     65.100      0.000      0.000      2.340    0.00010   0.025
ENDATA09
$$$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID     TIDAL     DISPERSION     DISPERSION     DISPERSION     DISPERSION
                  RANGE       "A"          "B"          "C"          "D"
ENDATA10
$$$ DATA TYPE 11 (INITIAL CONDITIONS) $$$
CARD TYPE      REACH  ID      TEMP     SALIN       DO      NH3    NO3+2     PHOS    CHL A    MACRO
INITIAL          1  PA      31.60      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          2  IA      31.60      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          3  I1      31.60      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          4  IB      32.10      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          5  IC      31.70      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          6  I2      31.70      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          7  ID      31.00      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          8  IE      31.40      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL          9  IF      31.50      0.00      5.00      0.10      0.04      0.05      1.00      0.00
INITIAL         10  TL      31.50      0.00      5.00      0.10      0.04      0.05      1.00      0.00
ENDATA11
```

```
$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                    BOD    ANAER                    BOD2    ANAER
CARD    RCH  RCH  K2              K2      K2      K2   BKGRND     BOD      BOD     CONV     BOD2     BOD2     BOD2     CONV     BOD2
TYPE    NUM   ID  OPT            "A"     "B"     "C"     SOD    DECAY     SETT   TO SOD    DECAY    DECAY     SETT   TO SOD    DECAY
                                        g/m²/d  per day    m/d            per day  per day     m/d            per day
COEF-1    1   PA   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    2   IA   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    3   I1   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    4   IB   3 OCONNER-DOBB   0.000   0.000   0.000   0.840   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    5   IC   3 OCONNER-DOBB   0.000   0.000   0.000   0.840   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    6   I2   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    7   ID   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    8   IE   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    9   IF   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.072   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   10   TL   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.072   0.010   1.000   0.001   0.010   0.000   0.000   0.000
ENDATA12
$$$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) $$$
CARD TYPE     REACH  ID      ORG-N    ORG-N   ORGN CONV      NH3      NH3     PHOS    DENIT
                          DECA     SETT  TO NH3 SRCE    DECA     SRCE     SRCE     RATE
COEF-2          1   PA     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          2   IA     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          3   I1     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          4   IB     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          5   IC     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          6   I2     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          7   ID     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          8   IE     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          9   IF     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         10   TL     0.050    0.010    1.000    0.100    0.000    0.000    0.001
ENDATA13
$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$
CARD TYPE     REACH  ID     SECCHI   ALGAE:    ALGAE   ALG CONV    ALGAE    ALGAE    MACRO    MACRO
                          DEPTH    CHL A     SETT    TO SOD     GROW     RESP     GROW     RESP
COEF-3          1   PA      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          2   IA      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          3   I1      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          4   IB      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          5   IC      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          6   I2      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          7   ID      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          8   IE      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3          9   IF      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
COEF-3         10   TL      3.00    0.000    0.00     0.00       0.00     0.00     0.00     0.00
ENDATA14
$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
CARD TYPE     REACH  ID   COLIFORM      NCM      NCM   NCM CONV
                          DIE-OFF    DECAY     SETT    TO SOD
COEF-4          1   PA     3.000    0.000    0.000    0.000
COEF-4          2   IA     3.000    0.000    0.000    0.000
COEF-4          3   I1     3.000    0.000    0.000    0.000
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COEF-4        4  IB     3.000    0.000    0.000    0.000
COEF-4        5  IC     3.000    0.000    0.000    0.000
COEF-4        6  I2     3.000    0.000    0.000    0.000
COEF-4        7  ID     3.000    0.000    0.000    0.000
COEF-4        8  IE     3.000    0.000    0.000    0.000
COEF-4        9  IF     3.000    0.000    0.000    0.000
COEF-4       10  TL     3.000    0.000    0.000    0.000
ENDATA15
$$$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE     REACH  ID     OUTFLOW    INFLOW     TEMP    SALIN     CM-I    CM-II  IN/DIST  OUT/DIST
INCR-1        1  PA     0.00000    0.00000    30.00     0.00     0.00     0.00  0.00000  0.00000
INCR-1        2  IA     0.00000    0.00000    30.00     0.00     0.00     0.00  0.00000  0.00000
INCR-1        3  I1     0.00000    0.00000    30.00     0.00     0.00     0.00  0.00000  0.00000
INCR-1        4  IB     0.00000    0.13000    30.00     0.00     0.00     0.00  0.17931  0.00000
INCR-1        5  IC     0.00000    0.00000    30.00     0.00     0.00     0.00  0.00000  0.00000
INCR-1        6  I2     0.00000    1.03000    30.00     0.00     0.00     0.00  0.86920  0.00000
INCR-1        7  ID     0.00000    0.00000    30.00     0.00     0.00     0.00  0.00000  0.00000
INCR-1        8  IE     0.00000    0.00000    30.00     0.00     0.00     0.00  0.00000  0.00000
INCR-1        9  IF     0.00000    0.50000    30.00     0.00     0.00     0.00  0.47170  0.00000
INCR-1       10  TL     0.00000    0.00000    30.00     0.00     0.00     0.00  0.00000  0.00000
ENDATA16
$$$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE     REACH  ID      DO     BOD    ORG-N    NH3-N    NO3-N    BOD#2
INCR-2        1  PA     5.00     0.00     0.00     0.00     0.00     0.00
INCR-2        2  IA     5.00     0.00     0.00     0.00     0.00     0.00
INCR-2        3  I1     5.00     0.00     0.00     0.00     0.00     0.00
INCR-2        4  IB     5.00     3.60     0.00     0.10     0.50     0.00
INCR-2        5  IC     5.00     0.00     0.00     0.00     0.00     0.00
INCR-2        6  I2     5.00     5.80     0.00     0.10     0.50     0.00
INCR-2        7  ID     5.00     0.00     0.00     0.00     0.00     0.00
INCR-2        8  IE     5.00     0.00     0.00     0.00     0.00     0.00
INCR-2        9  IF     5.00     5.80     0.00     0.10     0.50     0.00
INCR-2       10  TL     5.00     0.00     0.00     0.00     0.00     0.00
ENDATA17
$$$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
 CARD TYPE     REACH  ID     PHOS    CHL A     COLI      NCM
INCR-3        1  PA     0.00     0.00     0.00     0.00
INCR-3        2  IA     0.00     0.00     0.00     0.00
INCR-3        3  I1     0.00     0.00     0.00     0.00
INCR-3        4  IB     0.00     0.00     0.00     0.00
INCR-3        5  IC     0.00     0.00     0.00     0.00
INCR-3        6  I2     0.00     0.00     0.00     0.00
INCR-3        7  ID     0.00     0.00     0.00     0.00
INCR-3        8  IE     0.00     0.00     0.00     0.00
INCR-3        9  IF     0.00     0.00     0.00     0.00
INCR-3       10  TL     0.00     0.00     0.00     0.00
ENDATA18
$$$ DATA TYPE 19 (NONPOINT SOURCE DATA) $$$
CARD TYPE     REACH  ID    BOD#1    ORG-N     COLI      NCM       DO    BOD#2
ENDATA19
```

```
$$$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME              UNIT    FLOW    FLOW   TEMP   SALIN    CM-I    CM-II
                                          m³/s    cfs   deg C    ppt    mg/L    mg/L
HDWTR-1        1            Headwater   0   0.00283   0.100   30.00    0.00    0.000    0.000
ENDATA20
$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE    ELEMENT   NAME                    DO    BOD#1    ORG-N    NH3-N    NO3-N    BOD#2
                                            mg/L    mg/L    mg/L    mg/L    mg/L    mg/L
HDWTR-2        1            Headwater      5.00     3.60     0.00     0.10     0.50     0.00
ENDATA21
$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME                  PHOS    CHL A     COLI      NCM
                                            mg/L    mg/L    mg/L    mg/L
HDWTR-3        1            Headwater      0.00     0.00     0.00     0.00
ENDATA22
$$$ DATA TYPE 23 (JUNCTION DATA) $$$
CARD TYPE   JUNCTION   UPSTRM    RIVER    NAME
        ELEMENT  ELEMENT    KILOM
ENDATA23
$$$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE  ELEMENT   RKILO  NAME                FLOW     FLOW    FLOW   TEMP   SALIN    CM-I    CM-II
                                            m³/s     cfs     MGD   deg C    ppt    mg/L    mg/L
WSTLD-1      1      7.77  test            0.00000   0.00000   0.000   20.00    0.00    0.000    0.000
ENDATA24
$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                % BOD                  %
CARD TYPE    ELEMENT   NAME                    DO     BOD    RMVL    ORG-N    NH3-N   NITRIF    NO3-N    BOD#2
                                            mg/L    mg/L    mg/L    mg/L    mg/L    mg/L
WSTLD-2        1    test                  0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
ENDATA25
$$$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME                  PHOS    CHL A     COLI      NCM
                                            mg/L    mg/L    mg/L    mg/L
WSTLD-3        1    test                  0.00     0.00     0.00     0.00
ENDATA26
$$$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) $$$
CARD TYPE    CONSTITUENT                CONCENTRATION
ENDATA27
$$$ DATA TYPE 28 (DAM DATA) $$$
CARD TYPE    ELEMENT   NAME              EQN     "A"     "B"     "H"
ENDATA28
$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$
CARD TYPE      PARAMETER    COL 1    COL 2    COL 3    COL 4    COL 5    COL 6    COL 7    COL 8
SENSITIV       VELOCITY    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       DISPERSI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       REAERATI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD DECA    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD SETT    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BENTHAL     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
ENDATA29
```

```
$$$ DATA TYPE 30 (PLOT CONTROL CARDS) $$$
NUMBER OF PLOTS =  2
NUMBER OF REACHES IN PLOT 1 =  10
PLOT RCH  1  2  3  4  5  6  7  8  9 10
NUMBER OF REACHES IN PLOT 2 =   3
PLOT RCH  6  7  8
ENDATA30
$$$ DATA TYPE 31 (OVERLAY PLOT DATA) $$$
ENDATA31
    .....NO ERRORS DETECTED IN INPUT DATA
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN   5 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
INTERMEDIATE REPORT
 Dissolved Oxygen                                  Pearl River DO Modeling 090105
    mg/L                                          COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 PA   1    1      6.63    6.97
 IA   2    3      7.09    7.13
 I1   3    5      7.12    7.08
 IB   4    7      5.13    5.03    5.01    5.00    5.00    5.00    5.01    5.01    5.01    5.02
 IC   5   17      5.02    5.02    5.03    5.03    5.04    5.05    5.06    5.07    5.09    5.10
 I2   6   27      5.34    5.41    5.44    5.45    5.46    5.46    5.46    5.46    5.46    5.46
 I2   6   37      5.46    5.46    5.46    5.46    5.46
 ID   7   42      5.48    5.50    5.52    5.54    5.57    5.59    5.62    5.64    5.67    5.69
 ID   7   52      5.72    5.74    5.77    5.79    5.82    5.85    5.87    5.90    5.92    5.95
 IE   8   62      5.97    6.00    6.02    6.04    6.07    6.09    6.11    6.13    6.15    6.17
 IE   8   72      6.19    6.21    6.23    6.25    6.26    6.28    6.30    6.32    6.33    6.35
 IF   9   82      6.33    6.31    6.29    6.27    6.25    6.24    6.22    6.20    6.19    6.18
 IF   9   92      6.16    6.15    6.14    6.12    6.11    6.10    6.09    6.08    6.07    6.06
 TL  10  102      6.06    6.04
INTERMEDIATE REPORT
 Effective BOD                                     Pearl River DO Modeling 090105
    mg/L                                          COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 PA   1    1      1.91    1.01
 IA   2    3      0.42    0.18
 I1   3    5      0.09    0.09
 IB   4    7      2.28    2.47    2.54    2.57    2.59    2.60    2.61    2.62    2.62    2.63
 IC   5   17      2.52    2.42    2.32    2.22    2.13    2.05    1.96    1.88    1.81    1.75
 I2   6   27      2.92    3.47    3.79    3.99    4.13    4.24    4.31    4.38    4.42    4.47
 I2   6   37      4.50    4.53    4.55    4.57    4.59
 ID   7   42      4.48    4.38    4.27    4.17    4.07    3.97    3.88    3.79    3.70    3.61
 ID   7   52      3.52    3.44    3.36    3.27    3.20    3.12    3.04    2.97    2.90    2.83
 IE   8   62      2.79    2.74    2.70    2.66    2.62    2.58    2.54    2.50    2.46    2.43
 IE   8   72      2.39    2.35    2.32    2.28    2.25    2.21    2.18    2.15    2.11    2.08
 IF   9   82      2.14    2.20    2.26    2.31    2.36    2.41    2.45    2.50    2.54    2.58
 IF   9   92      2.62    2.65    2.69    2.72    2.76    2.79    2.82    2.85    2.87    2.90
 TL  10  102      2.88    2.77
```

INTERMEDIATE REPORT
Biochemical Oxygen Demand Pearl River DO Modeling 090105
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	1.91	1.01								
IA	2	3	0.42	0.18								
I1	3	5	0.09	0.09								
IB	4	7	2.28	2.47	2.54	2.57	2.59	2.60	2.61	2.62	2.62	2.63
IC	5	17	2.52	2.42	2.32	2.22	2.13	2.05	1.96	1.88	1.81	1.75
I2	6	27	2.92	3.47	3.79	3.99	4.13	4.24	4.31	4.38	4.42	4.47
I2	6	37	4.50	4.53	4.55	4.57	4.59					
ID	7	42	4.48	4.38	4.27	4.17	4.07	3.97	3.88	3.79	3.70	3.61
ID	7	52	3.52	3.44	3.36	3.27	3.20	3.12	3.04	2.97	2.90	2.83
IE	8	62	2.79	2.74	2.70	2.66	2.62	2.58	2.54	2.50	2.46	2.43
IE	8	72	2.39	2.35	2.32	2.28	2.25	2.21	2.18	2.15	2.11	2.08
IF	9	82	2.14	2.20	2.26	2.31	2.36	2.41	2.45	2.50	2.54	2.58
IF	9	92	2.62	2.65	2.69	2.72	2.76	2.79	2.82	2.85	2.87	2.90
TL	10	102	2.88	2.77								

INTERMEDIATE REPORT
Organic Nitrogen Pearl River DO Modeling 090105
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.00	0.00								
IA	2	3	0.00	0.00								
I1	3	5	0.00	0.00								
IB	4	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IC	5	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2	6	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2	6	37	0.00	0.00	0.00	0.00	0.00					
ID	7	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ID	7	52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IF	9	82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IF	9	92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TL	10	102	0.00	0.00								

INTERMEDIATE REPORT
Ammonia Nitrogen Pearl River DO Modeling 090105
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.04	0.01								
IA	2	3	0.00	0.00								
I1	3	5	0.00	0.00								
IB	4	7	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
IC	5	17	0.06	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.03
I2	6	27	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
I2	6	37	0.07	0.07	0.07	0.07	0.07					
ID	7	42	0.07	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.04
ID	7	52	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03
IE	8	62	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

IE	8	72	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
IF	9	82	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
IF	9	92	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
TL	10	102	0.03	0.04								

INTERMEDIATE REPORT

Nitrate+Nitrite Nitrogen — Pearl River DO Modeling 090105

mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.53	0.53								
IA	2	3	0.49	0.44								
I1	3	5	0.41	0.38								
IB	4	7	0.50	0.51	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
IC	5	17	0.53	0.53	0.53	0.53	0.54	0.54	0.54	0.54	0.54	0.54
I2	6	27	0.53	0.53	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
I2	6	37	0.52	0.52	0.52	0.52	0.52					
ID	7	42	0.52	0.53	0.53	0.53	0.53	0.53	0.53	0.54	0.54	0.54
ID	7	52	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.55	0.55
IE	8	62	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
IE	8	72	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
IF	9	82	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
IF	9	92	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.53	0.53	0.53
TL	10	102	0.53	0.52								

INTERMEDIATE REPORT

Total Nitrogen — Pearl River DO Modeling 090105

mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.57	0.54								
IA	2	3	0.49	0.44								
I1	3	5	0.41	0.39								
IB	4	7	0.55	0.57	0.57	0.58	0.58	0.58	0.58	0.58	0.58	0.58
IC	5	17	0.58	0.58	0.58	0.58	0.58	0.57	0.57	0.57	0.57	0.57
I2	6	27	0.58	0.58	0.58	0.58	0.59	0.59	0.59	0.59	0.59	0.59
I2	6	37	0.59	0.59	0.59	0.59	0.59					
ID	7	42	0.59	0.59	0.59	0.59	0.59	0.58	0.58	0.58	0.58	0.58
ID	7	52	0.58	0.58	0.58	0.58	0.58	0.58	0.57	0.57	0.57	0.57
IE	8	62	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
IE	8	72	0.57	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
IF	9	82	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.57
IF	9	92	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
TL	10	102	0.57	0.55								

INTERMEDIATE REPORT

Chlorophyll a — Pearl River DO Modeling 090105

µg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	1.00	1.00								
IA	2	3	1.00	1.00								
I1	3	5	1.00	1.00								
IB	4	7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IC	5	17	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
I2	6	27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

```
 I2    6   37      1.00     1.00     1.00     1.00     1.00
 ID    7   42      1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 ID    7   52      1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IE    8   62      1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IE    8   72      1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IF    9   82      1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IF    9   92      1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 TL   10  102      1.00     1.00
INTERMEDIATE REPORT
 Temperature                                   Pearl River DO Modeling 090105
   deg C                                       COEF-1 Run
 ID  RCH  ELEM      +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1     31.60    31.60
 IA    2    3     31.60    31.60
 I1    3    5     31.85    32.10
 IB    4    7     32.06    32.02    31.98    31.94    31.90    31.86    31.82    31.78    31.74    31.70
 IC    5   17     31.70    31.70    31.70    31.70    31.70    31.70    31.70    31.70    31.70    31.70
 I2    6   27     31.65    31.61    31.56    31.51    31.47    31.42    31.37    31.33    31.28    31.23
 I2    6   37     31.19    31.14    31.09    31.05    31.00
 ID    7   42     31.02    31.04    31.06    31.08    31.10    31.12    31.14    31.16    31.18    31.20
 ID    7   52     31.22    31.24    31.26    31.28    31.30    31.32    31.34    31.36    31.38    31.40
 IE    8   62     31.40    31.41    31.41    31.42    31.42    31.43    31.43    31.44    31.44    31.45
 IE    8   72     31.45    31.46    31.47    31.47    31.48    31.48    31.49    31.49    31.50    31.50
 IF    9   82     31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50
 IF    9   92     31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50
 TL   10  102     31.50    31.50
INTERMEDIATE REPORT
 Salinity                                      Pearl River DO Modeling 090105
   ppt                                         COEF-1 Run
 ID  RCH  ELEM      +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1      0.00     0.00
 IA    2    3      0.00     0.00
 I1    3    5      0.00     0.00
 IB    4    7      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IC    5   17      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 I2    6   27      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 I2    6   37      0.00     0.00     0.00     0.00     0.00
 ID    7   42      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 ID    7   52      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IE    8   62      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IE    8   72      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IF    9   82      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IF    9   92      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 TL   10  102      0.00     0.00
INTERMEDIATE REPORT
 River Distance                                Pearl River DO Modeling 090105
   km                                          COEF-1 Run
 ID  RCH  ELEM      +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1       8.       8.
 IA    2    3       8.       8.
```

I1	3	5	8.	7.								
IB	4	7	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.
IC	5	17	7.	7.	7.	6.	6.	6.	6.	6.	6.	6.
I2	6	27	6.	6.	6.	6.	6.	6.	5.	5.	5.	5.
I2	6	37	5.	5.	5.	5.	5.					
ID	7	42	5.	5.	5.	4.	4.	4.	4.	4.	4.	4.
ID	7	52	4.	4.	4.	3.	3.	3.	3.	3.	3.	3.
IE	8	62	3.	3.	3.	3.	2.	2.	2.	2.	2.	2.
IE	8	72	2.	2.	2.	2.	2.	2.	1.	1.	1.	1.
IF	9	82	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
IF	9	92	1.	1.	0.	0.	0.	0.	0.	0.	0.	0.
TL	10	102	0.	0.								

INTERMEDIATE REPORT

Flow — Pearl River DO Modeling 090105

m^3/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.0	0.0								
IA	2	3	0.0	0.0								
I1	3	5	0.0	0.0								
IB	4	7	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IC	5	17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
I2	6	27	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.8
I2	6	37	0.9	1.0	1.0	1.1	1.2					
ID	7	42	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
ID	7	52	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
IE	8	62	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
IE	8	72	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
IF	9	82	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4
IF	9	92	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7
TL	10	102	1.7	1.7								

INTERMEDIATE REPORT

Dispersion — Pearl River DO Modeling 090105

m^2/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.0	0.0								
IA	2	3	0.0	0.0								
I1	3	5	0.0	0.0								
IB	4	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IC	5	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	37	0.0	0.0	0.0	0.0	0.0					
ID	7	42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ID	7	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TL	10	102	0.0	0.0								

INTERMEDIATE REPORT

Advective Velocity — Pearl River DO Modeling 090105

m/s COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.0	0.0								
IA	2	3	0.0	0.0								
I1	3	5	0.0	0.0								
IB	4	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IC	5	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I2	6	37	0.0	0.0	0.0	0.0	0.0					
ID	7	42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ID	7	52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	8	72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IF	9	92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TL	10	102	0.0	0.0								

INTERMEDIATE REPORT

Depth Pearl River DO Modeling 090105

m COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	1.0	1.0								
IA	2	3	1.0	1.0								
I1	3	5	1.0	1.0								
IB	4	7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
IC	5	17	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
I2	6	27	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
I2	6	37	2.1	2.1	2.1	2.1	2.1					
ID	7	42	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
ID	7	52	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
IE	8	62	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
IE	8	72	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
IF	9	82	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
IF	9	92	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
TL	10	102	2.3	2.3								

INTERMEDIATE REPORT

Width Pearl River DO Modeling 090105

m COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	44.7	44.7								
IA	2	3	44.7	44.7								
I1	3	5	44.7	44.7								
IB	4	7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
IC	5	17	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8	43.8
I2	6	27	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8
I2	6	37	62.8	62.8	62.8	62.8	62.8					
ID	7	42	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
ID	7	52	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
IE	8	62	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
IE	8	72	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7	67.7
IF	9	82	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9

IF	9	92	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
TL	10	102	65.1	65.1								

INTERMEDIATE REPORT

Cross-Sectional Area — Pearl River DO Modeling 090105

m^2 — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	44.3	44.3								
IA	2	3	44.3	44.3								
I1	3	5	44.3	44.3								
IB	4	7	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
IC	5	17	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
I2	6	27	129.9	129.9	129.9	129.9	129.9	129.9	129.9	129.9	129.9	129.9
I2	6	37	129.9	129.9	129.9	129.9	129.9					
ID	7	42	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1
ID	7	52	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1	229.1
IE	8	62	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0
IE	8	72	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0	155.0
IF	9	82	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5
IF	9	92	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5	122.5
TL	10	102	152.3	152.3								

INTERMEDIATE REPORT

Reaeration Rate — Pearl River DO Modeling 090105

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.874	0.874								
IA	2	3	0.874	0.874								
I1	3	5	0.878	0.882								
IB	4	7	0.881	0.880	0.880	0.879	0.879	0.878	0.877	0.877	0.876	0.876
IC	5	17	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
I2	6	27	0.418	0.418	0.418	0.417	0.417	0.417	0.416	0.416	0.416	0.415
I2	6	37	0.415	0.415	0.414	0.414	0.414					
ID	7	42	0.309	0.309	0.310	0.310	0.310	0.310	0.310	0.310	0.310	0.310
ID	7	52	0.310	0.311	0.311	0.311	0.311	0.311	0.311	0.311	0.311	0.311
IE	8	62	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377
IE	8	72	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377
IF	9	82	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415
IF	9	92	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415	0.415
TL	10	102	0.369	0.369								

INTERMEDIATE REPORT

BOD Decay Rate — Pearl River DO Modeling 090105

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.11	0.11								
IA	2	3	0.11	0.11								
I1	3	5	0.11	0.11								
IB	4	7	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IC	5	17	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I2	6	27	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I2	6	37	0.11	0.11	0.11	0.11	0.11					
ID	7	42	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

ID	7	52	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IE	8	62	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IE	8	72	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
IF	9	82	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
IF	9	92	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
TL	10	102	0.12	0.12								

INTERMEDIATE REPORT

BOD Settling Rate — Pearl River DO Modeling 090105

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.01	0.01								
IA	2	3	0.01	0.01								
I1	3	5	0.01	0.01								
IB	4	7	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IC	5	17	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
I2	6	27	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
I2	6	37	0.01	0.01	0.01	0.01	0.01					
ID	7	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ID	7	52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	8	62	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IE	8	72	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IF	9	82	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
IF	9	92	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TL	10	102	0.01	0.01								

INTERMEDIATE REPORT

Ammonia Decay Rate — Pearl River DO Modeling 090105

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.24	0.24								
IA	2	3	0.25	0.25								
I1	3	5	0.25	0.26								
IB	4	7	0.24	0.24	0.24	0.24	0.24	0.24	0.23	0.23	0.23	0.23
IC	5	17	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
I2	6	27	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
I2	6	37	0.23	0.23	0.23	0.22	0.22					
ID	7	42	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
ID	7	52	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
IE	8	62	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
IE	8	72	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
IF	9	82	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
IF	9	92	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
TL	10	102	0.24	0.24								

INTERMEDIATE REPORT

Sediment Oxygen Demand — Pearl River DO Modeling 090105

$g/m^2/d$ — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
PA	1	1	0.27	0.26								
IA	2	3	0.25	0.25								
I1	3	5	0.25	0.26								
IB	4	7	1.83	1.82	1.82	1.82	1.81	1.81	1.80	1.80	1.79	1.79

IC	5	17	1.79	1.79	1.79	1.78	1.78	1.78	1.78	1.78	1.78	1.78
I2	6	27	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
I2	6	37	0.30	0.30	0.30	0.30	0.30					
ID	7	42	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.29
ID	7	52	0.29	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28
IE	8	62	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
IE	8	72	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.27
IF	9	82	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
IF	9	92	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.29
TL	10	102	0.29	0.28								

CONDENSED CAPSULE SUMMARY FOR Headwater

DIST	FLOW	TEMP	SALN	DO	REAER EBOD1	BOD1 EBOD2	BOD2 ORGN	NH3 NH3	CHLA	RATE	DECA	SETT	DECA	SETT	DECA	SOD
km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	µg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
HDWTR	0.00283	30.00	0.00	5.00	3.60	0.00	0.00	0.10	1.00							
7.73	0.00283	31.60	0.00	6.63	1.91	0.00	0.00	0.04	1.00	0.87	0.11	0.01	0.01	0.00	0.24	0.27
7.69	0.00283	31.60	0.00	6.97	1.01	0.00	0.00	0.01	1.00	0.87	0.11	0.01	0.01	0.00	0.24	0.26
7.63	0.00283	31.60	0.00	7.09	0.42	0.00	0.00	0.00	1.00	0.87	0.11	0.01	0.01	0.00	0.25	0.25
7.57	0.00283	31.60	0.00	7.13	0.18	0.00	0.00	0.00	1.00	0.87	0.11	0.01	0.01	0.00	0.25	0.25
7.53	0.00283	31.85	0.00	7.12	0.09	0.00	0.00	0.00	1.00	0.88	0.11	0.01	0.01	0.00	0.25	0.25
7.49	0.00283	32.10	0.00	7.08	0.09	0.00	0.00	0.00	1.00	0.88	0.11	0.01	0.01	0.00	0.26	0.26
7.41	0.01583	32.06	0.00	5.13	2.28	0.00	0.00	0.05	1.00	0.88	0.11	0.01	0.01	0.00	0.24	1.83
7.34	0.02883	32.02	0.00	5.03	2.47	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.24	1.82
7.27	0.04183	31.98	0.00	5.01	2.54	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.24	1.82
7.19	0.05483	31.94	0.00	5.00	2.57	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.24	1.82
7.12	0.06783	31.90	0.00	5.00	2.59	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.24	1.81
7.05	0.08083	31.86	0.00	5.00	2.60	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.24	1.81
6.98	0.09383	31.82	0.00	5.01	2.61	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.23	1.80
6.90	0.10683	31.78	0.00	5.01	2.62	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.23	1.80
6.83	0.11983	31.74	0.00	5.01	2.62	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.23	1.79
6.76	0.13283	31.70	0.00	5.02	2.63	0.00	0.00	0.06	1.00	0.88	0.11	0.01	0.01	0.00	0.23	1.79
6.68	0.13283	31.70	0.00	5.02	2.52	0.00	0.00	0.06	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.79
6.61	0.13283	31.70	0.00	5.02	2.42	0.00	0.00	0.05	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.79
6.53	0.13283	31.70	0.00	5.03	2.32	0.00	0.00	0.05	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.79
6.45	0.13283	31.70	0.00	5.03	2.22	0.00	0.00	0.04	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.78
6.37	0.13283	31.70	0.00	5.04	2.13	0.00	0.00	0.04	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.78
6.30	0.13283	31.70	0.00	5.05	2.05	0.00	0.00	0.04	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.78
6.22	0.13283	31.70	0.00	5.06	1.96	0.00	0.00	0.03	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.78
6.14	0.13283	31.70	0.00	5.07	1.88	0.00	0.00	0.03	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.78
6.07	0.13283	31.70	0.00	5.09	1.81	0.00	0.00	0.03	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.78
5.99	0.13283	31.70	0.00	5.10	1.75	0.00	0.00	0.03	1.00	0.73	0.11	0.01	0.01	0.00	0.23	1.78
5.91	0.20150	31.65	0.00	5.34	2.92	0.00	0.00	0.05	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.29
5.83	0.27017	31.61	0.00	5.41	3.47	0.00	0.00	0.05	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.75	0.33883	31.56	0.00	5.44	3.79	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.67	0.40750	31.51	0.00	5.45	3.99	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.59	0.47617	31.47	0.00	5.46	4.13	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.52	0.54483	31.42	0.00	5.46	4.24	0.00	0.00	0.06	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.44	0.61350	31.37	0.00	5.46	4.31	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.36	0.68217	31.33	0.00	5.46	4.38	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.28	0.75083	31.28	0.00	5.46	4.42	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30

5.20	0.81950	31.23	0.00	5.46	4.47	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.12	0.88817	31.19	0.00	5.46	4.50	0.00	0.00	0.07	1.00	0.42	0.11	0.01	0.01	0.00	0.23	0.30
5.04	0.95683	31.14	0.00	5.46	4.53	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.23	0.30
4.96	1.02550	31.09	0.00	5.46	4.55	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.23	0.30
4.88	1.09417	31.05	0.00	5.46	4.57	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.22	0.30
4.80	1.16283	31.00	0.00	5.46	4.59	0.00	0.00	0.07	1.00	0.41	0.11	0.01	0.01	0.00	0.22	0.30
4.71	1.16283	31.02	0.00	5.48	4.48	0.00	0.00	0.07	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.30
4.62	1.16283	31.04	0.00	5.50	4.38	0.00	0.00	0.06	1.00	0.31	0.11	0.00	0.01	0.00	0.22	0.30
4.52	1.16283	31.06	0.00	5.52	4.27	0.00	0.00	0.06	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.30
4.43	1.16283	31.08	0.00	5.54	4.17	0.00	0.00	0.06	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.30
4.33	1.16283	31.10	0.00	5.57	4.07	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
4.24	1.16283	31.12	0.00	5.59	3.97	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
4.14	1.16283	31.14	0.00	5.62	3.88	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
4.05	1.16283	31.16	0.00	5.64	3.79	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.95	1.16283	31.18	0.00	5.67	3.70	0.00	0.00	0.05	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.86	1.16283	31.20	0.00	5.69	3.61	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.76	1.16283	31.22	0.00	5.72	3.52	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.67	1.16283	31.24	0.00	5.74	3.44	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.57	1.16283	31.26	0.00	5.77	3.36	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.48	1.16283	31.28	0.00	5.79	3.27	0.00	0.00	0.04	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.38	1.16283	31.30	0.00	5.82	3.20	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.29	1.16283	31.32	0.00	5.85	3.12	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.29
3.19	1.16283	31.34	0.00	5.87	3.04	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.28
3.10	1.16283	31.36	0.00	5.90	2.97	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.28
3.00	1.16283	31.38	0.00	5.92	2.90	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.28
2.91	1.16283	31.40	0.00	5.95	2.83	0.00	0.00	0.03	1.00	0.31	0.11	0.00	0.01	0.00	0.23	0.28
2.82	1.16283	31.40	0.00	5.97	2.79	0.00	0.00	0.03	1.00	0.38	0.11	0.01	0.01	0.00	0.23	0.28
2.74	1.16283	31.41	0.00	6.00	2.74	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.65	1.16283	31.41	0.00	6.02	2.70	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.56	1.16283	31.42	0.00	6.04	2.66	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.48	1.16283	31.42	0.00	6.07	2.62	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.39	1.16283	31.43	0.00	6.09	2.58	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.30	1.16283	31.43	0.00	6.11	2.54	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.22	1.16283	31.44	0.00	6.13	2.50	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.13	1.16283	31.44	0.00	6.15	2.46	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
2.04	1.16283	31.45	0.00	6.17	2.43	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.96	1.16283	31.45	0.00	6.19	2.39	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.87	1.16283	31.46	0.00	6.21	2.35	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.78	1.16283	31.47	0.00	6.23	2.32	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.70	1.16283	31.47	0.00	6.25	2.28	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.61	1.16283	31.48	0.00	6.26	2.25	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.52	1.16283	31.48	0.00	6.28	2.21	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.44	1.16283	31.49	0.00	6.30	2.18	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.35	1.16283	31.49	0.00	6.32	2.15	0.00	0.00	0.02	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.26	1.16283	31.50	0.00	6.33	2.11	0.00	0.00	0.01	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.28
1.17	1.16283	31.50	0.00	6.35	2.08	0.00	0.00	0.01	1.00	0.38	0.11	0.01	0.01	0.00	0.24	0.27
1.12	1.18783	31.50	0.00	6.33	2.14	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
1.07	1.21283	31.50	0.00	6.31	2.20	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
1.02	1.23783	31.50	0.00	6.29	2.26	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.96	1.26283	31.50	0.00	6.27	2.31	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28

0.91	1.28783	31.50	0.00	6.25	2.36	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.86	1.31283	31.50	0.00	6.24	2.41	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.80	1.33783	31.50	0.00	6.22	2.45	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.75	1.36283	31.50	0.00	6.20	2.50	0.00	0.00	0.02	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.70	1.38783	31.50	0.00	6.19	2.54	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.65	1.41283	31.50	0.00	6.18	2.58	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.59	1.43783	31.50	0.00	6.16	2.62	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.54	1.46283	31.50	0.00	6.15	2.65	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.49	1.48783	31.50	0.00	6.14	2.69	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.43	1.51283	31.50	0.00	6.12	2.72	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.38	1.53783	31.50	0.00	6.11	2.76	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.33	1.56283	31.50	0.00	6.10	2.79	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.27	1.58783	31.50	0.00	6.09	2.82	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.22	1.61283	31.50	0.00	6.08	2.85	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.28
0.17	1.63783	31.50	0.00	6.07	2.87	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.29
0.12	1.66283	31.50	0.00	6.06	2.90	0.00	0.00	0.03	1.00	0.42	0.12	0.01	0.01	0.00	0.24	0.29
0.06	1.66283	31.50	0.00	6.06	2.88	0.00	0.00	0.03	1.00	0.37	0.12	0.01	0.01	0.00	0.24	0.29
0.00	1.66283	31.50	0.00	6.04	2.77	0.00	0.00	0.04	1.00	0.37	0.12	0.01	0.01	0.00	0.24	0.28

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	DISP	DEPTH	WIDTH	VELO	VELO	SAT	RATE	DECA	SETT	DECA	SETT	DECA	SOD
		km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	m²/s	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
	HDWTR		0.003	30.0	0.0	5.0	3.6	0.0	0.0	0.1	1.0													
	WASTELOAD # 001 (test) ENTERS HERE WITHOUT ANY FLOW																							
1	PA 1	7.73	0.003	31.6	0.0	6.6	1.9	0.0	0.0	0.0	1.0	0.0	0.99	44.7	0.000	0.000	7.4	0.874	0.11	0.01	0.01	0.00	0.24	0.27
2	PA 1	7.69	0.003	31.6	0.0	7.0	1.0	0.0	0.0	0.0	1.0	0.0	0.99	44.7	0.000	0.000	7.4	0.874	0.11	0.01	0.01	0.00	0.24	0.26
3	IA 2	7.63	0.003	31.6	0.0	7.1	0.4	0.0	0.0	0.0	1.0	0.0	0.99	44.7	0.000	0.000	7.4	0.874	0.11	0.01	0.01	0.00	0.25	0.25
4	IA 2	7.57	0.003	31.6	0.0	7.1	0.2	0.0	0.0	0.0	1.0	0.0	0.99	44.7	0.000	0.000	7.4	0.874	0.11	0.01	0.01	0.00	0.25	0.25
5	I1 3	7.53	0.003	31.8	0.0	7.1	0.1	0.0	0.0	0.0	1.0	0.0	0.99	44.7	0.000	0.000	7.3	0.878	0.11	0.01	0.01	0.00	0.25	0.25
6	I1 3	7.49	0.003	32.1	0.0	7.1	0.1	0.0	0.0	0.0	1.0	0.0	0.99	44.7	0.000	0.000	7.3	0.882	0.11	0.01	0.01	0.00	0.26	0.26
7	IB 4	7.41	0.016	32.1	0.0	5.1	2.3	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.000	0.000	7.3	0.881	0.11	0.01	0.01	0.00	0.24	1.83
8	IB 4	7.34	0.029	32.0	0.0	5.0	2.5	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.001	0.001	7.3	0.880	0.11	0.01	0.01	0.00	0.24	1.82
9	IB 4	7.27	0.042	32.0	0.0	5.0	2.5	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.001	0.001	7.3	0.880	0.11	0.01	0.01	0.00	0.24	1.82
10	IB 4	7.19	0.055	31.9	0.0	5.0	2.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.001	0.001	7.3	0.879	0.11	0.01	0.01	0.00	0.24	1.82
11	IB 4	7.12	0.068	31.9	0.0	5.0	2.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.3	0.879	0.11	0.01	0.01	0.00	0.24	1.81
12	IB 4	7.05	0.081	31.9	0.0	5.0	2.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.3	0.878	0.11	0.01	0.01	0.00	0.24	1.81
13	IB 4	6.98	0.094	31.8	0.0	5.0	2.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.3	0.877	0.11	0.01	0.01	0.00	0.23	1.80
14	IB 4	6.90	0.107	31.8	0.0	5.0	2.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.002	0.002	7.3	0.877	0.11	0.01	0.01	0.00	0.23	1.80
15	IB 4	6.83	0.120	31.7	0.0	5.0	2.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.003	0.003	7.3	0.876	0.11	0.01	0.01	0.00	0.23	1.79
16	IB 4	6.76	0.133	31.7	0.0	5.0	2.6	0.0	0.0	0.1	1.0	0.0	0.99	44.7	0.003	0.003	7.3	0.876	0.11	0.01	0.01	0.00	0.23	1.79
17	IC 5	6.68	0.133	31.7	0.0	5.0	2.5	0.0	0.0	0.1	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.79
18	IC 5	6.61	0.133	31.7	0.0	5.0	2.4	0.0	0.0	0.1	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.79
19	IC 5	6.53	0.133	31.7	0.0	5.0	2.3	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.79
20	IC 5	6.45	0.133	31.7	0.0	5.0	2.2	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.78
21	IC 5	6.37	0.133	31.7	0.0	5.0	2.1	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.78
22	IC 5	6.30	0.133	31.7	0.0	5.1	2.0	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.78
23	IC 5	6.22	0.133	31.7	0.0	5.1	2.0	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.78
24	IC 5	6.14	0.133	31.7	0.0	5.1	1.9	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.78
25	IC 5	6.07	0.133	31.7	0.0	5.1	1.8	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.78
26	IC 5	5.99	0.133	31.7	0.0	5.1	1.7	0.0	0.0	0.0	1.0	0.0	1.18	43.8	0.003	0.003	7.3	0.735	0.11	0.01	0.01	0.00	0.23	1.78
27	I2 6	5.91	0.201	31.7	0.0	5.3	2.9	0.0	0.0	0.0	1.0	0.0	2.07	62.8	0.002	0.002	7.3	0.418	0.11	0.01	0.01	0.00	0.23	0.29
28	I2 6	5.83	0.270	31.6	0.0	5.4	3.5	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.002	0.002	7.4	0.418	0.11	0.01	0.01	0.00	0.23	0.30
29	I2 6	5.75	0.339	31.6	0.0	5.4	3.8	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.003	0.003	7.4	0.418	0.11	0.01	0.01	0.00	0.23	0.30
30	I2 6	5.67	0.407	31.5	0.0	5.5	4.0	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.003	0.003	7.4	0.417	0.11	0.01	0.01	0.00	0.23	0.30
31	I2 6	5.59	0.476	31.5	0.0	5.5	4.1	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.004	0.004	7.4	0.417	0.11	0.01	0.01	0.00	0.23	0.30
32	I2 6	5.52	0.545	31.4	0.0	5.5	4.2	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.004	0.004	7.4	0.417	0.11	0.01	0.01	0.00	0.23	0.30
33	I2 6	5.44	0.613	31.4	0.0	5.5	4.3	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.005	0.005	7.4	0.416	0.11	0.01	0.01	0.00	0.23	0.30
34	I2 6	5.36	0.682	31.3	0.0	5.5	4.4	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.005	0.005	7.4	0.416	0.11	0.01	0.01	0.00	0.23	0.30
35	I2 6	5.28	0.751	31.3	0.0	5.5	4.4	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.006	0.006	7.4	0.416	0.11	0.01	0.01	0.00	0.23	0.30
36	I2 6	5.20	0.819	31.2	0.0	5.5	4.5	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.006	0.006	7.4	0.415	0.11	0.01	0.01	0.00	0.23	0.30
37	I2 6	5.12	0.888	31.2	0.0	5.5	4.5	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.007	0.007	7.4	0.415	0.11	0.01	0.01	0.00	0.23	0.30
38	I2 6	5.04	0.957	31.1	0.0	5.5	4.5	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.007	0.007	7.4	0.415	0.11	0.01	0.01	0.00	0.23	0.30
39	I2 6	4.96	1.025	31.1	0.0	5.5	4.6	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.008	0.008	7.4	0.414	0.11	0.01	0.01	0.00	0.23	0.30
40	I2 6	4.88	1.094	31.0	0.0	5.5	4.6	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.008	0.008	7.4	0.414	0.11	0.01	0.01	0.00	0.22	0.30
41	I2 6	4.80	1.163	31.0	0.0	5.5	4.6	0.0	0.0	0.1	1.0	0.0	2.07	62.8	0.009	0.009	7.4	0.414	0.11	0.01	0.01	0.00	0.22	0.30
42	ID 7	4.71	1.163	31.0	0.0	5.5	4.5	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.309	0.11	0.00	0.01	0.00	0.22	0.30
43	ID 7	4.62	1.163	31.0	0.0	5.5	4.4	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.309	0.11	0.00	0.01	0.00	0.22	0.30

44	ID	7	4.52	1.163	31.1	0.0	5.5	4.3	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.30
45	ID	7	4.43	1.163	31.1	0.0	5.5	4.2	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.30
46	ID	7	4.33	1.163	31.1	0.0	5.6	4.1	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.29
47	ID	7	4.24	1.163	31.1	0.0	5.6	4.0	0.0	0.0	0.1	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.29
48	ID	7	4.14	1.163	31.1	0.0	5.6	3.9	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.29
49	ID	7	4.05	1.163	31.2	0.0	5.6	3.8	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.29
50	ID	7	3.95	1.163	31.2	0.0	5.7	3.7	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.29
51	ID	7	3.86	1.163	31.2	0.0	5.7	3.6	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.29
52	ID	7	3.76	1.163	31.2	0.0	5.7	3.5	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.310	0.11	0.00	0.01	0.00	0.23	0.29
53	ID	7	3.67	1.163	31.2	0.0	5.7	3.4	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.29
54	ID	7	3.57	1.163	31.3	0.0	5.8	3.4	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.29
55	ID	7	3.48	1.163	31.3	0.0	5.8	3.3	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.29
56	ID	7	3.38	1.163	31.3	0.0	5.8	3.2	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.29
57	ID	7	3.29	1.163	31.3	0.0	5.8	3.1	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.29
58	ID	7	3.19	1.163	31.3	0.0	5.9	3.0	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.28
59	ID	7	3.10	1.163	31.4	0.0	5.9	3.0	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.28
60	ID	7	3.00	1.163	31.4	0.0	5.9	2.9	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.28
61	ID	7	2.91	1.163	31.4	0.0	5.9	2.8	0.0	0.0	0.0	1.0	0.0	2.77	82.7	0.005	0.005	7.4	0.311	0.11	0.00	0.01	0.00	0.23	0.28
62	IE	8	2.82	1.163	31.4	0.0	6.0	2.8	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.23	0.28
63	IE	8	2.74	1.163	31.4	0.0	6.0	2.7	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
64	IE	8	2.65	1.163	31.4	0.0	6.0	2.7	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
65	IE	8	2.56	1.163	31.4	0.0	6.0	2.7	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
66	IE	8	2.48	1.163	31.4	0.0	6.1	2.6	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
67	IE	8	2.39	1.163	31.4	0.0	6.1	2.6	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
68	IE	8	2.30	1.163	31.4	0.0	6.1	2.5	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
69	IE	8	2.22	1.163	31.4	0.0	6.1	2.5	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
70	IE	8	2.13	1.163	31.4	0.0	6.2	2.5	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
71	IE	8	2.04	1.163	31.4	0.0	6.2	2.4	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
72	IE	8	1.96	1.163	31.5	0.0	6.2	2.4	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST km	FLOW m³/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N µg/L	NH3 m²/s	ADVEC CHLA m	MEAN DISP m	DO DEPTH m/s	REAER WIDTH m/s	BOD1 VELO mg/L	BOD1 VELO 1/da	BOD2 SAT 1/da	BOD2 RATE 1/da	NH3 DECA 1/da	SETT DECA 1/da	SETT DECA 1/da	SOD g/m²/d
73	IE 8	1.87	1.163	31.5	0.0	6.2	2.4	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
74	IE 8	1.78	1.163	31.5	0.0	6.2	2.3	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
75	IE 8	1.70	1.163	31.5	0.0	6.2	2.3	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
76	IE 8	1.61	1.163	31.5	0.0	6.3	2.2	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
77	IE 8	1.52	1.163	31.5	0.0	6.3	2.2	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
78	IE 8	1.44	1.163	31.5	0.0	6.3	2.2	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
79	IE 8	1.35	1.163	31.5	0.0	6.3	2.1	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
80	IE 8	1.26	1.163	31.5	0.0	6.3	2.1	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.28
81	IE 8	1.17	1.163	31.5	0.0	6.3	2.1	0.0	0.0	0.0	1.0	0.0	2.29	67.7	0.008	0.008	7.4	0.377	0.11	0.01	0.01	0.00	0.24	0.27
82	IF 9	1.12	1.188	31.5	0.0	6.3	2.1	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.010	0.010	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
83	IF 9	1.07	1.213	31.5	0.0	6.3	2.2	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.010	0.010	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
84	IF 9	1.02	1.238	31.5	0.0	6.3	2.3	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.010	0.010	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
85	IF 9	0.96	1.263	31.5	0.0	6.3	2.3	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.010	0.010	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
86	IF 9	0.91	1.288	31.5	0.0	6.3	2.4	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
87	IF 9	0.86	1.313	31.5	0.0	6.2	2.4	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
88	IF 9	0.80	1.338	31.5	0.0	6.2	2.5	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
89	IF 9	0.75	1.363	31.5	0.0	6.2	2.5	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
90	IF 9	0.70	1.388	31.5	0.0	6.2	2.5	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.011	0.011	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
91	IF 9	0.65	1.413	31.5	0.0	6.2	2.6	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
92	IF 9	0.59	1.438	31.5	0.0	6.2	2.6	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
93	IF 9	0.54	1.463	31.5	0.0	6.1	2.7	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
94	IF 9	0.49	1.488	31.5	0.0	6.1	2.7	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
95	IF 9	0.43	1.513	31.5	0.0	6.1	2.7	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.012	0.012	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
96	IF 9	0.38	1.538	31.5	0.0	6.1	2.8	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
97	IF 9	0.33	1.563	31.5	0.0	6.1	2.8	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
98	IF 9	0.27	1.588	31.5	0.0	6.1	2.8	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
99	IF 9	0.22	1.613	31.5	0.0	6.1	2.8	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.28
100	IF 9	0.17	1.638	31.5	0.0	6.1	2.9	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.013	0.013	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.29
101	IF 9	0.12	1.663	31.5	0.0	6.1	2.9	0.0	0.0	0.0	1.0	0.0	2.08	58.9	0.014	0.014	7.4	0.415	0.12	0.01	0.01	0.00	0.24	0.29
102	TL 10	0.06	1.663	31.5	0.0	6.1	2.9	0.0	0.0	0.0	1.0	0.0	2.34	65.1	0.011	0.011	7.4	0.369	0.12	0.01	0.01	0.00	0.24	0.29
103	TL 10	0.00	1.663	31.5	0.0	6.0	2.8	0.0	0.0	0.0	1.0	0.0	2.34	65.1	0.011	0.011	7.4	0.369	0.12	0.01	0.01	0.00	0.24	0.28

SPECIAL REPORT: Headwater

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING km	TEMP deg C	SALN ppt	CM-I *	CM-II *	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N mg/L	TOTN µg/L	PHOS **	CHL A #/100mL	MACRO *	COLI	NCM
1	7.730	31.60	0.0	0.0	0.0	6.63	1.91	0.00	1.91	0.00	0.00	0.04	0.53	0.57	0.05	1.0	0.0	0.	0.00
2	7.690	31.60	0.0	0.0	0.0	6.97	1.01	0.00	1.01	0.00	0.00	0.01	0.53	0.54	0.05	1.0	0.0	0.	0.00
3	7.628	31.60	0.0	0.0	0.0	7.09	0.42	0.00	0.42	0.00	0.00	0.00	0.49	0.49	0.05	1.0	0.0	0.	0.00
4	7.565	31.60	0.0	0.0	0.0	7.13	0.18	0.00	0.18	0.00	0.00	0.00	0.44	0.44	0.05	1.0	0.0	0.	0.00
5	7.525	31.85	0.0	0.0	0.0	7.12	0.09	0.00	0.09	0.00	0.00	0.00	0.41	0.41	0.05	1.0	0.0	0.	0.00
6	7.485	32.10	0.0	0.0	0.0	7.08	0.09	0.00	0.09	0.00	0.00	0.00	0.38	0.39	0.05	1.0	0.0	0.	0.00
7	7.412	32.06	0.0	0.0	0.0	5.13	2.28	0.00	2.28	0.00	0.00	0.05	0.50	0.55	0.05	1.0	0.0	0.	0.00
8	7.340	32.02	0.0	0.0	0.0	5.03	2.47	0.00	2.47	0.00	0.00	0.06	0.51	0.57	0.05	1.0	0.0	0.	0.00
9	7.267	31.98	0.0	0.0	0.0	5.01	2.54	0.00	2.54	0.00	0.00	0.06	0.52	0.57	0.05	1.0	0.0	0.	0.00
10	7.195	31.94	0.0	0.0	0.0	5.00	2.57	0.00	2.57	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00

11	7.122	31.90	0.0	0.0	0.0	5.00	2.59	0.00	2.59	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
12	7.050	31.86	0.0	0.0	0.0	5.00	2.60	0.00	2.60	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
13	6.977	31.82	0.0	0.0	0.0	5.01	2.61	0.00	2.61	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
14	6.905	31.78	0.0	0.0	0.0	5.01	2.62	0.00	2.62	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
15	6.832	31.74	0.0	0.0	0.0	5.01	2.62	0.00	2.62	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
16	6.760	31.70	0.0	0.0	0.0	5.02	2.63	0.00	2.63	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
17	6.683	31.70	0.0	0.0	0.0	5.02	2.52	0.00	2.52	0.00	0.00	0.06	0.53	0.58	0.05	1.0	0.0	0.	0.00
18	6.606	31.70	0.0	0.0	0.0	5.02	2.42	0.00	2.42	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
19	6.529	31.70	0.0	0.0	0.0	5.03	2.32	0.00	2.32	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
20	6.452	31.70	0.0	0.0	0.0	5.03	2.22	0.00	2.22	0.00	0.00	0.04	0.53	0.58	0.05	1.0	0.0	0.	0.00
21	6.375	31.70	0.0	0.0	0.0	5.04	2.13	0.00	2.13	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
22	6.298	31.70	0.0	0.0	0.0	5.05	2.05	0.00	2.05	0.00	0.00	0.04	0.54	0.57	0.05	1.0	0.0	0.	0.00
23	6.221	31.70	0.0	0.0	0.0	5.06	1.96	0.00	1.96	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
24	6.144	31.70	0.0	0.0	0.0	5.07	1.88	0.00	1.88	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
25	6.067	31.70	0.0	0.0	0.0	5.09	1.81	0.00	1.81	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
26	5.990	31.70	0.0	0.0	0.0	5.10	1.75	0.00	1.75	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
27	5.911	31.65	0.0	0.0	0.0	5.34	2.92	0.00	2.92	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
28	5.832	31.61	0.0	0.0	0.0	5.41	3.47	0.00	3.47	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
29	5.753	31.56	0.0	0.0	0.0	5.44	3.79	0.00	3.79	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
30	5.674	31.51	0.0	0.0	0.0	5.45	3.99	0.00	3.99	0.00	0.00	0.06	0.52	0.58	0.05	1.0	0.0	0.	0.00
31	5.595	31.47	0.0	0.0	0.0	5.46	4.13	0.00	4.13	0.00	0.00	0.06	0.52	0.59	0.05	1.0	0.0	0.	0.00
32	5.516	31.42	0.0	0.0	0.0	5.46	4.24	0.00	4.24	0.00	0.00	0.06	0.52	0.59	0.05	1.0	0.0	0.	0.00
33	5.437	31.37	0.0	0.0	0.0	5.46	4.31	0.00	4.31	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
34	5.358	31.33	0.0	0.0	0.0	5.46	4.38	0.00	4.38	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
35	5.279	31.28	0.0	0.0	0.0	5.46	4.42	0.00	4.42	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
36	5.200	31.23	0.0	0.0	0.0	5.46	4.47	0.00	4.47	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
37	5.121	31.19	0.0	0.0	0.0	5.46	4.50	0.00	4.50	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
38	5.042	31.14	0.0	0.0	0.0	5.46	4.53	0.00	4.53	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
39	4.963	31.09	0.0	0.0	0.0	5.46	4.55	0.00	4.55	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
40	4.884	31.05	0.0	0.0	0.0	5.46	4.57	0.00	4.57	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
41	4.805	31.00	0.0	0.0	0.0	5.46	4.59	0.00	4.59	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
42	4.710	31.02	0.0	0.0	0.0	5.48	4.48	0.00	4.48	0.00	0.00	0.07	0.52	0.59	0.05	1.0	0.0	0.	0.00
43	4.615	31.04	0.0	0.0	0.0	5.50	4.38	0.00	4.38	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
44	4.521	31.06	0.0	0.0	0.0	5.52	4.27	0.00	4.27	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
45	4.426	31.08	0.0	0.0	0.0	5.54	4.17	0.00	4.17	0.00	0.00	0.06	0.53	0.59	0.05	1.0	0.0	0.	0.00
46	4.331	31.10	0.0	0.0	0.0	5.57	4.07	0.00	4.07	0.00	0.00	0.05	0.53	0.59	0.05	1.0	0.0	0.	0.00
47	4.237	31.12	0.0	0.0	0.0	5.59	3.97	0.00	3.97	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
48	4.142	31.14	0.0	0.0	0.0	5.62	3.88	0.00	3.88	0.00	0.00	0.05	0.53	0.58	0.05	1.0	0.0	0.	0.00
49	4.047	31.16	0.0	0.0	0.0	5.64	3.79	0.00	3.79	0.00	0.00	0.05	0.54	0.58	0.05	1.0	0.0	0.	0.00
50	3.952	31.18	0.0	0.0	0.0	5.67	3.70	0.00	3.70	0.00	0.00	0.05	0.54	0.58	0.05	1.0	0.0	0.	0.00
51	3.858	31.20	0.0	0.0	0.0	5.69	3.61	0.00	3.61	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
52	3.763	31.22	0.0	0.0	0.0	5.72	3.52	0.00	3.52	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
53	3.668	31.24	0.0	0.0	0.0	5.74	3.44	0.00	3.44	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
54	3.573	31.26	0.0	0.0	0.0	5.77	3.36	0.00	3.36	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
55	3.479	31.28	0.0	0.0	0.0	5.79	3.27	0.00	3.27	0.00	0.00	0.04	0.54	0.58	0.05	1.0	0.0	0.	0.00
56	3.384	31.30	0.0	0.0	0.0	5.82	3.20	0.00	3.20	0.00	0.00	0.03	0.54	0.58	0.05	1.0	0.0	0.	0.00
57	3.289	31.32	0.0	0.0	0.0	5.85	3.12	0.00	3.12	0.00	0.00	0.03	0.54	0.58	0.05	1.0	0.0	0.	0.00
58	3.194	31.34	0.0	0.0	0.0	5.87	3.04	0.00	3.04	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
59	3.100	31.36	0.0	0.0	0.0	5.90	2.97	0.00	2.97	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
60	3.005	31.38	0.0	0.0	0.0	5.92	2.90	0.00	2.90	0.00	0.00	0.03	0.55	0.57	0.05	1.0	0.0	0.	0.00

61	2.910	31.40	0.0	0.0	0.0	5.95	2.83	0.00	2.83	0.00	0.00	0.03	0.55	0.57	0.05	1.0	0.0	0.	0.00
62	2.823	31.40	0.0	0.0	0.0	5.97	2.79	0.00	2.79	0.00	0.00	0.03	0.55	0.57	0.05	1.0	0.0	0.	0.00
63	2.737	31.41	0.0	0.0	0.0	6.00	2.74	0.00	2.74	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
64	2.650	31.41	0.0	0.0	0.0	6.02	2.70	0.00	2.70	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
65	2.563	31.42	0.0	0.0	0.0	6.04	2.66	0.00	2.66	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
66	2.476	31.42	0.0	0.0	0.0	6.07	2.62	0.00	2.62	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
67	2.389	31.43	0.0	0.0	0.0	6.09	2.58	0.00	2.58	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
68	2.303	31.43	0.0	0.0	0.0	6.11	2.54	0.00	2.54	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
69	2.216	31.44	0.0	0.0	0.0	6.13	2.50	0.00	2.50	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
70	2.129	31.44	0.0	0.0	0.0	6.15	2.46	0.00	2.46	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
71	2.042	31.45	0.0	0.0	0.0	6.17	2.43	0.00	2.43	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
72	1.956	31.45	0.0	0.0	0.0	6.19	2.39	0.00	2.39	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
73	1.869	31.46	0.0	0.0	0.0	6.21	2.35	0.00	2.35	0.00	0.00	0.02	0.55	0.57	0.05	1.0	0.0	0.	0.00
74	1.782	31.47	0.0	0.0	0.0	6.23	2.32	0.00	2.32	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
75	1.695	31.47	0.0	0.0	0.0	6.25	2.28	0.00	2.28	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
76	1.609	31.48	0.0	0.0	0.0	6.26	2.25	0.00	2.25	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
77	1.522	31.48	0.0	0.0	0.0	6.28	2.21	0.00	2.21	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
78	1.435	31.49	0.0	0.0	0.0	6.30	2.18	0.00	2.18	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
79	1.348	31.49	0.0	0.0	0.0	6.32	2.15	0.00	2.15	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
80	1.262	31.50	0.0	0.0	0.0	6.33	2.11	0.00	2.11	0.00	0.00	0.01	0.55	0.56	0.05	1.0	0.0	0.	0.00
81	1.175	31.50	0.0	0.0	0.0	6.35	2.08	0.00	2.08	0.00	0.00	0.01	0.55	0.56	0.05	1.0	0.0	0.	0.00
82	1.122	31.50	0.0	0.0	0.0	6.33	2.14	0.00	2.14	0.00	0.00	0.02	0.55	0.56	0.05	1.0	0.0	0.	0.00
83	1.069	31.50	0.0	0.0	0.0	6.31	2.20	0.00	2.20	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
84	1.016	31.50	0.0	0.0	0.0	6.29	2.26	0.00	2.26	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
85	0.963	31.50	0.0	0.0	0.0	6.27	2.31	0.00	2.31	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
86	0.910	31.50	0.0	0.0	0.0	6.25	2.36	0.00	2.36	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
87	0.857	31.50	0.0	0.0	0.0	6.24	2.41	0.00	2.41	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
88	0.804	31.50	0.0	0.0	0.0	6.22	2.45	0.00	2.45	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
89	0.751	31.50	0.0	0.0	0.0	6.20	2.50	0.00	2.50	0.00	0.00	0.02	0.54	0.56	0.05	1.0	0.0	0.	0.00
90	0.698	31.50	0.0	0.0	0.0	6.19	2.54	0.00	2.54	0.00	0.00	0.03	0.54	0.56	0.05	1.0	0.0	0.	0.00
91	0.645	31.50	0.0	0.0	0.0	6.18	2.58	0.00	2.58	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
92	0.592	31.50	0.0	0.0	0.0	6.16	2.62	0.00	2.62	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
93	0.539	31.50	0.0	0.0	0.0	6.15	2.65	0.00	2.65	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
94	0.486	31.50	0.0	0.0	0.0	6.14	2.69	0.00	2.69	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
95	0.433	31.50	0.0	0.0	0.0	6.12	2.72	0.00	2.72	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
96	0.380	31.50	0.0	0.0	0.0	6.11	2.76	0.00	2.76	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
97	0.327	31.50	0.0	0.0	0.0	6.10	2.79	0.00	2.79	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
98	0.274	31.50	0.0	0.0	0.0	6.09	2.82	0.00	2.82	0.00	0.00	0.03	0.54	0.57	0.05	1.0	0.0	0.	0.00
99	0.221	31.50	0.0	0.0	0.0	6.08	2.85	0.00	2.85	0.00	0.00	0.03	0.53	0.57	0.05	1.0	0.0	0.	0.00
100	0.168	31.50	0.0	0.0	0.0	6.07	2.87	0.00	2.87	0.00	0.00	0.03	0.53	0.57	0.05	1.0	0.0	0.	0.00
101	0.115	31.50	0.0	0.0	0.0	6.06	2.90	0.00	2.90	0.00	0.00	0.03	0.53	0.57	0.05	1.0	0.0	0.	0.00
102	0.058	31.50	0.0	0.0	0.0	6.06	2.88	0.00	2.88	0.00	0.00	0.03	0.53	0.57	0.05	1.0	0.0	0.	0.00
103	0.000	31.50	0.0	0.0	0.0	6.04	2.77	0.00	2.77	0.00	0.00	0.04	0.52	0.55	0.05	1.0	0.0	0.	0.00

SPECIAL REPORT: Headwater

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST km	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#2 DECAY *	ABOD#2 SOD *	FULL SOD 1/da	CORR DECAY 1/da	ORG-N SETT *	ORG-N DECAY **	NH3 SRCE **	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM SETT
1	7.730	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.27	0.27	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00
2	7.690	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.26	0.26	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00

3	7.628	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.25	0.06	0.01	0.25	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
4	7.565	7.35	0.87	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.25	0.06	0.01	0.25	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
5	7.525	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.25	0.06	0.01	0.25	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
6	7.485	7.29	0.88	0.11	0.01	0.00	0.01	0.00	0.00	0.26	0.26	0.06	0.01	0.26	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
7	7.412	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.83	1.83	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
8	7.340	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.82	1.82	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
9	7.267	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.82	1.82	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
10	7.195	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.82	1.82	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
11	7.122	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.81	1.81	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
12	7.050	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.81	1.81	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
13	6.977	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.80	1.80	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
14	6.905	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.80	1.80	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
15	6.832	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
16	6.760	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
17	6.683	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
18	6.606	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
19	6.529	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
20	6.452	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
21	6.375	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
22	6.298	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
23	6.221	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
24	6.144	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
25	6.067	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
26	5.990	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
27	5.911	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
28	5.832	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
29	5.753	7.36	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
30	5.674	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
31	5.595	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
32	5.516	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
33	5.437	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
34	5.358	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
35	5.279	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
36	5.200	7.40	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
37	5.121	7.41	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
38	5.042	7.41	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
39	4.963	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
40	4.884	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
41	4.805	7.43	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
42	4.710	7.43	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
43	4.615	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
44	4.521	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
45	4.426	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
46	4.331	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
47	4.237	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
48	4.142	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
49	4.047	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
50	3.952	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
51	3.858	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
52	3.763	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

53	3.668	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
54	3.573	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
55	3.479	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
56	3.384	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
57	3.289	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
58	3.194	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
59	3.100	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
60	3.005	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
61	2.910	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
62	2.823	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
63	2.737	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
64	2.650	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
65	2.563	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
66	2.476	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
67	2.389	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
68	2.303	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
69	2.216	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
70	2.129	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
71	2.042	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
72	1.956	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
73	1.869	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
74	1.782	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
75	1.695	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
76	1.609	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
77	1.522	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
78	1.435	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
79	1.348	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
80	1.262	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
81	1.175	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.27	0.27	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
82	1.122	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
83	1.069	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
84	1.016	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
85	0.963	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
86	0.910	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
87	0.857	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
88	0.804	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
89	0.751	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
90	0.698	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
91	0.645	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
92	0.592	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
93	0.539	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
94	0.486	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
95	0.433	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
96	0.380	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
97	0.327	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
98	0.274	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
99	0.221	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
100	0.168	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
101	0.115	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
102	0.058	7.37	0.37	0.12	0.01	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

103 0.000 7.37 0.37 0.12 0.01 0.00 0.01 0.00 0.00 0.28 0.28 0.06 0.01 0.24 0.00 0.00 0.00 0.08 0.00 0.00 0.00 0.00

SPECIAL REPORT: Headwater

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW VELO	ADVCTV	DEPTH	WIDTH	VOLUME AREA	SURFACE AREA	PRISM	X-SECT VELO	TIDAL	TIDAL VELO	DISPRSN	MEAN
	km	km	m³/s	m/s	m	m	m³	m²	m²	m³	m/s	m²/s	m/s	
1	7.77	7.73	0.0028	0.000	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.000	0.000	
2	7.73	7.69	0.0028	0.000	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.000	0.000	
3	7.69	7.63	0.0028	0.000	0.99	44.7	2766.	2793.8	44.3	0.	0.000	0.000	0.000	
4	7.63	7.57	0.0028	0.000	0.99	44.7	2766.	2793.8	44.3	0.	0.000	0.000	0.000	
5	7.57	7.53	0.0028	0.000	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.000	0.000	
6	7.53	7.49	0.0028	0.000	0.99	44.7	1770.	1788.0	44.3	0.	0.000	0.000	0.000	
7	7.49	7.41	0.0158	0.000	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.000	0.000	
8	7.41	7.34	0.0288	0.001	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.000	0.001	
9	7.34	7.27	0.0418	0.001	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.000	0.001	
10	7.27	7.19	0.0548	0.001	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.001	
11	7.19	7.12	0.0678	0.002	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.002	
12	7.12	7.05	0.0808	0.002	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.002	
13	7.05	6.98	0.0938	0.002	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.002	
14	6.98	6.90	0.1068	0.002	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.002	
15	6.90	6.83	0.1198	0.003	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.003	
16	6.83	6.76	0.1328	0.003	0.99	44.7	3208.	3240.8	44.3	0.	0.000	0.001	0.003	
17	6.76	6.68	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
18	6.68	6.61	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
19	6.61	6.53	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
20	6.53	6.45	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
21	6.45	6.37	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
22	6.37	6.30	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
23	6.30	6.22	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
24	6.22	6.14	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
25	6.14	6.07	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
26	6.07	5.99	0.1328	0.003	1.18	43.8	3975.	3368.8	51.6	0.	0.000	0.001	0.003	
27	5.99	5.91	0.2015	0.002	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.001	0.002	
28	5.91	5.83	0.2702	0.002	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.002	0.002	
29	5.83	5.75	0.3388	0.003	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.002	0.003	
30	5.75	5.67	0.4075	0.003	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.003	0.003	
31	5.67	5.59	0.4762	0.004	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.003	0.004	
32	5.59	5.52	0.5448	0.004	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.004	0.004	
33	5.52	5.44	0.6135	0.005	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.004	0.005	
34	5.44	5.36	0.6822	0.005	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.004	0.005	
35	5.36	5.28	0.7508	0.006	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.005	0.006	
36	5.28	5.20	0.8195	0.006	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.005	0.006	
37	5.20	5.12	0.8882	0.007	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.006	0.007	
38	5.12	5.04	0.9568	0.007	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.006	0.007	
39	5.04	4.96	1.0255	0.008	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.007	0.008	
40	4.96	4.88	1.0942	0.008	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.007	0.008	
41	4.88	4.80	1.1628	0.009	2.07	62.8	10262.	4957.2	129.9	0.	0.000	0.008	0.009	
42	4.80	4.71	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005	
43	4.71	4.62	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005	
44	4.62	4.52	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005	

45	4.52	4.43	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
46	4.43	4.33	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
47	4.33	4.24	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
48	4.24	4.14	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
49	4.14	4.05	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
50	4.05	3.95	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
51	3.95	3.86	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
52	3.86	3.76	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
53	3.76	3.67	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
54	3.67	3.57	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
55	3.57	3.48	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
56	3.48	3.38	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
57	3.38	3.29	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
58	3.29	3.19	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
59	3.19	3.10	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
60	3.10	3.00	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
61	3.00	2.91	1.1628	0.005	2.77	82.7	21705.	7835.8	229.1	0.	0.000	0.005	0.005
62	2.91	2.82	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
63	2.82	2.74	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
64	2.74	2.65	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
65	2.65	2.56	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
66	2.56	2.48	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
67	2.48	2.39	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
68	2.39	2.30	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
69	2.30	2.22	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
70	2.22	2.13	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
71	2.13	2.04	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
72	2.04	1.96	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
73	1.96	1.87	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
74	1.87	1.78	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
75	1.78	1.70	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
76	1.70	1.61	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
77	1.61	1.52	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
78	1.52	1.44	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
79	1.44	1.35	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
80	1.35	1.26	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
81	1.26	1.17	1.1628	0.008	2.29	67.7	13449.	5873.0	155.0	0.	0.000	0.007	0.008
82	1.17	1.12	1.1878	0.010	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.008	0.010
83	1.12	1.07	1.2128	0.010	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.008	0.010
84	1.07	1.02	1.2378	0.010	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.010
85	1.02	0.96	1.2628	0.010	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.010
86	0.96	0.91	1.2878	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.011
87	0.91	0.86	1.3128	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.011
88	0.86	0.80	1.3378	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.011
89	0.80	0.75	1.3628	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.009	0.011
90	0.75	0.70	1.3878	0.011	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.011
91	0.70	0.65	1.4128	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012
92	0.65	0.59	1.4378	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012
93	0.59	0.54	1.4628	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012
94	0.54	0.49	1.4878	0.012	2.08	58.9	6493.	3121.7	122.5	0.	0.000	0.010	0.012

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  95   0.49   0.43    1.5128  0.012   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.011  0.012
  96   0.43   0.38    1.5378  0.013   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.011  0.013
  97   0.38   0.33    1.5628  0.013   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.011  0.013
  98   0.33   0.27    1.5878  0.013   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.011  0.013
  99   0.27   0.22    1.6128  0.013   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.011  0.013
 100   0.22   0.17    1.6378  0.013   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.011  0.013
 101   0.17   0.12    1.6628  0.014   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.012  0.014
 102   0.12   0.06    1.6628  0.011   2.34   65.1    8759.    3743.2  152.3      0.  0.000    0.010  0.011
 103   0.06   0.00    1.6628  0.011   2.34   65.1    8759.    3743.2  152.3      0.  0.000    0.010  0.011
FINAL REPORT            Headwater                    Pearl River DO Modeling 090105
REACH NO.  1    Pearl River to Above   A                    COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  1  HDWTR    0.00283  30.00    0.00    0.00    0.00  5.00  3.60  0.00  3.60  0.00  0.00  0.10  0.50  0.00  1.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km      km      m³/s          m/s    days      m      m       m³       m²      m²       m³    m/s     m²/s    m/s
  1   7.77    7.73   0.00283  0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25     0.00  0.000    0.000  0.000
  2   7.73    7.69   0.00283  0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25     0.00  0.000    0.000  0.000
 TOT                                  14.47                3540.24   3576.00
 AVG                            0.0001          0.99  44.70                    44.25
 CUM                                  14.47
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da   1/da   1/da   1/da   1/da   1/da    *     *     *   1/da   1/da   1/da    *    1/da    *    **    **   1/da   1/da   1/da
  1   7.730  7.35    0.87   0.11  0.01   0.00   0.01  0.00   0.00  0.25  0.27  0.27   0.06  0.01   0.24  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
  2   7.690  7.35    0.87   0.11  0.01   0.00   0.01  0.00   0.00  0.25  0.26  0.26   0.06  0.01   0.24  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.71   0.06  0.01   0.00   0.01  0.00   0.00  0.12              0.05  0.01   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    g/m³  #/100mL
  1   7.730  31.60  0.00    0.00    0.00  6.63   1.91  0.00   1.91  0.00  0.00  0.04  0.53  0.57  0.05  1.00    0.00      0.    0.00
  2   7.690  31.60  0.00    0.00    0.00  6.97   1.01  0.00   1.01  0.00  0.00  0.01  0.53  0.54  0.05  1.00    0.00      0.    0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090105
REACH NO.  2    Include A                    COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  3  UPR RCH  0.00283  31.60    0.00    0.00    0.00  6.97  1.01  0.00  1.01  0.00  0.00  0.01  0.53  0.05  1.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km      km      m³/s          m/s    days      m      m       m³       m²      m²       m³    m/s     m²/s    m/s
  3   7.69    7.63   0.00283  0.0  0.00006   11.30   0.99  44.70  2765.81   2793.75  44.25     0.00  0.000    0.000  0.000
  4   7.63    7.57   0.00283  0.0  0.00006   11.30   0.99  44.70  2765.81   2793.75  44.25     0.00  0.000    0.000  0.000
 TOT                                  22.61                5531.63   5587.50
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 AVG                          0.0001          0.99   44.70                  44.25
 CUM                                   37.08
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  3   7.628  7.35   0.87  0.11  0.01   0.00  0.01  0.00   0.00  0.25  0.25  0.25   0.06  0.01   0.25  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
  4   7.565  7.35   0.87  0.11  0.01   0.00  0.01  0.00   0.00  0.25  0.25  0.25   0.06  0.01   0.25  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.71   0.06  0.01   0.00  0.01  0.00   0.00  0.12              0.05  0.01   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
  3   7.628  31.60  0.00    0.00    0.00  7.09  0.42  0.00  0.42  0.00  0.00  0.00  0.49  0.49  0.05  1.00   0.00      0.   0.00
  4   7.565  31.60  0.00    0.00    0.00  7.13  0.18  0.00  0.18  0.00  0.00  0.00  0.44  0.44  0.05  1.00   0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090105
REACH NO.  3    Include Stream 1                         COEF-1 Run
********************************************** REACH INPUTS **********************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  5  UPR RCH  0.00283  31.60    0.00    0.00    0.00  7.13  0.18  0.00  0.18  0.00  0.00  0.00  0.44  0.05  1.00    0.00   0.00
********************************************** HYDRAULIC PARAMETER VALUES **********************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH   WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km     km       m³/s          m/s    days      m      m       m³       m²      m²       m³    m/s     m²/s    m/s
  5   7.57   7.53   0.00283   0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25     0.00  0.000    0.000  0.000
  6   7.53   7.49   0.00283   0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25     0.00  0.000    0.000  0.000
 TOT                                  14.47                3540.24   3576.00
 AVG                          0.0001          0.99   44.70                  44.25
 CUM                                   51.54
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  5   7.525  7.32   0.88  0.11  0.01   0.00  0.01  0.00   0.00  0.25  0.25  0.25   0.06  0.01   0.25  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
  6   7.485  7.29   0.88  0.11  0.01   0.00  0.01  0.00   0.00  0.26  0.26  0.26   0.06  0.01   0.26  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.71   0.06  0.01   0.00  0.01  0.00   0.00  0.12              0.05  0.01   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
  5   7.525  31.85  0.00    0.00    0.00  7.12  0.09  0.00  0.09  0.00  0.00  0.00  0.41  0.41  0.05  1.00   0.00      0.   0.00
  6   7.485  32.10  0.00    0.00    0.00  7.08  0.09  0.00  0.09  0.00  0.00  0.00  0.38  0.39  0.05  1.00   0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090105
REACH NO.  4    Include B                                COEF-1 Run
********************************************** REACH INPUTS **********************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  7  UPR RCH  0.00283  32.10    0.00    0.00    0.00  7.08  0.09  0.00  0.09  0.00  0.00  0.00  0.38  0.05  1.00    0.00   0.00
EACH  INCR    0.01300  30.00    0.00    0.00    0.00  5.00  3.60  0.00              0.00  0.10  0.50  0.00    0.00   0.00
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********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	TIDAL VELO m²/s	DISPRSN m/s	MEAN
7	7.49	7.41	0.01583	0.0	0.00036	2.35	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.000	0.000	
8	7.41	7.34	0.02883	0.0	0.00065	1.29	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.000	0.001	
9	7.34	7.27	0.04183	0.0	0.00095	0.89	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.000	0.001	
10	7.27	7.19	0.05483	0.0	0.00124	0.68	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.001	
11	7.19	7.12	0.06783	0.0	0.00153	0.55	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.002	
12	7.12	7.05	0.08083	0.0	0.00183	0.46	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.002	
13	7.05	6.98	0.09383	0.0	0.00212	0.40	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.002	
14	6.98	6.90	0.10683	0.0	0.00241	0.35	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.002	
15	6.90	6.83	0.11983	0.0	0.00271	0.31	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.003	
16	6.83	6.76	0.13283	0.0	0.00300	0.28	0.99	44.70	3208.34	3240.75	44.25	0.00	0.000	0.001	0.003	
TOT					7.54				32083.43	32407.50						
AVG				0.0011			0.99	44.70			44.25					
CUM					59.08											

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE 1/da	PO4 SRCE *	ALG PROD **	MAC PROD **	COLI DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
7	7.412	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.80	1.83	1.83	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
8	7.340	7.30	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.79	1.82	1.82	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
9	7.267	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.79	1.82	1.82	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
10	7.195	7.31	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.82	1.82	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
11	7.122	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.78	1.81	1.81	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
12	7.050	7.32	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.77	1.81	1.81	0.06	0.01	0.24	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
13	6.977	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.77	1.80	1.80	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
14	6.905	7.33	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.76	1.80	1.80	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
15	6.832	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.76	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
16	6.760	7.34	0.88	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.71	0.06	0.01	0.00	0.01	0.00	0.00	0.84			0.05	0.01	0.10	0.00	0.00	0.00			3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO g/m³	COLI #/100mL	NCM
7	7.412	32.06	0.00	0.00	0.00	5.13	2.28	0.00	2.28	0.00	0.00	0.05	0.50	0.55	0.05	1.00	0.00	0.	0.00
8	7.340	32.02	0.00	0.00	0.00	5.03	2.47	0.00	2.47	0.00	0.00	0.06	0.51	0.57	0.05	1.00	0.00	0.	0.00
9	7.267	31.98	0.00	0.00	0.00	5.01	2.54	0.00	2.54	0.00	0.00	0.06	0.52	0.57	0.05	1.00	0.00	0.	0.00
10	7.195	31.94	0.00	0.00	0.00	5.00	2.57	0.00	2.57	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00	0.	0.00
11	7.122	31.90	0.00	0.00	0.00	5.00	2.59	0.00	2.59	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00	0.	0.00
12	7.050	31.86	0.00	0.00	0.00	5.00	2.60	0.00	2.60	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00	0.	0.00
13	6.977	31.82	0.00	0.00	0.00	5.01	2.61	0.00	2.61	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00	0.	0.00
14	6.905	31.78	0.00	0.00	0.00	5.01	2.62	0.00	2.62	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00	0.	0.00
15	6.832	31.74	0.00	0.00	0.00	5.01	2.62	0.00	2.62	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00	0.	0.00
16	6.760	31.70	0.00	0.00	0.00	5.02	2.63	0.00	2.63	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 5 Include C COEF-1 Run

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

ELEM	TYPE	FLOW	TEMP	SALN	CM-I	CM-II	DO	BOD#1	BOD#2	EBOD#1	EBOD#2	ORGN	NH3	NO3+2	PHOS	CHL A	COLI	NCM

NO.		deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL
17	UPR RCH	0.13283	31.70	0.00	0.00	0.00	5.02	2.63	0.00	2.63	0.00	0.00	0.06	0.52	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m³	VOLUME m²	SURFACE AREA m²	X-SECT AREA m³	TIDAL PRISM m/s	TIDAL VELO m²/s	DISPRSN m/s	MEAN VELO
17	6.76	6.68	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
18	6.68	6.61	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
19	6.61	6.53	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
20	6.53	6.45	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
21	6.45	6.37	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
22	6.37	6.30	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
23	6.30	6.22	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
24	6.22	6.14	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
25	6.14	6.07	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
26	6.07	5.99	0.13283	0.0	0.00257	0.35	1.18	43.75	3975.12	3368.75	51.62	0.00	0.000	0.001	0.003
TOT					3.46				39751.25	33687.50					
AVG				0.0026			1.18	43.75			51.62				
CUM					62.55										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE **	SRCE **	DENIT PROD 1/da	PO4 PROD 1/da	ALG DECAY 1/da	MAC DECAY 1/da	COLI DECAY 1/da	NCM SETT 1/da	NCM
17	6.683	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
18	6.606	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
19	6.529	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
20	6.452	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
21	6.375	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
22	6.298	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
23	6.221	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
24	6.144	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
25	6.067	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
26	5.990	7.34	0.73	0.11	0.01	0.00	0.01	0.00	0.00	1.75	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.59	0.06	0.01	0.00	0.01	0.00	0.00	0.84			0.05	0.01	0.10	0.00	0.00	0.00			3.00	0.00	0.00		

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
17	6.683	31.70	0.00	0.00	0.00	5.02	2.52	0.00	2.52	0.00	0.00	0.06	0.53	0.58	0.05	1.00	0.00	0.	0.00
18	6.606	31.70	0.00	0.00	0.00	5.02	2.42	0.00	2.42	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
19	6.529	31.70	0.00	0.00	0.00	5.03	2.32	0.00	2.32	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
20	6.452	31.70	0.00	0.00	0.00	5.03	2.22	0.00	2.22	0.00	0.00	0.04	0.53	0.58	0.05	1.00	0.00	0.	0.00
21	6.375	31.70	0.00	0.00	0.00	5.04	2.13	0.00	2.13	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
22	6.298	31.70	0.00	0.00	0.00	5.05	2.05	0.00	2.05	0.00	0.00	0.04	0.54	0.57	0.05	1.00	0.00	0.	0.00
23	6.221	31.70	0.00	0.00	0.00	5.06	1.96	0.00	1.96	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
24	6.144	31.70	0.00	0.00	0.00	5.07	1.88	0.00	1.88	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
25	6.067	31.70	0.00	0.00	0.00	5.09	1.81	0.00	1.81	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
26	5.990	31.70	0.00	0.00	0.00	5.10	1.75	0.00	1.75	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 6 Include Stream 2 COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
27	UPR RCH	0.13283	31.70	0.00	0.00	0.00	5.10	1.75	0.00	1.75	0.00	0.00	0.03	0.54	0.05	1.00	0.00	0.00
EACH	INCR	0.06867	30.00	0.00	0.00	0.00	5.00	5.80	0.00		0.00	0.10	0.50	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
27	5.99	5.91	0.20150	0.0	0.00155	0.59	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.001	0.002
28	5.91	5.83	0.27017	0.0	0.00208	0.44	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.002	0.002
29	5.83	5.75	0.33883	0.0	0.00261	0.35	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.002	0.003
30	5.75	5.67	0.40750	0.0	0.00314	0.29	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.003	0.003
31	5.67	5.59	0.47617	0.0	0.00367	0.25	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.003	0.004
32	5.59	5.52	0.54483	0.0	0.00419	0.22	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.004	0.004
33	5.52	5.44	0.61350	0.0	0.00472	0.19	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.004	0.005
34	5.44	5.36	0.68217	0.0	0.00525	0.17	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.004	0.005
35	5.36	5.28	0.75083	0.0	0.00578	0.16	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.005	0.006
36	5.28	5.20	0.81950	0.0	0.00631	0.14	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.005	0.006
37	5.20	5.12	0.88817	0.0	0.00684	0.13	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.006	0.007
38	5.12	5.04	0.95683	0.0	0.00737	0.12	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.006	0.007
39	5.04	4.96	1.02550	0.0	0.00789	0.12	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.007	0.008
40	4.96	4.88	1.09417	0.0	0.00842	0.11	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.007	0.008
41	4.88	4.80	1.16283	0.0	0.00895	0.10	2.07	62.75	10261.51	4957.25	129.89	0.00	0.000	0.008	0.009
TOT					3.39				153922.59	74358.75					
AVG				0.0040		2.07	62.75				129.89				
CUM					65.94										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE **	SRCE **	DENIT PROD 1/da	PO4 PROD 1/da	ALG DECAY 1/da	MAC DECAY 1/da	COLI SETT 1/da	NCM	NCM
27	5.911	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.29	0.29	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
28	5.832	7.35	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
29	5.753	7.36	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00		
30	5.674	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
31	5.595	7.37	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
32	5.516	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
33	5.437	7.38	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
34	5.358	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
35	5.279	7.39	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
36	5.200	7.40	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
37	5.121	7.41	0.42	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
38	5.042	7.41	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
39	4.963	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
40	4.884	7.42	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
41	4.805	7.43	0.41	0.11	0.01	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.01	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.34	0.06	0.00	0.00	0.01	0.00	0.00	0.12		0.05	0.00	0.10	0.00	0.00	0.00		3.00	0.00	0.00			

* g/m²/d ** mg/L/day

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

ELEM	ENDING	TEMP	SALN	CM-I	CM-II	DO	BOD#1	BOD#2	EBOD#1	EBOD#2	ORGN	NH3	NO3+2	TOTN	PHOS	CHL A	MACRO	COLI	NCM

NO.	DIST	DEG C	PPT	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	g/m³	#/100mL
27	5.911	31.65	0.00	0.00	0.00	5.34	2.92	0.00	2.92	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00		0.	0.00
28	5.832	31.61	0.00	0.00	0.00	5.41	3.47	0.00	3.47	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00		0.	0.00
29	5.753	31.56	0.00	0.00	0.00	5.44	3.79	0.00	3.79	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00		0.	0.00
30	5.674	31.51	0.00	0.00	0.00	5.45	3.99	0.00	3.99	0.00	0.00	0.06	0.52	0.58	0.05	1.00	0.00		0.	0.00
31	5.595	31.47	0.00	0.00	0.00	5.46	4.13	0.00	4.13	0.00	0.00	0.06	0.52	0.59	0.05	1.00	0.00		0.	0.00
32	5.516	31.42	0.00	0.00	0.00	5.46	4.24	0.00	4.24	0.00	0.00	0.06	0.52	0.59	0.05	1.00	0.00		0.	0.00
33	5.437	31.37	0.00	0.00	0.00	5.46	4.31	0.00	4.31	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
34	5.358	31.33	0.00	0.00	0.00	5.46	4.38	0.00	4.38	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
35	5.279	31.28	0.00	0.00	0.00	5.46	4.42	0.00	4.42	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
36	5.200	31.23	0.00	0.00	0.00	5.46	4.47	0.00	4.47	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
37	5.121	31.19	0.00	0.00	0.00	5.46	4.50	0.00	4.50	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
38	5.042	31.14	0.00	0.00	0.00	5.46	4.53	0.00	4.53	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
39	4.963	31.09	0.00	0.00	0.00	5.46	4.55	0.00	4.55	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
40	4.884	31.05	0.00	0.00	0.00	5.46	4.57	0.00	4.57	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00
41	4.805	31.00	0.00	0.00	0.00	5.46	4.59	0.00	4.59	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00		0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105

REACH NO. 7 Include D COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 µg/L	PHOS #/100mL	CHL A	COLI	NCM
42	UPR RCH	1.16283	31.00	0.00	0.00	0.00	5.46	4.59	0.00	4.59	0.00	0.00	0.07	0.52	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
42	4.80	4.71	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
43	4.71	4.62	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
44	4.62	4.52	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
45	4.52	4.43	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
46	4.43	4.33	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
47	4.33	4.24	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
48	4.24	4.14	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
49	4.14	4.05	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
50	4.05	3.95	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
51	3.95	3.86	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
52	3.86	3.76	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
53	3.76	3.67	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
54	3.67	3.57	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
55	3.57	3.48	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
56	3.48	3.38	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
57	3.38	3.29	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
58	3.29	3.19	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
59	3.19	3.10	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
60	3.10	3.00	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
61	3.00	2.91	1.16283	0.0	0.00508	0.22	2.77	82.70	21705.23	7835.82	229.08	0.00	0.000	0.005	0.005
TOT					4.32			434104.81	156716.53						
AVG				0.0051		2.77	82.70				229.08				
CUM					70.26										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT *	BOD#2 DECAY *	ABOD#2 SOD *	BKGD SOD 1/da	FULL SOD 1/da	CORR DECAY 1/da	ORGN SETT *	ORGN DECAY **	NH3 SRCE **	NH3 RATE 1/da	DENIT PROD 1/da	PO4 PROD 1/da	ALG DECAY	MAC DECAY	COLI SETT	NCM	NCM
42	4.710	7.43	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
43	4.615	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
44	4.521	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
45	4.426	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.30	0.30	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
46	4.331	7.42	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
47	4.237	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
48	4.142	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
49	4.047	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
50	3.952	7.41	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
51	3.858	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
52	3.763	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
53	3.668	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
54	3.573	7.40	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
55	3.479	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
56	3.384	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
57	3.289	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.24	0.29	0.29	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
58	3.194	7.39	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
59	3.100	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
60	3.005	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
61	2.910	7.38	0.31	0.11	0.00	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.00	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.25	0.06	0.00	0.00	0.01	0.00	0.00	0.12			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
42	4.710	31.02	0.00	0.00	0.00	5.48	4.48	0.00	4.48	0.00	0.00	0.07	0.52	0.59	0.05	1.00	0.00	0.	0.00
43	4.615	31.04	0.00	0.00	0.00	5.50	4.38	0.00	4.38	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
44	4.521	31.06	0.00	0.00	0.00	5.52	4.27	0.00	4.27	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
45	4.426	31.08	0.00	0.00	0.00	5.54	4.17	0.00	4.17	0.00	0.00	0.06	0.53	0.59	0.05	1.00	0.00	0.	0.00
46	4.331	31.10	0.00	0.00	0.00	5.57	4.07	0.00	4.07	0.00	0.00	0.05	0.53	0.59	0.05	1.00	0.00	0.	0.00
47	4.237	31.12	0.00	0.00	0.00	5.59	3.97	0.00	3.97	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
48	4.142	31.14	0.00	0.00	0.00	5.62	3.88	0.00	3.88	0.00	0.00	0.05	0.53	0.58	0.05	1.00	0.00	0.	0.00
49	4.047	31.16	0.00	0.00	0.00	5.64	3.79	0.00	3.79	0.00	0.00	0.05	0.54	0.58	0.05	1.00	0.00	0.	0.00
50	3.952	31.18	0.00	0.00	0.00	5.67	3.70	0.00	3.70	0.00	0.00	0.05	0.54	0.58	0.05	1.00	0.00	0.	0.00
51	3.858	31.20	0.00	0.00	0.00	5.69	3.61	0.00	3.61	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
52	3.763	31.22	0.00	0.00	0.00	5.72	3.52	0.00	3.52	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
53	3.668	31.24	0.00	0.00	0.00	5.74	3.44	0.00	3.44	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
54	3.573	31.26	0.00	0.00	0.00	5.77	3.36	0.00	3.36	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
55	3.479	31.28	0.00	0.00	0.00	5.79	3.27	0.00	3.27	0.00	0.00	0.04	0.54	0.58	0.05	1.00	0.00	0.	0.00
56	3.384	31.30	0.00	0.00	0.00	5.82	3.20	0.00	3.20	0.00	0.00	0.03	0.54	0.58	0.05	1.00	0.00	0.	0.00
57	3.289	31.32	0.00	0.00	0.00	5.85	3.12	0.00	3.12	0.00	0.00	0.03	0.54	0.58	0.05	1.00	0.00	0.	0.00
58	3.194	31.34	0.00	0.00	0.00	5.87	3.04	0.00	3.04	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
59	3.100	31.36	0.00	0.00	0.00	5.90	2.97	0.00	2.97	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
60	3.005	31.38	0.00	0.00	0.00	5.92	2.90	0.00	2.90	0.00	0.00	0.03	0.55	0.57	0.05	1.00	0.00	0.	0.00
61	2.910	31.40	0.00	0.00	0.00	5.95	2.83	0.00	2.83	0.00	0.00	0.03	0.55	0.57	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105

REACH NO. 8 Include E COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
62	UPR RCH	1.16283	31.40	0.00	0.00	0.00	5.95	2.83	0.00	2.83	0.00	0.00	0.03	0.55	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
62	2.91	2.82	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
63	2.82	2.74	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
64	2.74	2.65	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
65	2.65	2.56	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
66	2.56	2.48	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
67	2.48	2.39	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
68	2.39	2.30	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
69	2.30	2.22	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
70	2.22	2.13	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
71	2.13	2.04	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
72	2.04	1.96	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
73	1.96	1.87	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
74	1.87	1.78	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
75	1.78	1.70	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
76	1.70	1.61	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
77	1.61	1.52	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
78	1.52	1.44	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
79	1.44	1.35	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
80	1.35	1.26	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
81	1.26	1.17	1.16283	0.0	0.00750	0.13	2.29	67.70	13449.11	5872.97	155.03	0.00	0.000	0.007	0.008
TOT					2.68				268982.22	117459.52					
AVG				0.0075			2.29	67.70			155.03				
CUM					72.94										

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

ELEM NO.	ENDING DIST mg/L	SAT D.O.	REAER RATE 1/da	DECAY 1/da	BOD#1 SETT 1/da	BOD#1 DECAY 1/da	ABOD#1 DECAY 1/da	BOD#2 SETT 1/da	BOD#2 DECAY 1/da	ABOD#2 SETT *	BKGD *	FULL *	CORR SOD 1/da	ORGN SOD 1/da	ORGN DECAY *	NH3 SETT 1/da	NH3 DECAY *	DENIT **	PO4 **	ALG SRCE 1/da	MAC RATE 1/da	COLI SRCE 1/da	NCM PROD	NCM PROD	NCM DECAY	NCM DECAY	NCM SETT
62	2.823	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.23	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
63	2.737	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
64	2.650	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
65	2.563	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
66	2.476	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
67	2.389	7.38	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
68	2.303	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
69	2.216	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
70	2.129	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
71	2.042	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
72	1.956	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
73	1.869	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
74	1.782	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
75	1.695	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				
76	1.609	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00				

77	1.522	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
78	1.435	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
79	1.348	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
80	1.262	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
81	1.175	7.37	0.38	0.11	0.01	0.00	0.01	0.00	0.00	0.25	0.27	0.27	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.31	0.06	0.00	0.00	0.01	0.00	0.00	0.12			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
62	2.823	31.40	0.00	0.00	0.00	5.97	2.79	0.00	2.79	0.00	0.00	0.03	0.55	0.57	0.05	1.00	0.00	0.	0.00
63	2.737	31.41	0.00	0.00	0.00	6.00	2.74	0.00	2.74	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
64	2.650	31.41	0.00	0.00	0.00	6.02	2.70	0.00	2.70	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
65	2.563	31.42	0.00	0.00	0.00	6.04	2.66	0.00	2.66	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
66	2.476	31.42	0.00	0.00	0.00	6.07	2.62	0.00	2.62	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
67	2.389	31.43	0.00	0.00	0.00	6.09	2.58	0.00	2.58	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
68	2.303	31.43	0.00	0.00	0.00	6.11	2.54	0.00	2.54	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
69	2.216	31.44	0.00	0.00	0.00	6.13	2.50	0.00	2.50	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
70	2.129	31.44	0.00	0.00	0.00	6.15	2.46	0.00	2.46	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
71	2.042	31.45	0.00	0.00	0.00	6.17	2.43	0.00	2.43	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
72	1.956	31.45	0.00	0.00	0.00	6.19	2.39	0.00	2.39	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
73	1.869	31.46	0.00	0.00	0.00	6.21	2.35	0.00	2.35	0.00	0.00	0.02	0.55	0.57	0.05	1.00	0.00	0.	0.00
74	1.782	31.47	0.00	0.00	0.00	6.23	2.32	0.00	2.32	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
75	1.695	31.47	0.00	0.00	0.00	6.25	2.28	0.00	2.28	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
76	1.609	31.48	0.00	0.00	0.00	6.26	2.25	0.00	2.25	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
77	1.522	31.48	0.00	0.00	0.00	6.28	2.21	0.00	2.21	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
78	1.435	31.49	0.00	0.00	0.00	6.30	2.18	0.00	2.18	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
79	1.348	31.49	0.00	0.00	0.00	6.32	2.15	0.00	2.15	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
80	1.262	31.50	0.00	0.00	0.00	6.33	2.11	0.00	2.11	0.00	0.00	0.01	0.55	0.56	0.05	1.00	0.00	0.	0.00
81	1.175	31.50	0.00	0.00	0.00	6.35	2.08	0.00	2.08	0.00	0.00	0.01	0.55	0.56	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105

REACH NO. 9 Include F COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
82	UPR RCH	1.16283	31.50	0.00	0.00	0.00	6.35	2.08	0.00	2.08	0.00	0.00	0.01	0.55	0.05	1.00	0.00	0.00
EACH	INCR	0.02500	30.00	0.00	0.00	0.00	5.00	5.80	0.00		0.00	0.10	0.50	0.00		0.00	0.00	

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
82	1.17	1.12	1.18783	0.0	0.00970	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.008	0.010
83	1.12	1.07	1.21283	0.0	0.00990	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.008	0.010
84	1.07	1.02	1.23783	0.0	0.01010	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.010
85	1.02	0.96	1.26283	0.0	0.01031	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.010
86	0.96	0.91	1.28783	0.0	0.01051	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.011
87	0.91	0.86	1.31283	0.0	0.01072	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.011
88	0.86	0.80	1.33783	0.0	0.01092	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.011
89	0.80	0.75	1.36283	0.0	0.01112	0.06	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.009	0.011
90	0.75	0.70	1.38783	0.0	0.01133	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.011

91	0.70	0.65	1.41283	0.0	0.01153	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012
92	0.65	0.59	1.43783	0.0	0.01174	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012
93	0.59	0.54	1.46283	0.0	0.01194	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012
94	0.54	0.49	1.48783	0.0	0.01214	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.010	0.012
95	0.49	0.43	1.51283	0.0	0.01235	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.012
96	0.43	0.38	1.53783	0.0	0.01255	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
97	0.38	0.33	1.56283	0.0	0.01276	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
98	0.33	0.27	1.58783	0.0	0.01296	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
99	0.27	0.22	1.61283	0.0	0.01316	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
100	0.22	0.17	1.63783	0.0	0.01337	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.011	0.013
101	0.17	0.12	1.66283	0.0	0.01357	0.05	2.08	58.90	6493.14	3121.70	122.51	0.00	0.000	0.012	0.014
TOT					1.07				129862.70	62433.99					
AVG				0.0115			2.08	58.90			122.51				
CUM					74.00										

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	DENIT RATE	PO4 SRCE	ALG PROD	MAC PROD	COLI DECAY	NCM DECAY	NCM SETT
	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da
82	1.122	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
83	1.069	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
84	1.016	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
85	0.963	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
86	0.910	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
87	0.857	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
88	0.804	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
89	0.751	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
90	0.698	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
91	0.645	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
92	0.592	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
93	0.539	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
94	0.486	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
95	0.433	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
96	0.380	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
97	0.327	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
98	0.274	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
99	0.221	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
100	0.168	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
101	0.115	7.37	0.42	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.34	0.07	0.00	0.00	0.01	0.00	0.00	0.12			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m^3	MACRO	COLI #/100mL	NCM
82	1.122	31.50	0.00	0.00	0.00	6.33	2.14	0.00	2.14	0.00	0.00	0.02	0.55	0.56	0.05	1.00	0.00	0.	0.00
83	1.069	31.50	0.00	0.00	0.00	6.31	2.20	0.00	2.20	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
84	1.016	31.50	0.00	0.00	0.00	6.29	2.26	0.00	2.26	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
85	0.963	31.50	0.00	0.00	0.00	6.27	2.31	0.00	2.31	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
86	0.910	31.50	0.00	0.00	0.00	6.25	2.36	0.00	2.36	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
87	0.857	31.50	0.00	0.00	0.00	6.24	2.41	0.00	2.41	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
88	0.804	31.50	0.00	0.00	0.00	6.22	2.45	0.00	2.45	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00

89	0.751	31.50	0.00	0.00	0.00	6.20	2.50	0.00	2.50	0.00	0.00	0.02	0.54	0.56	0.05	1.00	0.00	0.	0.00
90	0.698	31.50	0.00	0.00	0.00	6.19	2.54	0.00	2.54	0.00	0.00	0.03	0.54	0.56	0.05	1.00	0.00	0.	0.00
91	0.645	31.50	0.00	0.00	0.00	6.18	2.58	0.00	2.58	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
92	0.592	31.50	0.00	0.00	0.00	6.16	2.62	0.00	2.62	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
93	0.539	31.50	0.00	0.00	0.00	6.15	2.65	0.00	2.65	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
94	0.486	31.50	0.00	0.00	0.00	6.14	2.69	0.00	2.69	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
95	0.433	31.50	0.00	0.00	0.00	6.12	2.72	0.00	2.72	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
96	0.380	31.50	0.00	0.00	0.00	6.11	2.76	0.00	2.76	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
97	0.327	31.50	0.00	0.00	0.00	6.10	2.79	0.00	2.79	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
98	0.274	31.50	0.00	0.00	0.00	6.09	2.82	0.00	2.82	0.00	0.00	0.03	0.54	0.57	0.05	1.00	0.00	0.	0.00
99	0.221	31.50	0.00	0.00	0.00	6.08	2.85	0.00	2.85	0.00	0.00	0.03	0.53	0.57	0.05	1.00	0.00	0.	0.00
100	0.168	31.50	0.00	0.00	0.00	6.07	2.87	0.00	2.87	0.00	0.00	0.03	0.53	0.57	0.05	1.00	0.00	0.	0.00
101	0.115	31.50	0.00	0.00	0.00	6.06	2.90	0.00	2.90	0.00	0.00	0.03	0.53	0.57	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 10 To Lock 3 COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
102	UPR RCH	1.66283	31.50	0.00	0.00	0.00	6.06	2.90	0.00	2.90	0.00	0.00	0.03	0.53	0.05	1.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
102	0.12	0.06	1.66283	0.0	0.01092	0.06	2.34	65.10	8759.20	3743.25	152.33	0.00	0.000	0.010	0.011
103	0.06	0.00	1.66283	0.0	0.01092	0.06	2.34	65.10	8759.20	3743.25	152.33	0.00	0.000	0.010	0.011
TOT					0.12				17518.41	7486.50					
AVG				0.0109			2.34	65.10			152.33				
CUM					74.13										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	ORGN SRCE *	NH3 RATE 1/da	NH3 SRCE *	DENIT PROD **	PO4 PROD **	ALG DECAY 1/da	MAC DECAY 1/da	COLI SETT 1/da	NCM DECAY	NCM SETT
102	0.058	7.37	0.37	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.29	0.29	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
103	0.000	7.37	0.37	0.12	0.01	0.00	0.01	0.00	0.00	0.25	0.28	0.28	0.06	0.01	0.24	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.30	0.07	0.00	0.00	0.01	0.00	0.00	0.12			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
102	0.058	31.50	0.00	0.00	0.00	6.06	2.88	0.00	2.88	0.00	0.00	0.03	0.53	0.57	0.05	1.00	0.00	0.	0.00
103	0.000	31.50	0.00	0.00	0.00	6.04	2.77	0.00	2.77	0.00	0.00	0.04	0.52	0.55	0.05	1.00	0.00	0.	0.00

STREAM SUMMARY Pearl River DO Modeling 090105
Headwater COEF-1 Run

TRAVEL TIME = 74.13 DAYS
MAXIMUM EFFLUENT = 0.00 PERCENT
FLOW = 0.00283 TO 1.66283 m³/s
DISPERSION = 0.0000 TO 0.0116 m²/s
VELOCITY = 0.00006 TO 0.01357 m/s
DEPTH = 0.99 TO 2.77 m
WIDTH = 43.75 TO 82.70 m

BOD DECAY = 0.11 TO 0.12 per day
NH3 DECAY = 0.22 TO 0.26 per day
SOD = 0.25 TO 1.83 g/m²/d
NH3 SOURCE = 0.00 TO 0.00 g/m²/d
REAERATION = 0.31 TO 0.88 per day
BOD SETTLING = 0.00 TO 0.01 per day
ORG-N DECAY = 0.06 TO 0.06 per day
ORG-N SETTLING = 0.00 TO 0.01 per day
TEMPERATURE = 31.00 TO 32.10 deg C
DISSOLVED OXYGEN = 5.00 TO 7.13 mg/L
Pearl River DO Modeling 090105
COEF-1 Run
REACH SUMMARY REPORT FOR Headwater

RCH NO.	REACH NAME	BEGIN DIST km	ENDING DIST km	REACH LENGTH km	TRAVEL TIME days	FLOW AT EOR m3/s	AVERAGE VELO m/s	AVG DEPTH m	AVG WIDTH m	FLOW AT EOR cfs	AVERAGE VELO fps	AVG DEPTH ft	AVG WIDTH ft
1	Pearl River to Above A	7.77	7.69	0.08	14.47	0.00283	0.00006	0.990	44.70	0.100	0.000	3.248	146.66
2	Include A	7.69	7.57	0.12	22.61	0.00283	0.00006	0.990	44.70	0.100	0.000	3.248	146.66
3	Include Stream 1	7.57	7.49	0.08	14.47	0.00283	0.00006	0.990	44.70	0.100	0.000	3.248	146.66
4	Include B	7.49	6.76	0.72	7.54	0.13283	0.00111	0.990	44.70	4.690	0.004	3.248	146.66
5	Include C	6.76	5.99	0.77	3.46	0.13283	0.00257	1.180	43.75	4.690	0.008	3.872	143.54
6	Include Stream 2	5.99	4.80	1.18	3.39	1.16283	0.00404	2.070	62.75	41.060	0.013	6.792	205.88
7	Include D	4.80	2.91	1.89	4.32	1.16283	0.00508	2.770	82.70	41.060	0.017	9.088	271.34
8	Include E	2.91	1.17	1.74	2.68	1.16283	0.00750	2.290	67.70	41.060	0.025	7.513	222.12
9	Include F	1.17	0.12	1.06	1.07	1.66283	0.01151	2.080	58.90	58.715	0.038	6.824	193.25
10	To Lock 3	0.12	0.00	0.12	0.12	1.66283	0.01092	2.340	65.10	58.715	0.036	7.678	213.59

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	NONP OUT	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N DECA	ORG-N BKGD	NCM BOD1	SOD ALG	SOD NCM	SOD PHOT	SOD RESP	ALG PHOT	ALG OUT	MAC IN	TOT	TOT
1	1.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	-2.5	2.5	0.00
2	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	-2.4	2.4	0.00
3	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	0.	-2.6	2.6	0.00
4	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	-1.	0.	0.	0.	0.	0.	0.	0.	-2.5	2.5	0.00
5	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	-2.2	2.2	0.00
6	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	-2.2	2.2	0.00
7	2.	0.	-7.	0.	0.	0.	6.	0.	0.	0.	0.	6.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-13.8	13.8	0.00
8	7.	0.	-13.	0.	0.	0.	6.	0.	0.	0.	0.	6.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-19.3	19.3	0.00
9	13.	0.	-18.	0.	0.	0.	6.	0.	0.	0.	0.	6.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-24.9	24.9	0.00
10	18.	0.	-24.	0.	0.	0.	6.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-30.5	30.5	0.00
11	24.	0.	-29.	0.	0.	0.	6.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-36.1	36.1	0.00
12	29.	0.	-35.	0.	0.	0.	6.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-41.7	41.7	0.00
13	35.	0.	-41.	0.	0.	0.	6.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-47.4	47.4	0.00
14	41.	0.	-46.	0.	0.	0.	6.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-53.0	53.0	0.00
15	46.	0.	-52.	0.	0.	0.	6.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-58.7	58.7	0.00
16	52.	0.	-58.	0.	0.	0.	6.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-64.3	64.3	0.00
17	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-64.7	64.7	0.00
18	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-64.7	64.7	0.00
19	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-64.7	64.7	0.00
20	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-64.8	64.8	0.00
21	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-64.8	64.8	0.00
22	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-64.9	64.9	0.00
23	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-65.0	65.0	0.00
24	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-65.1	65.1	0.00
25	58.	0.	-58.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-65.2	65.2	0.00
26	58.	0.	-59.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-1.	0.	0.	0.	-6.	0.	0.	0.	0.	0.	0.	-65.3	65.3	0.00
27	59.	0.	-93.	0.	0.	0.	30.	0.	0.	0.	0.	9.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-97.7	97.7	0.00
28	93.	0.	-126.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-131.8	131.8	0.00
29	126.	0.	-159.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-165.1	165.1	0.00
30	159.	0.	-192.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-198.1	198.1	0.00
31	192.	0.	-225.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-230.8	230.8	0.00
32	225.	0.	-257.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-263.3	263.3	0.00
33	257.	0.	-289.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-295.8	295.8	0.00
34	289.	0.	-322.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-328.2	328.2	0.00
35	322.	0.	-354.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-360.6	360.6	0.00
36	354.	0.	-386.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-392.9	392.9	0.00
37	386.	0.	-419.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-425.3	425.3	0.00
38	419.	0.	-451.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-457.6	457.6	0.00
39	451.	0.	-483.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-489.9	489.9	0.00
40	483.	0.	-516.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-522.3	522.3	0.00
41	516.	0.	-548.	0.	0.	0.	30.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-554.6	554.6	0.00
42	548.	0.	-550.	0.	0.	0.	0.	0.	0.	0.	0.	13.	-10.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-563.0	563.0	0.00
43	550.	0.	-552.	0.	0.	0.	0.	0.	0.	0.	0.	13.	-10.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-564.9	564.9	0.00
44	552.	0.	-555.	0.	0.	0.	0.	0.	0.	0.	0.	13.	-10.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-566.9	566.9	0.00
45	555.	0.	-557.	0.	0.	0.	0.	0.	0.	0.	0.	13.	-10.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-569.0	569.0	0.00
46	557.	0.	-559.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-10.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-571.2	571.2	0.00

47	559.	0.	-562.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-9.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-573.4	573.4	0.00
48	562.	0.	-564.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-9.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-575.6	575.6	0.00
49	564.	0.	-567.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-9.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-577.9	577.9	0.00
50	567.	0.	-569.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-9.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-580.3	580.3	0.00
51	569.	0.	-572.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-9.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-582.6	582.6	0.00
52	572.	0.	-574.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-8.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-585.0	585.0	0.00
53	574.	0.	-577.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-8.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-587.4	587.4	0.00
54	577.	0.	-580.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-8.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-589.8	589.8	0.00
55	580.	0.	-582.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-8.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-592.2	592.2	0.00
56	582.	0.	-585.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-8.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-594.6	594.6	0.00
57	585.	0.	-587.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-7.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-597.1	597.1	0.00
58	587.	0.	-590.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-7.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-599.5	599.5	0.00
59	590.	0.	-593.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-7.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-601.9	601.9	0.00

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N BKGD	ORG-N BOD1	NCM ALG	SOD NCM	SOD PHOT	SOD RESP	SOD PHOT	ALG OUT	ALG IN	MAC	TOT	TOT
60	593.	0.	-595.	0.	0.	0.	0.	0.	0.	0.	10.	-7.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-604.3	604.3	0.00
61	595.	0.	-598.	0.	0.	0.	0.	0.	0.	0.	10.	-7.	0.	0.	0.	-2.	0.	0.	0.	2.	0.	0.	-606.6	606.6	0.00
62	598.	0.	-600.	0.	0.	0.	0.	0.	0.	0.	7.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-605.9	605.9	0.00
63	600.	0.	-603.	0.	0.	0.	0.	0.	0.	0.	7.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-608.3	608.3	0.00
64	603.	0.	-605.	0.	0.	0.	0.	0.	0.	0.	7.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-610.6	610.6	0.00
65	605.	0.	-607.	0.	0.	0.	0.	0.	0.	0.	7.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-612.8	612.8	0.00
66	607.	0.	-609.	0.	0.	0.	0.	0.	0.	0.	7.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-615.0	615.0	0.00
67	609.	0.	-612.	0.	0.	0.	0.	0.	0.	0.	7.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-617.2	617.2	0.00
68	612.	0.	-614.	0.	0.	0.	0.	0.	0.	0.	6.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-619.3	619.3	0.00
69	614.	0.	-616.	0.	0.	0.	0.	0.	0.	0.	6.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-621.3	621.3	0.00
70	616.	0.	-618.	0.	0.	0.	0.	0.	0.	0.	6.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-623.3	623.3	0.00
71	618.	0.	-620.	0.	0.	0.	0.	0.	0.	0.	6.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-625.2	625.2	0.00
72	620.	0.	-622.	0.	0.	0.	0.	0.	0.	0.	6.	-4.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-627.1	627.1	0.00
73	622.	0.	-624.	0.	0.	0.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-629.0	629.0	0.00
74	624.	0.	-626.	0.	0.	0.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-630.8	630.8	0.00
75	626.	0.	-628.	0.	0.	0.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-632.6	632.6	0.00
76	628.	0.	-629.	0.	0.	0.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-634.3	634.3	0.00
77	629.	0.	-631.	0.	0.	0.	0.	0.	0.	0.	6.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-636.0	636.0	0.00
78	631.	0.	-633.	0.	0.	0.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-637.7	637.7	0.00
79	633.	0.	-635.	0.	0.	0.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-639.3	639.3	0.00
80	635.	0.	-636.	0.	0.	0.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-640.9	640.9	0.00
81	636.	0.	-638.	0.	0.	0.	0.	0.	0.	0.	5.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-642.5	642.5	0.00
82	638.	0.	-649.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-651.9	651.9	0.00
83	649.	0.	-661.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-663.6	663.6	0.00
84	661.	0.	-673.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-675.2	675.2	0.00
85	673.	0.	-684.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-686.9	686.9	0.00
86	684.	0.	-696.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-698.5	698.5	0.00
87	696.	0.	-707.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-710.2	710.2	0.00
88	707.	0.	-719.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-721.8	721.8	0.00
89	719.	0.	-731.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-733.5	733.5	0.00
90	731.	0.	-742.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-745.2	745.2	0.00
91	742.	0.	-754.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-756.9	756.9	0.00
92	754.	0.	-766.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-768.5	768.5	0.00
93	766.	0.	-777.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-780.2	780.2	0.00
94	777.	0.	-789.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-791.9	791.9	0.00
95	789.	0.	-801.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-803.6	803.6	0.00
96	801.	0.	-812.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-815.3	815.3	0.00
97	812.	0.	-824.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-827.0	827.0	0.00
98	824.	0.	-836.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-838.7	838.7	0.00
99	836.	0.	-847.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-850.4	850.4	0.00
100	847.	0.	-859.	0.	0.	0.	11.	0.	0.	0.	0.	3.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-862.1	862.1	0.00
101	859.	0.	-871.	0.	0.	0.	11.	0.	0.	0.	0.	4.	-2.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-873.8	873.8	0.00
102	871.	0.	-871.	0.	0.	0.	0.	0.	0.	0.	0.	4.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-875.5	875.5	0.00
103	871.	0.	-868.	0.	0.	-5.	0.	0.	0.	0.	0.	4.	-3.	0.	0.	0.	-1.	0.	0.	0.	1.	0.	0.	-876.4	876.4	0.00

Pearl River DO Modeling 090105
COEF-1 Run
INPUT/OUTPUT LOADING SUMMARY

	FLOW	DO	BOD#1	BOD#2	ORG-N	NH3-N	NO3-N	PHOS	CHL A	NCM
	m³/s	kg/d	kg/d	kg/d	kg/d	kg/d	kg/d	kg/d		
HEADWATER FLOW	0.003	1.2	0.9	0.0	0.0	0.0	0.1	0.0	0.0	0.0
INCREMENTAL INFLOW	1.660	717.1	807.1	0.0	0.0	14.3	71.7	0.0	0.0	0.0
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FLOW THRU LOWER BNDRY	-1.663	-867.5	-397.5	0.0	0.0	-5.1	-74.6	0.0	0.0	0.0
DISPERSION THRU LOWER BNDRY		-4.9	-13.0	0.0	0.0	0.3	-2.3	0.0	0.0	0.0
DISPERSION THRU HDWTR BNDRY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NON-POINT INPUT		0.0	0.0	0.0	0.0			0.0		
NATURAL REAERATION		682.3								
DAM REAERATION		0.0								
BACKGROUND SOD		-222.5								
BOD#1 DECAY		-377.9	-377.9							
BOD#1 SETTLING		-19.7	-19.7							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0		0.0						
BOD#2 SETTLING		0.0		0.0						
ANAEROBIC BOD#2 DECAY					0.0					
ORG-N DECAY		0.0			0.0	0.0				
ORG-N SETTLING					0.0	0.0				
NH3 DECAY		0.0				-9.6	9.6			
BACKGROUND NH3 SOURCE							0.0			
OTHER DENITRIFICATION							0.0			
PHOSPHORUS SOURCE								0.0		
ALGAE PHOTOSYNTHESIS			91.8				0.0	-4.6	0.0	0.0
ALGAE RESPIRATION			0.0			0.0		0.0	0.0	
ALGAE SETTLING			0.0					0.0		
MACRO PHOTOSYNTHESIS				0.0			0.0	0.0	0.0	
NCM DECAY		0.0							0.0	
NCM SETTLING		0.0							0.0	
TOTAL INPUTS	1.663	1492.4	808.0	0.0	0.0	14.7	81.4	0.0	0.0	0.0
TOTAL OUTPUTS	-1.663	-1492.4	-808.0	0.0	0.0	-14.7	-81.4	0.0	0.0	0.0
NET CONVERGENCE ERROR		0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

.....EXECUTION COMPLETED

TMDL output file for subsegment 090204

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality
Input file is D:\LA TMDL 2006\PHASE I\Reports\Drafts\DO\RESULTS\TMDL\updates\Seg090204_TMDL_Update_ms.txt
Output produced at 17:10 on 11/29/2007
$$$ DATA TYPE 1 (TITLES AND CONTROL CARDS) $$$
CARD TYPE      CONTROL TITLES
TITLE01        Pearl River DO Modeling 090204
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01
$$$ DATA TYPE 2 (MODEL OPTIONS) $$$
CARD TYPE      MODEL OPTION
MODOPT    NO   TEMPERATURE
MODOPT    NO   SALINITY
MODOPT    NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT    NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT   YES   DISSOLVED OXYGEN
MODOPT   YES   BOD1
MODOPT    NO   BOD2
MODOPT   YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT    NO   PHOSPHORUS
MODOPT    NO   CHLOROPHYLL A
MODOPT    NO   MACROPHYTES
MODOPT    NO   COLIFORM
MODOPT    NO   NONCONSERVATIVE MATERIAL
ENDATA02
$$$ DATA TYPE 3 (PROGRAM CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
PROGRAM        MAXImum Iteration Limit          =      5000.00000
PROGRAM        HYDRaulic calculation method      =        2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE            =        1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE            =        1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                        =        0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE          =        3.00000 (inhibit all rates but SOD)
PROGRAM        ORGN OXYGEN UPTAKE RATE           =        0.00000 mg O/mg N
PROGRAM        NH3 OXYGEN UPTAKE RATE            =        0.00000 mg O/mg N
PROGRAM        K2 MAXIMUM                        =       25.00000 per day
ENDATA03
$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
 CARD TYPE     RATE CODE     THETA VALUE
ENDATA04
$$$ CONSTANTS TYPE 5 (TEMPERATURE DATA) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA05
$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA06
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$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA07
$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                        BEGIN      END    ELEM   REACH    ELEMS  BEGIN   END
CARD TYPE  REACH  ID  NAME                        REACH     REACH  LENGTH  LENGTH   PER RCH  ELEM  ELEM
                                          km        km      km      km            NUM    NUM
REACH ID    1  LA  Lock 3 to Below A              23.00  TO  21.50  0.3000    1.50     5      1     5
REACH ID    2  IB  Below A to Below B             21.50  TO  20.50  0.2000    1.00     5      6    10
REACH ID    3  IC  Below B to Below C             20.50  TO  19.00  0.3000    1.50     5     11    15
REACH ID    4  ID  Below C to Lock 2              19.00  TO  17.78  0.3050    1.22     4     16    19
REACH ID    5  IE  Lock 2 (Church) to ABTalisheek  17.78  TO  13.43  0.2900    4.35    15     20    34
REACH ID    6  I1  AB to Talisheek               13.43  TO  11.98  0.2900    1.45     5     35    39
REACH ID    7  IG  Talisheek to Below G           11.98  TO  10.40  0.3950    1.58     4     40    43
REACH ID    8  IH  Below G to Below H             10.40  TO   7.40  0.3000    3.00    10     44    53
REACH ID    9  II  Below H to Evans Creek          7.40  TO   5.45  0.3900    1.95     5     54    58
REACH ID   10  EP  Evans Creek to Possible Stream  5.45  TO   4.70  0.2500    0.75     3     59    61
REACH ID   11  PJ  Possible Stream to Junior High  4.70  TO   3.40  0.3250    1.30     4     62    65
REACH ID   12  IJ  Junior High to Spillway         3.40  TO   2.70  0.3500    0.70     2     66    67
REACH ID   13  IK  Spillway to Lock 1              2.70  TO   0.00  0.3000    2.70     9     68    76
ENDATA08
$$$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID     WIDTH     WIDTH     WIDTH     DEPTH     DEPTH     DEPTH     SLOPE   MANNINGS
                "A"       "B"       "C"       "D"       "E"       "F"                "N"
HYDRO-1     1  LA    0.000     0.000    55.100     0.000     0.000     2.210   0.00010   0.025
HYDRO-1     2  IB    0.000     0.000    55.100     0.000     0.000     2.210   0.00010   0.025
HYDRO-1     3  IC    0.000     0.000    55.100     0.000     0.000     2.210   0.00010   0.025
HYDRO-1     4  ID    0.000     0.000    59.300     0.000     0.000     2.110   0.00010   0.025
HYDRO-1     5  IE    0.000     0.000    62.900     0.000     0.000     1.910   0.00010   0.025
HYDRO-1     6  I1    0.000     0.000    62.900     0.000     0.000     1.910   0.00010   0.025
HYDRO-1     7  IG    0.000     0.000    69.500     0.000     0.000     3.750   0.00010   0.025
HYDRO-1     8  IH    0.000     0.000    49.600     0.000     0.000     1.640   0.00010   0.025
HYDRO-1     9  II    0.000     0.000    98.100     0.000     0.000     2.250   0.00010   0.025
HYDRO-1    10  EP    0.000     0.000    98.100     0.000     0.000     2.250   0.00010   0.025
HYDRO-1    11  PJ    0.000     0.000    98.100     0.000     0.000     2.250   0.00010   0.025
HYDRO-1    12  IJ    0.000     0.000    58.900     0.000     0.000     1.810   0.00010   0.025
HYDRO-1    13  IK    0.000     0.000    85.700     0.000     0.000     2.260   0.00010   0.025
ENDATA09
$$$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID    TIDAL    DISPERSION    DISPERSION    DISPERSION    DISPERSION
                RANGE      "A"          "B"          "C"          "D"
ENDATA10
$$$ DATA TYPE 11 (INITIAL CONDITIONS) $$$
CARD TYPE     REACH  ID     TEMP    SALIN      DO      NH3    NO3+2     PHOS    CHL A    MACRO
INITIAL         1  LA    32.10     0.00     5.00    0.10    0.20     0.07     1.50     0.00
INITIAL         2  IB    32.10     0.00     5.00    0.10    0.20     0.07     1.50     0.00
INITIAL         3  IC    32.10     0.00     5.00    0.10    0.20     0.07     1.50     0.00
INITIAL         4  ID    31.70     0.00     5.00    0.10    0.32     0.07     0.80     0.00
INITIAL         5  IE    31.80     0.00     5.00    0.10    0.15     0.07     3.60     0.00
INITIAL         6  I1    31.80     0.00     5.00    0.10    0.15     0.07     3.60     0.00
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INITIAL      7  IG    29.80    0.00    5.00    0.10    0.09    0.06    0.80    0.00
INITIAL      8  IH    30.90    0.00    5.00    0.10    0.04    0.06    4.20    0.00
INITIAL      9  II    30.80    0.00    5.00    0.11    0.06    0.06    7.30    0.00
INITIAL     10  EP    30.80    0.00    5.00    0.10    0.06    0.06    7.30    0.00
INITIAL     11  PJ    30.80    0.00    5.00    0.10    0.06    0.06    7.30    0.00
INITIAL     12  IJ    31.10    0.00    5.00    0.10    0.06    0.06    9.80    0.00
INITIAL     13  IK    31.60    0.00    5.00    0.10    0.04    0.03    2.30    0.00
ENDATA11
$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                  BOD    ANAER                BOD2    ANAER
CARD    RCH  RCH  K2            K2     K2     K2  BKGRND    BOD     BOD    CONV    BOD2    BOD2    BOD2    CONV    BOD2
TYPE    NUM   ID  OPT          "A"    "B"    "C"    SOD   DECAY    SETT  TO SOD   DECAY   DECAY    SETT  TO SOD   DECAY
                                     g/m²/d  per day    m/d         per day  per day    m/d         per day
COEF-1    1  LA   3 OCONNER-DOBB   0.000   0.000   0.000   0.310   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    2  IB   3 OCONNER-DOBB   0.000   0.000   0.000   0.310   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    3  IC   3 OCONNER-DOBB   0.000   0.000   0.000   0.250   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    4  ID   3 OCONNER-DOBB   0.000   0.000   0.000   0.250   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    5  IE   3 OCONNER-DOBB   0.000   0.000   0.000   0.060   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    6  I1   3 OCONNER-DOBB   0.000   0.000   0.000   1.950   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    7  IG   3 OCONNER-DOBB   0.000   0.000   0.000   0.190   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    8  IH   3 OCONNER-DOBB   0.000   0.000   0.000   0.190   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    9  II   3 OCONNER-DOBB   0.000   0.000   0.000   0.820   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   10  EP   3 OCONNER-DOBB   0.000   0.000   0.000   0.570   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   11  PJ   3 OCONNER-DOBB   0.000   0.000   0.000   0.570   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   12  IJ   3 OCONNER-DOBB   0.000   0.000   0.000   0.500   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   13  IK   3 OCONNER-DOBB   0.000   0.000   0.000   0.000   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
ENDATA12
$$$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) $$$
CARD TYPE    REACH  ID    ORG-N    ORG-N   ORGN CONV    NH3     NH3    PHOS    DENIT
                        DECA    SETT  TO NH3 SRCE   DECA    SRCE    SRCE    RATE
COEF-2       1  LA    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       2  IB    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       3  IC    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       4  ID    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       5  IE    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       6  I1    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       7  IG    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       8  IH    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2       9  II    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2      10  EP    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2      11  PJ    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2      12  IJ    0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2      13  IK    0.050   0.010   1.000   0.100   0.000   0.000   0.001
ENDATA13
$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$
CARD TYPE    REACH  ID    SECCHI   ALGAE:   ALGAE   ALG CONV   ALGAE   ALGAE   MACRO   MACRO
                        DEPTH    CHL A    SETT   TO SOD    GROW    RESP    GROW    RESP
COEF-3       1  LA    3.00   0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3       2  IB    3.00   0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3       3  IC    3.00   0.000    0.00    0.00    0.00    0.00    0.00    0.00
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COEF-3      4  ID     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      5  IE     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      6  I1     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      7  IG     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      8  IH     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3      9  II     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     10  EP     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     11  PJ     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     12  IJ     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
COEF-3     13  IK     3.00   0.000    0.00    0.00     0.00    0.00    0.00    0.00
ENDATA14
$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
CARD TYPE    REACH  ID   COLIFORM     NCM     NCM   NCM CONV
                       DIE-OFF    DECAY    SETT    TO SOD
COEF-4      1  LA     3.000   0.000   0.000   0.000
COEF-4      2  IB     3.000   0.000   0.000   0.000
COEF-4      3  IC     3.000   0.000   0.000   0.000
COEF-4      4  ID     3.000   0.000   0.000   0.000
COEF-4      5  IE     3.000   0.000   0.000   0.000
COEF-4      6  I1     3.000   0.000   0.000   0.000
COEF-4      7  IG     3.000   0.000   0.000   0.000
COEF-4      8  IH     3.000   0.000   0.000   0.000
COEF-4      9  II     3.000   0.000   0.000   0.000
COEF-4     10  EP     3.000   0.000   0.000   0.000
COEF-4     11  PJ     3.000   0.000   0.000   0.000
COEF-4     12  IJ     3.000   0.000   0.000   0.000
COEF-4     13  IK     3.000   0.000   0.000   0.000
ENDATA15
$$$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE    REACH  ID    OUTFLOW    INFLOW    TEMP    SALIN    CM-I    CM-II  IN/DIST  OUT/DIST
INCR-1      1  LA    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1      2  IB    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1      3  IC    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1      4  ID    0.00000   0.87000   30.00    0.00    0.00    0.00  0.71312  0.00000
INCR-1      5  IE    0.00000   0.28000   30.00    0.00    0.00    0.00  0.06437  0.00000
INCR-1      6  I1    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1      7  IG    0.00000   0.59000   30.00    0.00    0.00    0.00  0.37342  0.00000
INCR-1      8  IH    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1      9  II    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1     10  EP    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1     11  PJ    0.00000   0.30000   30.00    0.00    0.00    0.00  0.23077  0.00000
INCR-1     12  IJ    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1     13  IK    0.00000   0.00000   30.00    0.00    0.00    0.00  0.00000  0.00000
ENDATA16
$$$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE    REACH  ID      DO     BOD    ORG-N    NH3-N    NO3-N    BOD#2
INCR-2      1  LA    5.00    0.00    0.00    0.00    0.00    0.00
INCR-2      2  IB    5.00    0.00    0.00    0.00    0.00    0.00
INCR-2      3  IC    5.00    0.00    0.00    0.00    0.00    0.00
INCR-2      4  ID    5.00    1.98    0.00    0.50    0.10    0.00
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INCR-2      5  IE     5.00    3.96    0.00    0.50    0.10    0.00
INCR-2      6  I1     5.00    3.96    0.00    0.50    0.10    0.00
INCR-2      7  IG     5.00    5.94    0.00    1.00    0.10    0.00
INCR-2      8  IH     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2      9  II     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2     10  EP     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2     11  PJ     5.00    5.94    0.00    0.50    0.10    0.00
INCR-2     12  IJ     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2     13  IK     5.00    0.00    0.00    0.00    0.00    0.00
ENDATA17
$$$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
 CARD TYPE    REACH  ID     PHOS    CHL A    COLI     NCM
INCR-3      1  LA     0.00    0.00    0.00    0.00
INCR-3      2  IB     0.00    0.00    0.00    0.00
INCR-3      3  IC     0.00    0.00    0.00    0.00
INCR-3      4  ID     0.00    0.00    0.00    0.00
INCR-3      5  IE     0.00    0.00    0.00    0.00
INCR-3      6  I1     0.00    0.00    0.00    0.00
INCR-3      7  IG     0.00    0.00    0.00    0.00
INCR-3      8  IH     0.00    0.00    0.00    0.00
INCR-3      9  II     0.00    0.00    0.00    0.00
INCR-3     10  EP     0.00    0.00    0.00    0.00
INCR-3     11  PJ     0.00    0.00    0.00    0.00
INCR-3     12  IJ     0.00    0.00    0.00    0.00
INCR-3     13  IK     0.00    0.00    0.00    0.00
ENDATA18
$$$ DATA TYPE 19 (NONPOINT SOURCE DATA) $$$
CARD TYPE    REACH  ID     BOD#1    ORG-N    COLI     NCM      DO    BOD#2
ENDATA19
$$$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) $$$
CARD TYPE    ELEMENT  NAME              UNIT    FLOW    FLOW    TEMP    SALIN    CM-I    CM-II
                                         m³/s    cfs   deg C     ppt     mg/L     mg/L
HDWTR-1      1        Headwater   0   0.00283   0.100   30.00    0.00    0.000    0.000
ENDATA20
$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE    ELEMENT  NAME                DO    BOD#1    ORG-N    NH3-N    NO3-N    BOD#2
                                        mg/L     mg/L     mg/L     mg/L     mg/L     mg/L
HDWTR-2      1        Headwater      5.00     0.40     0.00     0.50     0.10     0.00
ENDATA21
$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT  NAME                PHOS    CHL A    COLI     NCM
                                        mg/L     mg/L     mg/L     mg/L
HDWTR-3      1        Headwater      0.00     0.00     0.00     0.00
ENDATA22
$$$ DATA TYPE 23 (JUNCTION DATA) $$$
CARD TYPE   JUNCTION   UPSTRM    RIVER    NAME
         ELEMENT  ELEMENT    KILOM
ENDATA23
$$$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE  ELEMENT    RKILO  NAME              FLOW     FLOW    FLOW    TEMP    SALIN    CM-I    CM-II
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                                        m³/s      cfs     MGD   deg C     ppt     mg/L     mg/L
WSTLD-1      20     17.78  Church            0.00008   0.00278   0.002   30.00     0.00     0.000     0.000
WSTLD-1      66      3.40  Junior High       0.00019   0.00665   0.004   30.00     0.00     0.000     0.000
ENDATA24
$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                 % BOD                    %
CARD TYPE    ELEMENT   NAME                  DO      BOD     RMVL    ORG-N    NH3-N   NITRIF    NO3-N    BOD#2
                                        mg/L     mg/L            mg/L     mg/L            mg/L     mg/L
WSTLD-2      20    Church                5.00     2.05     0.00     0.00     3.49     0.00     0.00     0.00
WSTLD-2      66    Junior High           5.00     2.05     0.00     0.00     2.33     0.00     0.00     0.00
ENDATA25
$$$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME                  PHOS    CHL A     COLI      NCM
                                        mg/L     mg/L     mg/L     mg/L
WSTLD-3      20    Church                0.00     0.00     0.00     0.00
WSTLD-3      66    Junior High           0.00     0.00     0.00     0.00
ENDATA26
$$$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) $$$
CARD TYPE    CONSTITUENT                CONCENTRATION
ENDATA27
$$$ DATA TYPE 28 (DAM DATA) $$$
CARD TYPE    ELEMENT   NAME                EQN      "A"      "B"      "H"
ENDATA28
$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$
CARD TYPE      PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8
SENSITIV       VELOCITY     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV       DISPERSI     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV       REAERATI     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV       BOD DECA     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV       BOD SETT     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV       BENTHAL      -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
ENDATA29
$$$ DATA TYPE 30 (PLOT CONTROL CARDS) $$$
NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =  13
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13
ENDATA30
$$$ DATA TYPE 31 (OVERLAY PLOT DATA) $$$
ENDATA31
    .....NO ERRORS DETECTED IN INPUT DATA
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN   5 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
 ***** WARNING:  NEGATIVE CONCENTRATIONS SET TO ZERO FOR Nitrate+Nitrite Nitrogen
    .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
INTERMEDIATE REPORT
 Dissolved Oxygen                                  Pearl River DO Modeling 090204
    mg/L                                        COEF-1 Run
  ID   RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
```

LA	1	1	6.82	6.86	6.86	6.86	6.86					
IB	2	6	6.86	6.86	6.86	6.86	6.86					
IC	3	11	6.99	6.97	6.95	6.93	6.91					
ID	4	16	5.67	5.71	5.75	5.79						
IE	5	20	6.04	6.24	6.40	6.54	6.65	6.74	6.82	6.88	6.94	6.98
IE	5	30	7.02	7.06	7.08	7.11	7.13					
I1	6	35	6.56	6.08	5.67	5.32	5.03					
IG	7	40	5.37	5.61	5.79	5.95						
IH	8	44	6.04	6.12	6.21	6.29	6.37	6.45	6.53	6.61	6.69	6.76
II	9	54	6.73	6.72	6.71	6.71	6.72					
EP	10	59	6.79	6.86	6.93							
PJ	11	62	6.94	6.95	6.98	7.01						
IJ	12	66	7.00	6.92								
IK	13	68	6.97	7.02	7.07	7.11	7.15	7.19	7.23	7.26	7.28	

INTERMEDIATE REPORT

Effective BOD — Pearl River DO Modeling 090204

mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.02	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.01					
ID	4	16	1.47	1.48	1.48	1.48						
IE	5	20	1.42	1.37	1.32	1.28	1.24	1.21	1.18	1.15	1.13	1.10
IE	5	30	1.08	1.06	1.05	1.03	1.02					
I1	6	35	0.96	0.91	0.86	0.81	0.77					
IG	7	40	1.21	1.53	1.76	1.94						
IH	8	44	1.88	1.83	1.78	1.73	1.68	1.64	1.59	1.55	1.50	1.46
II	9	54	1.34	1.23	1.13	1.04	0.95					
EP	10	59	0.90	0.85	0.81							
PJ	11	62	0.95	1.07	1.18	1.27						
IJ	12	66	1.23	1.19								
IK	13	68	1.13	1.07	1.02	0.96	0.92	0.87	0.83	0.79	0.74	

INTERMEDIATE REPORT

Biochemical Oxygen Demand — Pearl River DO Modeling 090204

mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.02	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.01					
ID	4	16	1.47	1.48	1.48	1.48						
IE	5	20	1.42	1.37	1.32	1.28	1.24	1.21	1.18	1.15	1.13	1.10
IE	5	30	1.08	1.06	1.05	1.03	1.02					
I1	6	35	0.96	0.91	0.86	0.81	0.77					
IG	7	40	1.21	1.53	1.76	1.94						
IH	8	44	1.88	1.83	1.78	1.73	1.68	1.64	1.59	1.55	1.50	1.46
II	9	54	1.34	1.23	1.13	1.04	0.95					
EP	10	59	0.90	0.85	0.81							
PJ	11	62	0.95	1.07	1.18	1.27						
IJ	12	66	1.23	1.19								
IK	13	68	1.13	1.07	1.02	0.96	0.92	0.87	0.83	0.79	0.74	

INTERMEDIATE REPORT
Organic Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.00	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.00					
ID	4	16	0.00	0.00	0.00	0.00						
IE	5	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IE	5	30	0.00	0.00	0.00	0.00	0.00					
I1	6	35	0.00	0.00	0.00	0.00	0.00					
IG	7	40	0.00	0.00	0.00	0.00						
IH	8	44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
II	9	54	0.00	0.00	0.00	0.00	0.00					
EP	10	59	0.00	0.00	0.00							
PJ	11	62	0.00	0.00	0.00	0.00						
IJ	12	66	0.00	0.00								
IK	13	68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

INTERMEDIATE REPORT
Ammonia Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.01	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.00					
ID	4	16	0.33	0.34	0.34	0.34						
IE	5	20	0.31	0.28	0.26	0.24	0.22	0.20	0.19	0.18	0.17	0.16
IE	5	30	0.15	0.14	0.14	0.13	0.13					
I1	6	35	0.12	0.11	0.10	0.09	0.09					
IG	7	40	0.16	0.21	0.24	0.27						
IH	8	44	0.26	0.25	0.24	0.23	0.22	0.21	0.21	0.20	0.19	0.19
II	9	54	0.16	0.15	0.13	0.11	0.10					
EP	10	59	0.09	0.09	0.08							
PJ	11	62	0.09	0.09	0.10	0.10						
IJ	12	66	0.10	0.09								
IK	13	68	0.09	0.08	0.08	0.07	0.06	0.06	0.06	0.05	0.05	

INTERMEDIATE REPORT
Nitrate+Nitrite Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.00	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.00					
ID	4	16	0.10	0.17	0.20	0.20						
IE	5	20	0.23	0.25	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.33
IE	5	30	0.34	0.34	0.34	0.35	0.35					
I1	6	35	0.35	0.36	0.36	0.37	0.37					
IG	7	40	0.37	0.37	0.37	0.38						
IH	8	44	0.38	0.39	0.40	0.40	0.40	0.41	0.41	0.41	0.42	0.42
II	9	54	0.42	0.43	0.42	0.42	0.42					

EP	10	59	0.42	0.41	0.41						
PJ	11	62	0.39	0.37	0.35	0.34					
IJ	12	66	0.34	0.34							
IK	13	68	0.34	0.35	0.35	0.35	0.36	0.36	0.36	0.36	0.36

INTERMEDIATE REPORT

Total Nitrogen — Pearl River DO Modeling 090204
mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.01	0.00	0.00	0.00	0.00					
IB	2	6	0.00	0.00	0.00	0.00	0.00					
IC	3	11	0.00	0.00	0.00	0.00	0.00					
ID	4	16	0.44	0.51	0.53	0.54						
IE	5	20	0.53	0.53	0.52	0.52	0.51	0.51	0.50	0.50	0.50	0.49
IE	5	30	0.49	0.48	0.48	0.48	0.47					
I1	6	35	0.47	0.47	0.46	0.46	0.46					
IG	7	40	0.53	0.58	0.61	0.64						
IH	8	44	0.64	0.64	0.63	0.63	0.63	0.62	0.62	0.61	0.61	0.60
II	9	54	0.59	0.57	0.55	0.54	0.52					
EP	10	59	0.51	0.50	0.49							
PJ	11	62	0.48	0.47	0.45	0.44						
IJ	12	66	0.44	0.44								
IK	13	68	0.43	0.43	0.43	0.42	0.42	0.42	0.41	0.41	0.41	

INTERMEDIATE REPORT

Chlorophyll a — Pearl River DO Modeling 090204
µg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	1.50	1.50	1.50	1.50	1.50					
IB	2	6	1.50	1.50	1.50	1.50	1.50					
IC	3	11	1.36	1.22	1.08	0.94	0.80					
ID	4	16	1.50	2.20	2.90	3.60						
IE	5	20	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
IE	5	30	3.60	3.60	3.60	3.60	3.60					
I1	6	35	3.04	2.48	1.92	1.36	0.80					
IG	7	40	1.65	2.50	3.35	4.20						
IH	8	44	4.51	4.82	5.13	5.44	5.75	6.06	6.37	6.68	6.99	7.30
II	9	54	7.30	7.30	7.30	7.30	7.30					
EP	10	59	7.30	7.30	7.30							
PJ	11	62	7.93	8.55	9.18	9.80						
IJ	12	66	6.05	2.30								
IK	13	68	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	

INTERMEDIATE REPORT

Temperature — Pearl River DO Modeling 090204
deg C — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	32.10	32.10	32.10	32.10	32.10					
IB	2	6	32.10	32.10	32.10	32.10	32.10					
IC	3	11	32.02	31.94	31.86	31.78	31.70					
ID	4	16	31.73	31.75	31.77	31.80						
IE	5	20	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80	31.80
IE	5	30	31.80	31.80	31.80	31.80	31.80					

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 I1    6   35      31.40    31.00    30.60    30.20    29.80
 IG    7   40      30.07    30.35    30.62    30.90
 IH    8   44      30.89    30.88    30.87    30.86    30.85    30.84    30.83    30.82    30.81    30.80
 II    9   54      30.80    30.80    30.80    30.80    30.80
 EP   10   59      30.80    30.80    30.80
 PJ   11   62      30.88    30.95    31.02    31.10
 IJ   12   66      31.35    31.60
 IK   13   68      31.60    31.60    31.60    31.60    31.60    31.60    31.60    31.60    31.60
INTERMEDIATE REPORT
 Salinity                                   Pearl River DO Modeling 090204
   ppt                                      COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 LA   1    1      0.00    0.00    0.00    0.00    0.00
 IB   2    6      0.00    0.00    0.00    0.00    0.00
 IC   3   11      0.00    0.00    0.00    0.00    0.00
 ID   4   16      0.00    0.00    0.00    0.00
 IE   5   20      0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
 IE   5   30      0.00    0.00    0.00    0.00    0.00
 I1   6   35      0.00    0.00    0.00    0.00    0.00
 IG   7   40      0.00    0.00    0.00    0.00
 IH   8   44      0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
 II   9   54      0.00    0.00    0.00    0.00    0.00
 EP  10   59      0.00    0.00    0.00
 PJ  11   62      0.00    0.00    0.00    0.00
 IJ  12   66      0.00    0.00
 IK  13   68      0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
INTERMEDIATE REPORT
 River Distance                             Pearl River DO Modeling 090204
   km                                       COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 LA   1    1      23.     22.     22.     22.     22.
 IB   2    6      21.     21.     21.     21.     20.
 IC   3   11      20.     20.     20.     19.     19.
 ID   4   16      19.     18.     18.     18.
 IE   5   20      17.     17.     17.     17.     16.     16.     16.     15.     15.     15.
 IE   5   30      15.     14.     14.     14.     13.
 I1   6   35      13.     13.     13.     12.     12.
 IG   7   40      12.     11.     11.     10.
 IH   8   44      10.     10.      9.      9.      9.      9.      8.      8.      8.      7.
 II   9   54       7.      7.      6.      6.      5.
 EP  10   59       5.      5.      5.
 PJ  11   62       4.      4.      4.      3.
 IJ  12   66       3.      3.
 IK  13   68       2.      2.      2.      2.      1.      1.      1.      0.      0.
INTERMEDIATE REPORT
 Flow                                       Pearl River DO Modeling 090204
   m³/s                                     COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 LA   1    1       0.0     0.0     0.0     0.0     0.0
 IB   2    6       0.0     0.0     0.0     0.0     0.0
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IC	3	11	0.0	0.0	0.0	0.0	0.0					
ID	4	16	0.2	0.4	0.7	0.9						
IE	5	20	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.1
IE	5	30	1.1	1.1	1.1	1.1	1.2					
I1	6	35	1.2	1.2	1.2	1.2	1.2					
IG	7	40	1.3	1.4	1.6	1.7						
IH	8	44	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
II	9	54	1.7	1.7	1.7	1.7	1.7					
EP	10	59	1.7	1.7	1.7							
PJ	11	62	1.8	1.9	2.0	2.0						
IJ	12	66	2.0	2.0								
IK	13	68	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	

INTERMEDIATE REPORT

Dispersion Pearl River DO Modeling 090204

m^2/s COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.0	0.0	0.0	0.0	0.0					
IB	2	6	0.0	0.0	0.0	0.0	0.0					
IC	3	11	0.0	0.0	0.0	0.0	0.0					
ID	4	16	0.0	0.0	0.0	0.0						
IE	5	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	5	30	0.0	0.0	0.0	0.0	0.0					
I1	6	35	0.0	0.0	0.0	0.0	0.0					
IG	7	40	0.0	0.0	0.0	0.0						
IH	8	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II	9	54	0.0	0.0	0.0	0.0	0.0					
EP	10	59	0.0	0.0	0.0							
PJ	11	62	0.0	0.0	0.0	0.0						
IJ	12	66	0.0	0.0								
IK	13	68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

INTERMEDIATE REPORT

Advective Velocity Pearl River DO Modeling 090204

m/s COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.0	0.0	0.0	0.0	0.0					
IB	2	6	0.0	0.0	0.0	0.0	0.0					
IC	3	11	0.0	0.0	0.0	0.0	0.0					
ID	4	16	0.0	0.0	0.0	0.0						
IE	5	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	5	30	0.0	0.0	0.0	0.0	0.0					
I1	6	35	0.0	0.0	0.0	0.0	0.0					
IG	7	40	0.0	0.0	0.0	0.0						
IH	8	44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II	9	54	0.0	0.0	0.0	0.0	0.0					
EP	10	59	0.0	0.0	0.0							
PJ	11	62	0.0	0.0	0.0	0.0						
IJ	12	66	0.0	0.0								
IK	13	68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

INTERMEDIATE REPORT

Depth Pearl River DO Modeling 090204

m COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	2.2	2.2	2.2	2.2	2.2					
IB	2	6	2.2	2.2	2.2	2.2	2.2					
IC	3	11	2.2	2.2	2.2	2.2	2.2					
ID	4	16	2.1	2.1	2.1	2.1						
IE	5	20	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
IE	5	30	1.9	1.9	1.9	1.9	1.9					
I1	6	35	1.9	1.9	1.9	1.9	1.9					
IG	7	40	3.8	3.8	3.8	3.8						
IH	8	44	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
II	9	54	2.2	2.2	2.2	2.2	2.2					
EP	10	59	2.2	2.2	2.2							
PJ	11	62	2.2	2.2	2.2	2.2						
IJ	12	66	1.8	1.8								
IK	13	68	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	

INTERMEDIATE REPORT

Width Pearl River DO Modeling 090204

m COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	55.1	55.1	55.1	55.1	55.1					
IB	2	6	55.1	55.1	55.1	55.1	55.1					
IC	3	11	55.1	55.1	55.1	55.1	55.1					
ID	4	16	59.3	59.3	59.3	59.3						
IE	5	20	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9
IE	5	30	62.9	62.9	62.9	62.9	62.9					
I1	6	35	62.9	62.9	62.9	62.9	62.9					
IG	7	40	69.5	69.5	69.5	69.5						
IH	8	44	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6
II	9	54	98.1	98.1	98.1	98.1	98.1					
EP	10	59	98.1	98.1	98.1							
PJ	11	62	98.1	98.1	98.1	98.1						
IJ	12	66	58.9	58.9								
IK	13	68	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7	

INTERMEDIATE REPORT

Cross-Sectional Area Pearl River DO Modeling 090204

m^2 COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	121.8	121.8	121.8	121.8	121.8					
IB	2	6	121.8	121.8	121.8	121.8	121.8					
IC	3	11	121.8	121.8	121.8	121.8	121.8					
ID	4	16	125.1	125.1	125.1	125.1						
IE	5	20	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1	120.1
IE	5	30	120.1	120.1	120.1	120.1	120.1					
I1	6	35	120.1	120.1	120.1	120.1	120.1					
IG	7	40	260.6	260.6	260.6	260.6						
IH	8	44	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
II	9	54	220.7	220.7	220.7	220.7	220.7					
EP	10	59	220.7	220.7	220.7							
PJ	11	62	220.7	220.7	220.7	220.7						

IJ	12	66	106.6	106.6								
IK	13	68	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7	

INTERMEDIATE REPORT

Reaeration Rate — Pearl River DO Modeling 090204

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.395	0.395	0.395	0.395	0.395					
IB	2	6	0.395	0.395	0.395	0.395	0.395					
IC	3	11	0.394	0.394	0.393	0.393	0.392					
ID	4	16	0.411	0.411	0.411	0.412						
IE	5	20	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455	0.455
IE	5	30	0.455	0.455	0.455	0.455	0.455					
I1	6	35	0.452	0.448	0.445	0.442	0.439					
IG	7	40	0.225	0.226	0.227	0.228						
IH	8	44	0.521	0.521	0.521	0.521	0.521	0.521	0.521	0.521	0.521	0.521
II	9	54	0.379	0.379	0.379	0.379	0.379					
EP	10	59	0.379	0.379	0.379							
PJ	11	62	0.380	0.380	0.381	0.381						
IJ	12	66	0.476	0.478								
IK	13	68	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	

INTERMEDIATE REPORT

BOD Decay Rate — Pearl River DO Modeling 090204

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.10	0.10	0.10	0.10	0.10					
IB	2	6	0.10	0.10	0.10	0.10	0.10					
IC	3	11	0.10	0.10	0.10	0.10	0.10					
ID	4	16	0.10	0.10	0.10	0.10						
IE	5	20	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
IE	5	30	0.10	0.10	0.10	0.10	0.10					
I1	6	35	0.10	0.10	0.10	0.10	0.09					
IG	7	40	0.10	0.10	0.10	0.10						
IH	8	44	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
II	9	54	0.10	0.10	0.10	0.10	0.10					
EP	10	59	0.10	0.10	0.10							
PJ	11	62	0.10	0.10	0.10	0.10						
IJ	12	66	0.10	0.10								
IK	13	68	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	

INTERMEDIATE REPORT

BOD Settling Rate — Pearl River DO Modeling 090204

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.06	0.06	0.06	0.06	0.06					
IB	2	6	0.06	0.06	0.06	0.06	0.06					
IC	3	11	0.06	0.06	0.06	0.06	0.06					
ID	4	16	0.06	0.06	0.06	0.06						
IE	5	20	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
IE	5	30	0.07	0.07	0.07	0.07	0.07					
I1	6	35	0.07	0.07	0.07	0.07	0.07					
IG	7	40	0.03	0.03	0.03	0.03						

IH	8	44	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
II	9	54	0.06	0.06	0.06	0.06	0.06					
EP	10	59	0.06	0.06	0.06							
PJ	11	62	0.06	0.06	0.06	0.06						
IJ	12	66	0.07	0.07								
IK	13	68	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	

INTERMEDIATE REPORT

Ammonia Decay Rate — Pearl River DO Modeling 090204

per day — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.25	0.25	0.25	0.25	0.25					
IB	2	6	0.25	0.25	0.25	0.25	0.25					
IC	3	11	0.25	0.25	0.25	0.25	0.25					
ID	4	16	0.24	0.24	0.24	0.24						
IE	5	20	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
IE	5	30	0.25	0.25	0.25	0.25	0.25					
I1	6	35	0.24	0.23	0.22	0.21	0.20					
IG	7	40	0.21	0.21	0.22	0.23						
IH	8	44	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
II	9	54	0.23	0.23	0.23	0.23	0.23					
EP	10	59	0.23	0.23	0.23							
PJ	11	62	0.23	0.23	0.23	0.24						
IJ	12	66	0.24	0.24								
IK	13	68	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25	0.25	

INTERMEDIATE REPORT

Sediment Oxygen Demand — Pearl River DO Modeling 090204

$g/m^2/d$ — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
LA	1	1	0.67	0.66	0.66	0.66	0.66					
IB	2	6	0.66	0.66	0.66	0.66	0.66					
IC	3	11	0.53	0.53	0.53	0.52	0.52					
ID	4	16	0.72	0.72	0.72	0.72						
IE	5	20	0.31	0.31	0.30	0.30	0.29	0.29	0.28	0.28	0.27	0.27
IE	5	30	0.27	0.27	0.26	0.26	0.26					
I1	6	35	4.12	4.02	3.91	3.81	3.71					
IG	7	40	0.51	0.56	0.60	0.63						
IH	8	44	0.62	0.61	0.61	0.60	0.59	0.59	0.58	0.58	0.57	0.56
II	9	54	1.79	1.78	1.76	1.75	1.74					
EP	10	59	1.24	1.24	1.23							
PJ	11	62	1.25	1.28	1.29	1.31						
IJ	12	66	1.18	1.19								
IK	13	68	0.15	0.14	0.13	0.13	0.12	0.11	0.11	0.10	0.10	

CONDENSED CAPSULE SUMMARY FOR Headwater

DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORGN	NH3	CHLA	REAER RATE	BOD1 DECA	BOD1 SETT	BOD2 DECA	BOD2 SETT	NH3 DECA	SOD
km	m^3/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	µg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	$g/m^2/d$
HDWTR	0.00283	30.00	0.00	5.00	0.40	0.00	0.00	0.50	1.50							
22.70	0.00283	32.10	0.00	6.82	0.02	0.00	0.00	0.01	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.67
22.40	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66

22.10	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
21.80	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
21.50	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
21.30	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
21.10	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
20.90	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
20.70	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
20.50	0.00283	32.10	0.00	6.86	0.00	0.00	0.00	0.00	1.50	0.39	0.10	0.06	0.01	0.00	0.25	0.66
20.20	0.00283	32.02	0.00	6.99	0.00	0.00	0.00	0.00	1.36	0.39	0.10	0.06	0.01	0.00	0.25	0.53
19.90	0.00283	31.94	0.00	6.97	0.00	0.00	0.00	0.00	1.22	0.39	0.10	0.06	0.01	0.00	0.25	0.53
19.60	0.00283	31.86	0.00	6.95	0.00	0.00	0.00	0.00	1.08	0.39	0.10	0.06	0.01	0.00	0.25	0.53
19.30	0.00283	31.78	0.00	6.93	0.00	0.00	0.00	0.00	0.94	0.39	0.10	0.06	0.01	0.00	0.25	0.52
19.00	0.00283	31.70	0.00	6.91	0.01	0.00	0.00	0.00	0.80	0.39	0.10	0.06	0.01	0.00	0.25	0.52
18.69	0.22033	31.73	0.00	5.67	1.47	0.00	0.00	0.33	1.50	0.41	0.10	0.06	0.01	0.00	0.24	0.72
18.39	0.43783	31.75	0.00	5.71	1.48	0.00	0.00	0.34	2.20	0.41	0.10	0.06	0.01	0.00	0.24	0.72
18.08	0.65533	31.77	0.00	5.75	1.48	0.00	0.00	0.34	2.90	0.41	0.10	0.06	0.01	0.00	0.24	0.72
17.78	0.87283	31.80	0.00	5.79	1.48	0.00	0.00	0.34	3.60	0.41	0.10	0.06	0.01	0.00	0.24	0.72
17.49	0.89158	31.80	0.00	6.04	1.42	0.00	0.00	0.31	3.60	0.45	0.10	0.07	0.01	0.00	0.24	0.31
17.20	0.91024	31.80	0.00	6.24	1.37	0.00	0.00	0.28	3.60	0.45	0.10	0.07	0.01	0.00	0.24	0.31
16.91	0.92891	31.80	0.00	6.40	1.32	0.00	0.00	0.26	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.30
16.62	0.94758	31.80	0.00	6.54	1.28	0.00	0.00	0.24	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.30
16.33	0.96624	31.80	0.00	6.65	1.24	0.00	0.00	0.22	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.29
16.04	0.98491	31.80	0.00	6.74	1.21	0.00	0.00	0.20	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.29
15.75	1.00358	31.80	0.00	6.82	1.18	0.00	0.00	0.19	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.28
15.46	1.02224	31.80	0.00	6.88	1.15	0.00	0.00	0.18	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.28
15.17	1.04091	31.80	0.00	6.94	1.13	0.00	0.00	0.17	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.27
14.88	1.05958	31.80	0.00	6.98	1.10	0.00	0.00	0.16	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.27
14.59	1.07824	31.80	0.00	7.02	1.08	0.00	0.00	0.15	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.27
14.30	1.09691	31.80	0.00	7.06	1.06	0.00	0.00	0.14	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.27
14.01	1.11558	31.80	0.00	7.08	1.05	0.00	0.00	0.14	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.26
13.72	1.13424	31.80	0.00	7.11	1.03	0.00	0.00	0.13	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.26
13.43	1.15291	31.80	0.00	7.13	1.02	0.00	0.00	0.13	3.60	0.45	0.10	0.07	0.01	0.00	0.25	0.26
13.14	1.15291	31.40	0.00	6.56	0.96	0.00	0.00	0.12	3.04	0.45	0.10	0.07	0.01	0.00	0.24	4.12
12.85	1.15291	31.00	0.00	6.08	0.91	0.00	0.00	0.11	2.48	0.45	0.10	0.07	0.01	0.00	0.23	4.02
12.56	1.15291	30.60	0.00	5.67	0.86	0.00	0.00	0.10	1.92	0.45	0.10	0.07	0.01	0.00	0.22	3.91
12.27	1.15291	30.20	0.00	5.32	0.81	0.00	0.00	0.09	1.36	0.44	0.10	0.07	0.01	0.00	0.21	3.81
11.98	1.15291	29.80	0.00	5.03	0.77	0.00	0.00	0.09	0.80	0.44	0.09	0.07	0.01	0.00	0.20	3.71
11.58	1.30041	30.07	0.00	5.37	1.21	0.00	0.00	0.16	1.65	0.22	0.10	0.03	0.01	0.00	0.21	0.51
11.19	1.44791	30.35	0.00	5.61	1.53	0.00	0.00	0.21	2.50	0.23	0.10	0.03	0.01	0.00	0.21	0.56
10.79	1.59541	30.62	0.00	5.79	1.76	0.00	0.00	0.24	3.35	0.23	0.10	0.03	0.01	0.00	0.22	0.60
10.40	1.74291	30.90	0.00	5.95	1.94	0.00	0.00	0.27	4.20	0.23	0.10	0.03	0.01	0.00	0.23	0.63
10.10	1.74291	30.89	0.00	6.04	1.88	0.00	0.00	0.26	4.51	0.52	0.10	0.08	0.01	0.00	0.23	0.62
9.80	1.74291	30.88	0.00	6.12	1.83	0.00	0.00	0.25	4.82	0.52	0.10	0.08	0.01	0.00	0.23	0.61
9.50	1.74291	30.87	0.00	6.21	1.78	0.00	0.00	0.24	5.13	0.52	0.10	0.08	0.01	0.00	0.23	0.61
9.20	1.74291	30.86	0.00	6.29	1.73	0.00	0.00	0.23	5.44	0.52	0.10	0.08	0.01	0.00	0.23	0.60
8.90	1.74291	30.85	0.00	6.37	1.68	0.00	0.00	0.22	5.75	0.52	0.10	0.08	0.01	0.00	0.23	0.59
8.60	1.74291	30.84	0.00	6.45	1.64	0.00	0.00	0.21	6.06	0.52	0.10	0.08	0.01	0.00	0.23	0.59
8.30	1.74291	30.83	0.00	6.53	1.59	0.00	0.00	0.21	6.37	0.52	0.10	0.08	0.01	0.00	0.23	0.58
8.00	1.74291	30.82	0.00	6.61	1.55	0.00	0.00	0.20	6.68	0.52	0.10	0.08	0.01	0.00	0.23	0.58
7.70	1.74291	30.81	0.00	6.69	1.50	0.00	0.00	0.19	6.99	0.52	0.10	0.08	0.01	0.00	0.23	0.57

7.40	1.74291	30.80	0.00	6.76	1.46	0.00	0.00	0.19	7.30	0.52	0.10	0.08	0.01	0.00	0.23	0.56
7.01	1.74291	30.80	0.00	6.73	1.34	0.00	0.00	0.16	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.79
6.62	1.74291	30.80	0.00	6.72	1.23	0.00	0.00	0.15	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.78
6.23	1.74291	30.80	0.00	6.71	1.13	0.00	0.00	0.13	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.76
5.84	1.74291	30.80	0.00	6.71	1.04	0.00	0.00	0.11	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.75
5.45	1.74291	30.80	0.00	6.72	0.95	0.00	0.00	0.10	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.74
5.20	1.74291	30.80	0.00	6.79	0.90	0.00	0.00	0.09	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.24
4.95	1.74291	30.80	0.00	6.86	0.85	0.00	0.00	0.09	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.24
4.70	1.74291	30.80	0.00	6.93	0.81	0.00	0.00	0.08	7.30	0.38	0.10	0.06	0.01	0.00	0.23	1.23
4.38	1.81791	30.88	0.00	6.94	0.95	0.00	0.00	0.09	7.93	0.38	0.10	0.06	0.01	0.00	0.23	1.25
4.05	1.89291	30.95	0.00	6.95	1.07	0.00	0.00	0.09	8.55	0.38	0.10	0.06	0.01	0.00	0.23	1.28
3.73	1.96791	31.02	0.00	6.98	1.18	0.00	0.00	0.10	9.18	0.38	0.10	0.06	0.01	0.00	0.23	1.29
3.40	2.04291	31.10	0.00	7.01	1.27	0.00	0.00	0.10	9.80	0.38	0.10	0.06	0.01	0.00	0.24	1.31
3.05	2.04310	31.35	0.00	7.00	1.23	0.00	0.00	0.10	6.05	0.48	0.10	0.07	0.01	0.00	0.24	1.18
2.70	2.04310	31.60	0.00	6.92	1.19	0.00	0.00	0.09	2.30	0.48	0.10	0.07	0.01	0.00	0.24	1.19
2.40	2.04310	31.60	0.00	6.97	1.13	0.00	0.00	0.09	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.15
2.10	2.04310	31.60	0.00	7.02	1.07	0.00	0.00	0.08	2.30	0.38	0.10	0.06	0.01	0.00	0.24	0.14
1.80	2.04310	31.60	0.00	7.07	1.02	0.00	0.00	0.08	2.30	0.38	0.10	0.06	0.01	0.00	0.25	0.13
1.50	2.04310	31.60	0.00	7.11	0.96	0.00	0.00	0.07	2.30	0.38	0.10	0.06	0.01	0.00	0.25	0.13
1.20	2.04310	31.60	0.00	7.15	0.92	0.00	0.00	0.06	2.30	0.38	0.10	0.06	0.01	0.00	0.25	0.12
0.90	2.04310	31.60	0.00	7.19	0.87	0.00	0.00	0.06	2.30	0.38	0.10	0.06	0.01	0.00	0.25	0.11
0.60	2.04310	31.60	0.00	7.23	0.83	0.00	0.00	0.06	2.30	0.38	0.10	0.06	0.01	0.00	0.25	0.11
0.30	2.04310	31.60	0.00	7.26	0.79	0.00	0.00	0.05	2.30	0.38	0.10	0.06	0.01	0.00	0.25	0.10
0.00	2.04310	31.60	0.00	7.28	0.74	0.00	0.00	0.05	2.30	0.38	0.10	0.06	0.01	0.00	0.25	0.10

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	ADVEC	MEAN DISP	DEPTH	WIDTH	VELO	VELO	SAT	REAER RATE	BOD1 DECA	BOD1 SETT	BOD2 DECA	BOD2 SETT	NH3 DECA	SOD
	km		m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	µg/L		m²/s	m	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
	HDWTR		0.003	30.0	0.0	5.0	0.4	0.0	0.0	0.5	1.5														
1 LA	1	22.70	0.003	32.1	0.0	6.8	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.67	
2 LA	1	22.40	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
3 LA	1	22.10	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
4 LA	1	21.80	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
5 LA	1	21.50	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
6 IB	2	21.30	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
7 IB	2	21.10	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
8 IB	2	20.90	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
9 IB	2	20.70	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
10 IB	2	20.50	0.003	32.1	0.0	6.9	0.0	0.0	0.0	0.0	1.5	0.0	2.21	55.1	0.000	0.000	7.3	0.395	0.10	0.06	0.01	0.00	0.25	0.66	
11 IC	3	20.20	0.003	32.0	0.0	7.0	0.0	0.0	0.0	0.0	1.4	0.0	2.21	55.1	0.000	0.000	7.3	0.394	0.10	0.06	0.01	0.00	0.25	0.53	
12 IC	3	19.90	0.003	31.9	0.0	7.0	0.0	0.0	0.0	0.0	1.2	0.0	2.21	55.1	0.000	0.000	7.3	0.394	0.10	0.06	0.01	0.00	0.25	0.53	
13 IC	3	19.60	0.003	31.9	0.0	7.0	0.0	0.0	0.0	0.0	1.1	0.0	2.21	55.1	0.000	0.000	7.3	0.393	0.10	0.06	0.01	0.00	0.25	0.53	
14 IC	3	19.30	0.003	31.8	0.0	6.9	0.0	0.0	0.0	0.0	0.9	0.0	2.21	55.1	0.000	0.000	7.3	0.393	0.10	0.06	0.01	0.00	0.25	0.52	
15 IC	3	19.00	0.003	31.7	0.0	6.9	0.0	0.0	0.0	0.0	0.8	0.0	2.21	55.1	0.000	0.000	7.3	0.392	0.10	0.06	0.01	0.00	0.25	0.52	
16 ID	4	18.69	0.220	31.7	0.0	5.7	1.5	0.0	0.0	0.3	1.5	0.0	2.11	59.3	0.002	0.002	7.3	0.411	0.10	0.06	0.01	0.00	0.24	0.72	
17 ID	4	18.39	0.438	31.8	0.0	5.7	1.5	0.0	0.0	0.3	2.2	0.0	2.11	59.3	0.003	0.003	7.3	0.411	0.10	0.06	0.01	0.00	0.24	0.72	
18 ID	4	18.08	0.655	31.8	0.0	5.7	1.5	0.0	0.0	0.3	2.9	0.0	2.11	59.3	0.005	0.005	7.3	0.411	0.10	0.06	0.01	0.00	0.24	0.72	
19 ID	4	17.78	0.873	31.8	0.0	5.8	1.5	0.0	0.0	0.3	3.6	0.0	2.11	59.3	0.007	0.007	7.3	0.412	0.10	0.06	0.01	0.00	0.24	0.72	
WASTELOAD # 020 (Church) ENTERS HERE																									
20 IE	5	17.49	0.892	31.8	0.0	6.0	1.4	0.0	0.0	0.3	3.6	0.0	1.91	62.9	0.007	0.007	7.3	0.455	0.10	0.07	0.01	0.00	0.24	0.31	
21 IE	5	17.20	0.910	31.8	0.0	6.2	1.4	0.0	0.0	0.3	3.6	0.0	1.91	62.9	0.008	0.008	7.3	0.455	0.10	0.07	0.01	0.00	0.24	0.31	
22 IE	5	16.91	0.929	31.8	0.0	6.4	1.3	0.0	0.0	0.3	3.6	0.0	1.91	62.9	0.008	0.008	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.30	
23 IE	5	16.62	0.948	31.8	0.0	6.5	1.3	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.008	0.008	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.30	
24 IE	5	16.33	0.966	31.8	0.0	6.7	1.2	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.008	0.008	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.29	
25 IE	5	16.04	0.985	31.8	0.0	6.7	1.2	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.008	0.008	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.29	
26 IE	5	15.75	1.004	31.8	0.0	6.8	1.2	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.008	0.008	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.28	
27 IE	5	15.46	1.022	31.8	0.0	6.9	1.1	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.009	0.009	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.28	
28 IE	5	15.17	1.041	31.8	0.0	6.9	1.1	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.009	0.009	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.27	
29 IE	5	14.88	1.060	31.8	0.0	7.0	1.1	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.009	0.009	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.27	
30 IE	5	14.59	1.078	31.8	0.0	7.0	1.1	0.0	0.0	0.2	3.6	0.0	1.91	62.9	0.009	0.009	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.27	
31 IE	5	14.30	1.097	31.8	0.0	7.1	1.1	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.009	0.009	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.27	
32 IE	5	14.01	1.116	31.8	0.0	7.1	1.0	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.009	0.009	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.26	
33 IE	5	13.72	1.134	31.8	0.0	7.1	1.0	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.009	0.009	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.26	
34 IE	5	13.43	1.153	31.8	0.0	7.1	1.0	0.0	0.0	0.1	3.6	0.0	1.91	62.9	0.010	0.010	7.3	0.455	0.10	0.07	0.01	0.00	0.25	0.26	
35 I1	6	13.14	1.153	31.4	0.0	6.6	1.0	0.0	0.0	0.1	3.0	0.0	1.91	62.9	0.010	0.010	7.4	0.452	0.10	0.07	0.01	0.00	0.24	4.12	
36 I1	6	12.85	1.153	31.0	0.0	6.1	0.9	0.0	0.0	0.1	2.5	0.0	1.91	62.9	0.010	0.010	7.4	0.448	0.10	0.07	0.01	0.00	0.23	4.02	
37 I1	6	12.56	1.153	30.6	0.0	5.7	0.9	0.0	0.0	0.1	1.9	0.0	1.91	62.9	0.010	0.010	7.5	0.445	0.10	0.07	0.01	0.00	0.22	3.91	
38 I1	6	12.27	1.153	30.2	0.0	5.3	0.8	0.0	0.0	0.1	1.4	0.0	1.91	62.9	0.010	0.010	7.5	0.442	0.10	0.07	0.01	0.00	0.21	3.81	
39 I1	6	11.98	1.153	29.8	0.0	5.0	0.8	0.0	0.0	0.1	0.8	0.0	1.91	62.9	0.010	0.010	7.6	0.439	0.09	0.07	0.01	0.00	0.20	3.71	
40 IG	7	11.58	1.300	30.1	0.0	5.4	1.2	0.0	0.0	0.2	1.6	0.0	3.75	69.5	0.005	0.005	7.5	0.225	0.10	0.03	0.01	0.00	0.21	0.51	
41 IG	7	11.19	1.448	30.3	0.0	5.6	1.5	0.0	0.0	0.2	2.5	0.0	3.75	69.5	0.006	0.006	7.5	0.226	0.10	0.03	0.01	0.00	0.21	0.56	
42 IG	7	10.79	1.595	30.6	0.0	5.8	1.8	0.0	0.0	0.2	3.3	0.0	3.75	69.5	0.006	0.006	7.5	0.227	0.10	0.03	0.01	0.00	0.22	0.60	
43 IG	7	10.40	1.743	30.9	0.0	5.9	1.9	0.0	0.0	0.3	4.2	0.0	3.75	69.5	0.007	0.007	7.4	0.228	0.10	0.03	0.01	0.00	0.23	0.63	

44	IH	8	10.10	1.743	30.9	0.0	6.0	1.9	0.0	0.0	0.3	4.5	0.0	1.64	49.6	0.021	0.021	7.4	0.521	0.10	0.08	0.01	0.00	0.23	0.62
45	IH	8	9.80	1.743	30.9	0.0	6.1	1.8	0.0	0.0	0.2	4.8	0.0	1.64	49.6	0.021	0.021	7.4	0.521	0.10	0.08	0.01	0.00	0.23	0.61
46	IH	8	9.50	1.743	30.9	0.0	6.2	1.8	0.0	0.0	0.2	5.1	0.0	1.64	49.6	0.021	0.021	7.4	0.521	0.10	0.08	0.01	0.00	0.23	0.61
47	IH	8	9.20	1.743	30.9	0.0	6.3	1.7	0.0	0.0	0.2	5.4	0.0	1.64	49.6	0.021	0.021	7.4	0.521	0.10	0.08	0.01	0.00	0.23	0.60
48	IH	8	8.90	1.743	30.9	0.0	6.4	1.7	0.0	0.0	0.2	5.8	0.0	1.64	49.6	0.021	0.021	7.4	0.521	0.10	0.08	0.01	0.00	0.23	0.59
49	IH	8	8.60	1.743	30.8	0.0	6.5	1.6	0.0	0.0	0.2	6.1	0.0	1.64	49.6	0.021	0.021	7.5	0.521	0.10	0.08	0.01	0.00	0.23	0.59
50	IH	8	8.30	1.743	30.8	0.0	6.5	1.6	0.0	0.0	0.2	6.4	0.0	1.64	49.6	0.021	0.021	7.5	0.521	0.10	0.08	0.01	0.00	0.23	0.58
51	IH	8	8.00	1.743	30.8	0.0	6.6	1.5	0.0	0.0	0.2	6.7	0.0	1.64	49.6	0.021	0.021	7.5	0.521	0.10	0.08	0.01	0.00	0.23	0.58
52	IH	8	7.70	1.743	30.8	0.0	6.7	1.5	0.0	0.0	0.2	7.0	0.0	1.64	49.6	0.021	0.021	7.5	0.521	0.10	0.08	0.01	0.00	0.23	0.57
53	IH	8	7.40	1.743	30.8	0.0	6.8	1.5	0.0	0.0	0.2	7.3	0.0	1.64	49.6	0.021	0.021	7.5	0.521	0.10	0.08	0.01	0.00	0.23	0.56
54	II	9	7.01	1.743	30.8	0.0	6.7	1.3	0.0	0.0	0.2	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.79
55	II	9	6.62	1.743	30.8	0.0	6.7	1.2	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.78
56	II	9	6.23	1.743	30.8	0.0	6.7	1.1	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.76
57	II	9	5.84	1.743	30.8	0.0	6.7	1.0	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.75
58	II	9	5.45	1.743	30.8	0.0	6.7	1.0	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.74
59	EP	10	5.20	1.743	30.8	0.0	6.8	0.9	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.24
60	EP	10	4.95	1.743	30.8	0.0	6.9	0.9	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.24
61	EP	10	4.70	1.743	30.8	0.0	6.9	0.8	0.0	0.0	0.1	7.3	0.0	2.25	98.1	0.008	0.008	7.5	0.379	0.10	0.06	0.01	0.00	0.23	1.23
62	PJ	11	4.38	1.818	30.9	0.0	6.9	1.0	0.0	0.0	0.1	7.9	0.0	2.25	98.1	0.008	0.008	7.4	0.380	0.10	0.06	0.01	0.00	0.23	1.25
63	PJ	11	4.05	1.893	31.0	0.0	7.0	1.1	0.0	0.0	0.1	8.6	0.0	2.25	98.1	0.009	0.009	7.4	0.380	0.10	0.06	0.01	0.00	0.23	1.28
64	PJ	11	3.73	1.968	31.0	0.0	7.0	1.2	0.0	0.0	0.1	9.2	0.0	2.25	98.1	0.009	0.009	7.4	0.381	0.10	0.06	0.01	0.00	0.23	1.29
65	PJ	11	3.40	2.043	31.1	0.0	7.0	1.3	0.0	0.0	0.1	9.8	0.0	2.25	98.1	0.009	0.009	7.4	0.381	0.10	0.06	0.01	0.00	0.24	1.31
WASTELOAD # 066 (Junior High) ENTERS HERE																										
66	IJ	12	3.05	2.043	31.4	0.0	7.0	1.2	0.0	0.0	0.1	6.1	0.0	1.81	58.9	0.019	0.019	7.4	0.476	0.10	0.07	0.01	0.00	0.24	1.18
67	IJ	12	2.70	2.043	31.6	0.0	6.9	1.2	0.0	0.0	0.1	2.3	0.0	1.81	58.9	0.019	0.019	7.4	0.478	0.10	0.07	0.01	0.00	0.24	1.19
68	IK	13	2.40	2.043	31.6	0.0	7.0	1.1	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.15
69	IK	13	2.10	2.043	31.6	0.0	7.0	1.1	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.24	0.14
70	IK	13	1.80	2.043	31.6	0.0	7.1	1.0	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.25	0.13
71	IK	13	1.50	2.043	31.6	0.0	7.1	1.0	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.25	0.13

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	ADVEC DISP	MEAN DEPTH	DO WIDTH	REAER VELO	BOD1 VELO	BOD1 SAT	BOD2 RATE	BOD2 DECA	NH3 SETT	NH3 DECA	SETT DECA	SOD
		km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	m²/s	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	g/m²/d
72	IK 13	1.20	2.043	31.6	0.0	7.2	0.9	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.25	0.12
73	IK 13	0.90	2.043	31.6	0.0	7.2	0.9	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.25	0.11
74	IK 13	0.60	2.043	31.6	0.0	7.2	0.8	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.25	0.11
75	IK 13	0.30	2.043	31.6	0.0	7.3	0.8	0.0	0.0	0.1	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.25	0.10
76	IK 13	0.00	2.043	31.6	0.0	7.3	0.7	0.0	0.0	0.0	2.3	0.0	2.26	85.7	0.011	0.011	7.4	0.383	0.10	0.06	0.01	0.00	0.25	0.10

SPECIAL REPORT: Headwater

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING km	TEMP deg C	SALN ppt	CM-I *	CM-II *	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N µg/L	TOTN **	PHOS	CHL A	MACRO	COLI #/100mL	NCM *
1	22.700	32.10	0.0	0.0	0.0	6.82	0.02	0.00	0.02	0.00	0.00	0.01	0.00	0.01	0.07	1.5	0.0	0.	0.00
2	22.400	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
3	22.100	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
4	21.800	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
5	21.500	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
6	21.300	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
7	21.100	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
8	20.900	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
9	20.700	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
10	20.500	32.10	0.0	0.0	0.0	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.5	0.0	0.	0.00
11	20.200	32.02	0.0	0.0	0.0	6.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.4	0.0	0.	0.00
12	19.900	31.94	0.0	0.0	0.0	6.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.2	0.0	0.	0.00
13	19.600	31.86	0.0	0.0	0.0	6.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	1.1	0.0	0.	0.00
14	19.300	31.78	0.0	0.0	0.0	6.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.9	0.0	0.	0.00
15	19.000	31.70	0.0	0.0	0.0	6.91	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.07	0.8	0.0	0.	0.00
16	18.695	31.73	0.0	0.0	0.0	5.67	1.47	0.00	1.47	0.00	0.00	0.33	0.10	0.44	0.07	1.5	0.0	0.	0.00
17	18.390	31.75	0.0	0.0	0.0	5.71	1.48	0.00	1.48	0.00	0.00	0.34	0.17	0.51	0.07	2.2	0.0	0.	0.00
18	18.085	31.77	0.0	0.0	0.0	5.75	1.48	0.00	1.48	0.00	0.00	0.34	0.20	0.53	0.07	2.9	0.0	0.	0.00
19	17.780	31.80	0.0	0.0	0.0	5.79	1.48	0.00	1.48	0.00	0.00	0.34	0.20	0.54	0.07	3.6	0.0	0.	0.00
20	17.490	31.80	0.0	0.0	0.0	6.04	1.42	0.00	1.42	0.00	0.00	0.31	0.23	0.53	0.07	3.6	0.0	0.	0.00
21	17.200	31.80	0.0	0.0	0.0	6.24	1.37	0.00	1.37	0.00	0.00	0.28	0.25	0.53	0.07	3.6	0.0	0.	0.00
22	16.910	31.80	0.0	0.0	0.0	6.40	1.32	0.00	1.32	0.00	0.00	0.26	0.27	0.52	0.07	3.6	0.0	0.	0.00
23	16.620	31.80	0.0	0.0	0.0	6.54	1.28	0.00	1.28	0.00	0.00	0.24	0.28	0.52	0.07	3.6	0.0	0.	0.00
24	16.330	31.80	0.0	0.0	0.0	6.65	1.24	0.00	1.24	0.00	0.00	0.22	0.29	0.51	0.07	3.6	0.0	0.	0.00
25	16.040	31.80	0.0	0.0	0.0	6.74	1.21	0.00	1.21	0.00	0.00	0.20	0.30	0.51	0.07	3.6	0.0	0.	0.00
26	15.750	31.80	0.0	0.0	0.0	6.82	1.18	0.00	1.18	0.00	0.00	0.19	0.31	0.50	0.07	3.6	0.0	0.	0.00
27	15.460	31.80	0.0	0.0	0.0	6.88	1.15	0.00	1.15	0.00	0.00	0.18	0.32	0.50	0.07	3.6	0.0	0.	0.00
28	15.170	31.80	0.0	0.0	0.0	6.94	1.13	0.00	1.13	0.00	0.00	0.17	0.33	0.50	0.07	3.6	0.0	0.	0.00
29	14.880	31.80	0.0	0.0	0.0	6.98	1.10	0.00	1.10	0.00	0.00	0.16	0.33	0.49	0.07	3.6	0.0	0.	0.00
30	14.590	31.80	0.0	0.0	0.0	7.02	1.08	0.00	1.08	0.00	0.00	0.15	0.34	0.49	0.07	3.6	0.0	0.	0.00
31	14.300	31.80	0.0	0.0	0.0	7.06	1.06	0.00	1.06	0.00	0.00	0.14	0.34	0.48	0.07	3.6	0.0	0.	0.00
32	14.010	31.80	0.0	0.0	0.0	7.08	1.05	0.00	1.05	0.00	0.00	0.14	0.34	0.48	0.07	3.6	0.0	0.	0.00
33	13.720	31.80	0.0	0.0	0.0	7.11	1.03	0.00	1.03	0.00	0.00	0.13	0.35	0.48	0.07	3.6	0.0	0.	0.00
34	13.430	31.80	0.0	0.0	0.0	7.13	1.02	0.00	1.02	0.00	0.00	0.13	0.35	0.47	0.07	3.6	0.0	0.	0.00
35	13.140	31.40	0.0	0.0	0.0	6.56	0.96	0.00	0.96	0.00	0.00	0.12	0.35	0.47	0.07	3.0	0.0	0.	0.00
36	12.850	31.00	0.0	0.0	0.0	6.08	0.91	0.00	0.91	0.00	0.00	0.11	0.36	0.47	0.07	2.5	0.0	0.	0.00

37	12.560	30.60	0.0	0.0	0.0	5.67	0.86	0.00	0.86	0.00	0.00	0.10	0.36	0.46	0.06	1.9	0.0	0.	0.00
38	12.270	30.20	0.0	0.0	0.0	5.32	0.81	0.00	0.81	0.00	0.00	0.09	0.37	0.46	0.06	1.4	0.0	0.	0.00
39	11.980	29.80	0.0	0.0	0.0	5.03	0.77	0.00	0.77	0.00	0.00	0.09	0.37	0.46	0.06	0.8	0.0	0.	0.00
40	11.585	30.07	0.0	0.0	0.0	5.37	1.21	0.00	1.21	0.00	0.00	0.16	0.37	0.53	0.06	1.6	0.0	0.	0.00
41	11.190	30.35	0.0	0.0	0.0	5.61	1.53	0.00	1.53	0.00	0.00	0.21	0.37	0.58	0.06	2.5	0.0	0.	0.00
42	10.795	30.62	0.0	0.0	0.0	5.79	1.76	0.00	1.76	0.00	0.00	0.24	0.37	0.61	0.06	3.3	0.0	0.	0.00
43	10.400	30.90	0.0	0.0	0.0	5.95	1.94	0.00	1.94	0.00	0.00	0.27	0.38	0.64	0.06	4.2	0.0	0.	0.00
44	10.100	30.89	0.0	0.0	0.0	6.04	1.88	0.00	1.88	0.00	0.00	0.26	0.38	0.64	0.06	4.5	0.0	0.	0.00
45	9.800	30.88	0.0	0.0	0.0	6.12	1.83	0.00	1.83	0.00	0.00	0.25	0.39	0.64	0.06	4.8	0.0	0.	0.00
46	9.500	30.87	0.0	0.0	0.0	6.21	1.78	0.00	1.78	0.00	0.00	0.24	0.40	0.63	0.06	5.1	0.0	0.	0.00
47	9.200	30.86	0.0	0.0	0.0	6.29	1.73	0.00	1.73	0.00	0.00	0.23	0.40	0.63	0.06	5.4	0.0	0.	0.00
48	8.900	30.85	0.0	0.0	0.0	6.37	1.68	0.00	1.68	0.00	0.00	0.22	0.40	0.63	0.06	5.8	0.0	0.	0.00
49	8.600	30.84	0.0	0.0	0.0	6.45	1.64	0.00	1.64	0.00	0.00	0.21	0.41	0.62	0.06	6.1	0.0	0.	0.00
50	8.300	30.83	0.0	0.0	0.0	6.53	1.59	0.00	1.59	0.00	0.00	0.21	0.41	0.62	0.06	6.4	0.0	0.	0.00
51	8.000	30.82	0.0	0.0	0.0	6.61	1.55	0.00	1.55	0.00	0.00	0.20	0.41	0.61	0.06	6.7	0.0	0.	0.00
52	7.700	30.81	0.0	0.0	0.0	6.69	1.50	0.00	1.50	0.00	0.00	0.19	0.42	0.61	0.06	7.0	0.0	0.	0.00
53	7.400	30.80	0.0	0.0	0.0	6.76	1.46	0.00	1.46	0.00	0.00	0.19	0.42	0.60	0.06	7.3	0.0	0.	0.00
54	7.010	30.80	0.0	0.0	0.0	6.73	1.34	0.00	1.34	0.00	0.00	0.16	0.42	0.59	0.06	7.3	0.0	0.	0.00
55	6.620	30.80	0.0	0.0	0.0	6.72	1.23	0.00	1.23	0.00	0.00	0.15	0.43	0.57	0.06	7.3	0.0	0.	0.00
56	6.230	30.80	0.0	0.0	0.0	6.71	1.13	0.00	1.13	0.00	0.00	0.13	0.42	0.55	0.06	7.3	0.0	0.	0.00
57	5.840	30.80	0.0	0.0	0.0	6.71	1.04	0.00	1.04	0.00	0.00	0.11	0.42	0.54	0.06	7.3	0.0	0.	0.00
58	5.450	30.80	0.0	0.0	0.0	6.72	0.95	0.00	0.95	0.00	0.00	0.10	0.42	0.52	0.06	7.3	0.0	0.	0.00
59	5.200	30.80	0.0	0.0	0.0	6.79	0.90	0.00	0.90	0.00	0.00	0.09	0.42	0.51	0.06	7.3	0.0	0.	0.00
60	4.950	30.80	0.0	0.0	0.0	6.86	0.85	0.00	0.85	0.00	0.00	0.09	0.41	0.50	0.06	7.3	0.0	0.	0.00
61	4.700	30.80	0.0	0.0	0.0	6.93	0.81	0.00	0.81	0.00	0.00	0.08	0.41	0.49	0.06	7.3	0.0	0.	0.00
62	4.375	30.88	0.0	0.0	0.0	6.94	0.95	0.00	0.95	0.00	0.00	0.09	0.39	0.48	0.06	7.9	0.0	0.	0.00
63	4.050	30.95	0.0	0.0	0.0	6.95	1.07	0.00	1.07	0.00	0.00	0.09	0.37	0.47	0.06	8.6	0.0	0.	0.00
64	3.725	31.02	0.0	0.0	0.0	6.98	1.18	0.00	1.18	0.00	0.00	0.10	0.35	0.45	0.06	9.2	0.0	0.	0.00
65	3.400	31.10	0.0	0.0	0.0	7.01	1.27	0.00	1.27	0.00	0.00	0.10	0.34	0.44	0.06	9.8	0.0	0.	0.00
66	3.050	31.35	0.0	0.0	0.0	7.00	1.23	0.00	1.23	0.00	0.00	0.10	0.34	0.44	0.04	6.1	0.0	0.	0.00
67	2.700	31.60	0.0	0.0	0.0	6.92	1.19	0.00	1.19	0.00	0.00	0.09	0.34	0.44	0.03	2.3	0.0	0.	0.00
68	2.400	31.60	0.0	0.0	0.0	6.97	1.13	0.00	1.13	0.00	0.00	0.09	0.34	0.43	0.03	2.3	0.0	0.	0.00
69	2.100	31.60	0.0	0.0	0.0	7.02	1.07	0.00	1.07	0.00	0.00	0.08	0.35	0.43	0.03	2.3	0.0	0.	0.00
70	1.800	31.60	0.0	0.0	0.0	7.07	1.02	0.00	1.02	0.00	0.00	0.08	0.35	0.43	0.03	2.3	0.0	0.	0.00
71	1.500	31.60	0.0	0.0	0.0	7.11	0.96	0.00	0.96	0.00	0.00	0.07	0.35	0.42	0.03	2.3	0.0	0.	0.00
72	1.200	31.60	0.0	0.0	0.0	7.15	0.92	0.00	0.92	0.00	0.00	0.06	0.36	0.42	0.03	2.3	0.0	0.	0.00
73	0.900	31.60	0.0	0.0	0.0	7.19	0.87	0.00	0.87	0.00	0.00	0.06	0.36	0.42	0.03	2.3	0.0	0.	0.00
74	0.600	31.60	0.0	0.0	0.0	7.23	0.83	0.00	0.83	0.00	0.00	0.06	0.36	0.41	0.03	2.3	0.0	0.	0.00
75	0.300	31.60	0.0	0.0	0.0	7.26	0.79	0.00	0.79	0.00	0.00	0.05	0.36	0.41	0.03	2.3	0.0	0.	0.00
76	0.000	31.60	0.0	0.0	0.0	7.28	0.74	0.00	0.74	0.00	0.00	0.05	0.36	0.41	0.03	2.3	0.0	0.	0.00

SPECIAL REPORT: Headwater

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST km	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#1 SETT 1/da	BOD#2 DECAY *	ABOD#2 SOD *	FULL SOD 1/da	CORR DECAY 1/da	ORG-N SETT *	ORG-N DECAY **	NH3 SRCE **	NH3 RATE 1/da	DENIT SRCE 1/da	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM SETT
1	22.700	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.67	0.67	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00
2	22.400	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00
3	22.100	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00
4	21.800	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00
5	21.500	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00

6	21.300	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
7	21.100	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
8	20.900	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
9	20.700	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
10	20.500	7.29	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.25	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
11	20.200	7.30	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.53	0.53	0.06	0.01	0.25	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
12	19.900	7.31	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.53	0.53	0.06	0.01	0.25	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
13	19.600	7.32	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.53	0.53	0.06	0.01	0.25	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
14	19.300	7.33	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.52	0.52	0.06	0.01	0.25	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
15	19.000	7.34	0.39	0.10	0.06	0.00	0.01	0.00	0.00	0.52	0.52	0.06	0.01	0.25	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
16	18.695	7.34	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.72	0.72	0.06	0.01	0.24	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
17	18.390	7.34	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.72	0.72	0.06	0.01	0.24	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
18	18.085	7.33	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.72	0.72	0.06	0.01	0.24	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
19	17.780	7.33	0.41	0.10	0.06	0.00	0.01	0.00	0.00	0.72	0.72	0.06	0.01	0.24	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
20	17.490	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.31	0.31	0.06	0.01	0.24	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
21	17.200	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.31	0.31	0.06	0.01	0.24	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
22	16.910	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
23	16.620	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.30	0.30	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
24	16.330	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
25	16.040	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.29	0.29	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
26	15.750	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
27	15.460	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.28	0.28	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
28	15.170	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
29	14.880	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
30	14.590	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
31	14.300	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
32	14.010	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.26	0.26	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
33	13.720	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.26	0.26	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
34	13.430	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.26	0.26	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
35	13.140	7.38	0.45	0.10	0.07	0.00	0.01	0.00	0.00	4.12	4.12	0.06	0.01	0.24	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00
36	12.850	7.43	0.45	0.10	0.07	0.00	0.01	0.00	0.00	4.02	4.02	0.06	0.01	0.23	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
37	12.560	7.48	0.45	0.10	0.07	0.00	0.01	0.00	0.00	3.91	3.91	0.06	0.01	0.22	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
38	12.270	7.53	0.44	0.10	0.07	0.00	0.01	0.00	0.00	3.81	3.81	0.06	0.01	0.21	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
39	11.980	7.58	0.44	0.09	0.07	0.00	0.01	0.00	0.00	3.71	3.71	0.06	0.01	0.20	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
40	11.585	7.55	0.22	0.10	0.03	0.00	0.01	0.00	0.00	0.51	0.51	0.06	0.00	0.21	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
41	11.190	7.51	0.23	0.10	0.03	0.00	0.01	0.00	0.00	0.56	0.56	0.06	0.00	0.21	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
42	10.795	7.48	0.23	0.10	0.03	0.00	0.01	0.00	0.00	0.60	0.60	0.06	0.00	0.22	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
43	10.400	7.44	0.23	0.10	0.03	0.00	0.01	0.00	0.00	0.63	0.63	0.06	0.00	0.23	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00
44	10.100	7.44	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.62	0.62	0.06	0.01	0.23	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
45	9.800	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.61	0.61	0.06	0.01	0.23	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00
46	9.500	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.61	0.61	0.06	0.01	0.23	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
47	9.200	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.60	0.60	0.06	0.01	0.23	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00
48	8.900	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	0.59	0.06	0.01	0.23	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
49	8.600	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.59	0.59	0.06	0.01	0.23	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
50	8.300	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.58	0.58	0.06	0.01	0.23	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
51	8.000	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.58	0.58	0.06	0.01	0.23	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
52	7.700	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.57	0.57	0.06	0.01	0.23	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
53	7.400	7.46	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.56	0.56	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
54	7.010	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.79	1.79	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
55	6.620	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.78	1.78	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00

56	6.230	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.76	1.76	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
57	5.840	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.75	1.75	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
58	5.450	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.74	1.74	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
59	5.200	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.24	1.24	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
60	4.950	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.24	1.24	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
61	4.700	7.46	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.23	1.23	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
62	4.375	7.45	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.25	1.25	0.06	0.01	0.23	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00
63	4.050	7.44	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.28	1.28	0.06	0.01	0.23	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00
64	3.725	7.43	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.29	1.29	0.06	0.01	0.23	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00
65	3.400	7.42	0.38	0.10	0.06	0.00	0.01	0.00	0.00	1.31	1.31	0.06	0.01	0.24	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00
66	3.050	7.39	0.48	0.10	0.07	0.00	0.01	0.00	0.00	1.18	1.18	0.06	0.01	0.24	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00
67	2.700	7.35	0.48	0.10	0.07	0.00	0.01	0.00	0.00	1.19	1.19	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
68	2.400	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.15	0.15	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
69	2.100	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.14	0.14	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
70	1.800	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.13	0.13	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
71	1.500	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.13	0.13	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
72	1.200	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.12	0.12	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
73	0.900	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.11	0.11	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
74	0.600	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.11	0.11	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
75	0.300	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
76	0.000	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00

SPECIAL REPORT: Headwater

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	ADVCTV VELO	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
	km	km	m³/s	m/s	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
1	23.00	22.70	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
2	22.70	22.40	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
3	22.40	22.10	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
4	22.10	21.80	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
5	21.80	21.50	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
6	21.50	21.30	0.0028	0.000	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.000	0.000
7	21.30	21.10	0.0028	0.000	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.000	0.000
8	21.10	20.90	0.0028	0.000	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.000	0.000
9	20.90	20.70	0.0028	0.000	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.000	0.000
10	20.70	20.50	0.0028	0.000	2.21	55.1	24354.	11020.0	121.8	0.	0.000	0.000	0.000
11	20.50	20.20	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
12	20.20	19.90	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
13	19.90	19.60	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
14	19.60	19.30	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
15	19.30	19.00	0.0028	0.000	2.21	55.1	36531.	16530.0	121.8	0.	0.000	0.000	0.000
16	19.00	18.69	0.2203	0.002	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.002	0.002
17	18.69	18.39	0.4378	0.003	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.003	0.003
18	18.39	18.08	0.6553	0.005	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.005	0.005
19	18.08	17.78	0.8728	0.007	2.11	59.3	38163.	18086.5	125.1	0.	0.000	0.006	0.007
20	17.78	17.49	0.8916	0.007	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.006	0.007
21	17.49	17.20	0.9102	0.008	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.006	0.008
22	17.20	16.91	0.9289	0.008	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.006	0.008
23	16.91	16.62	0.9476	0.008	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.006	0.008
24	16.62	16.33	0.9662	0.008	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.006	0.008

25	16.33	16.04	0.9849	0.008	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.008
26	16.04	15.75	1.0036	0.008	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.008
27	15.75	15.46	1.0222	0.009	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.009
28	15.46	15.17	1.0409	0.009	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.009
29	15.17	14.88	1.0596	0.009	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.009
30	14.88	14.59	1.0782	0.009	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.009
31	14.59	14.30	1.0969	0.009	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.009
32	14.30	14.01	1.1156	0.009	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.009
33	14.01	13.72	1.1342	0.009	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.007	0.009
34	13.72	13.43	1.1529	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
35	13.43	13.14	1.1529	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
36	13.14	12.85	1.1529	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
37	12.85	12.56	1.1529	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
38	12.56	12.27	1.1529	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
39	12.27	11.98	1.1529	0.010	1.91	62.9	34840.	18241.0	120.1	0.	0.000	0.008	0.010
40	11.98	11.58	1.3004	0.005	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.007	0.005
41	11.58	11.19	1.4479	0.006	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.008	0.006
42	11.19	10.79	1.5954	0.006	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.009	0.006
43	10.79	10.40	1.7429	0.007	3.75	69.5	102947.	27452.5	260.6	0.	0.000	0.009	0.007
44	10.40	10.10	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
45	10.10	9.80	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
46	9.80	9.50	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
47	9.50	9.20	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
48	9.20	8.90	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
49	8.90	8.60	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
50	8.60	8.30	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
51	8.30	8.00	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
52	8.00	7.70	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
53	7.70	7.40	1.7429	0.021	1.64	49.6	24403.	14880.0	81.3	0.	0.000	0.015	0.021
54	7.40	7.01	1.7429	0.008	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.007	0.008
55	7.01	6.62	1.7429	0.008	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.007	0.008
56	6.62	6.23	1.7429	0.008	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.007	0.008
57	6.23	5.84	1.7429	0.008	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.007	0.008
58	5.84	5.45	1.7429	0.008	2.25	98.1	86083.	38259.0	220.7	0.	0.000	0.007	0.008
59	5.45	5.20	1.7429	0.008	2.25	98.1	55181.	24525.0	220.7	0.	0.000	0.007	0.008
60	5.20	4.95	1.7429	0.008	2.25	98.1	55181.	24525.0	220.7	0.	0.000	0.007	0.008
61	4.95	4.70	1.7429	0.008	2.25	98.1	55181.	24525.0	220.7	0.	0.000	0.007	0.008
62	4.70	4.38	1.8179	0.008	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.007	0.008
63	4.38	4.05	1.8929	0.009	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.008	0.009
64	4.05	3.73	1.9679	0.009	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.008	0.009
65	3.73	3.40	2.0429	0.009	2.25	98.1	71736.	31882.5	220.7	0.	0.000	0.008	0.009
66	3.40	3.05	2.0431	0.019	1.81	58.9	37313.	20615.0	106.6	0.	0.000	0.015	0.019
67	3.05	2.70	2.0431	0.019	1.81	58.9	37313.	20615.0	106.6	0.	0.000	0.015	0.019
68	2.70	2.40	2.0431	0.011	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.010	0.011
69	2.40	2.10	2.0431	0.011	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.010	0.011
70	2.10	1.80	2.0431	0.011	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.010	0.011
71	1.80	1.50	2.0431	0.011	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.010	0.011
72	1.50	1.20	2.0431	0.011	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.010	0.011
73	1.20	0.90	2.0431	0.011	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.010	0.011
74	0.90	0.60	2.0431	0.011	2.26	85.7	58105.	25710.0	193.7	0.	0.000	0.010	0.011

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  75   0.60   0.30    2.0431  0.011   2.26   85.7   58105.   25710.0  193.7      0.  0.000    0.010  0.011
  76   0.30   0.00    2.0431  0.011   2.26   85.7   58105.   25710.0  193.7      0.  0.000    0.010  0.011
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  1    Lock 3 to Below A                    COEF-1 Run
******************************************************** REACH INPUTS ********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.             deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  1  HDWTR    0.00283  30.00    0.00    0.00    0.00   5.00   0.40   0.00   0.40   0.00   0.00   0.50   0.10   0.00   1.50    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
NO.    DIST   DIST       EFF   VELO    TIME                          AREA    AREA    PRISM   VELO            VELO
        km     km      m³/s      m/s    days     m      m      m³      m²      m²      m³    m/s     m²/s    m/s
  1   23.00  22.70   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  2   22.70  22.40   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  3   22.40  22.10   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  4   22.10  21.80   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  5   21.80  21.50   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
TOT                                  746.50                  182656.48  82650.00
AVG                            0.0000          2.21   55.10                121.77
CUM                                  746.50
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da   1/da   1/da   1/da   1/da    *     *     *    1/da   1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
  1  22.700  7.29    0.39   0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.67  0.67   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  2  22.400  7.29    0.39   0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  3  22.100  7.29    0.39   0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  4  21.800  7.29    0.39   0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  5  21.500  7.29    0.39   0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE     0.32   0.06  0.05   0.00   0.01  0.00   0.00  0.31              0.05  0.00   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
  1  22.700  32.10  0.00    0.00    0.00   6.82   0.02   0.00   0.02   0.00   0.00   0.01   0.00   0.01   0.07   1.50   0.00      0.   0.00
  2  22.400  32.10  0.00    0.00    0.00   6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50   0.00      0.   0.00
  3  22.100  32.10  0.00    0.00    0.00   6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50   0.00      0.   0.00
  4  21.800  32.10  0.00    0.00    0.00   6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50   0.00      0.   0.00
  5  21.500  32.10  0.00    0.00    0.00   6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50   0.00      0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  2    Below A to Below B                   COEF-1 Run
******************************************************** REACH INPUTS ********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.             deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  6  UPR RCH  0.00283  32.10    0.00    0.00    0.00   6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
NO.    DIST   DIST       EFF   VELO    TIME                          AREA    AREA    PRISM   VELO            VELO
        km     km      m³/s      m/s    days     m      m      m³      m²      m²      m³    m/s     m²/s    m/s
  6   21.50  21.30   0.00283  0.0  0.00002   99.53   2.21   55.10  24354.20  11020.00  121.77    0.00  0.000    0.000  0.000
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  7  21.30  21.10   0.00283  0.0  0.00002   99.53   2.21  55.10 24354.20  11020.00 121.77     0.00  0.000    0.000  0.000
  8  21.10  20.90   0.00283  0.0  0.00002   99.53   2.21  55.10 24354.20  11020.00 121.77     0.00  0.000    0.000  0.000
  9  20.90  20.70   0.00283  0.0  0.00002   99.53   2.21  55.10 24354.20  11020.00 121.77     0.00  0.000    0.000  0.000
 10  20.70  20.50   0.00283  0.0  0.00002   99.53   2.21  55.10 24354.20  11020.00 121.77     0.00  0.000    0.000  0.000
 TOT                                 497.66            121771.00   55100.00
 AVG                            0.0000          2.21  55.10                121.77
 CUM                                 1244.16
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
 ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN  ORGN   NH3  NH3  DENIT  PO4  ALG  MAC  COLI   NCM   NCM
 NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY  SOD  SOD  SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *   *   *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  6  21.300  7.29   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.66  0.66  0.66  0.06  0.01  0.25  0.00  0.00  0.00  0.13  0.00  0.00  0.00  0.00
  7  21.100  7.29   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.66  0.66  0.66  0.06  0.01  0.25  0.00  0.00  0.00  0.13  0.00  0.00  0.00  0.00
  8  20.900  7.29   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.66  0.66  0.66  0.06  0.01  0.25  0.00  0.00  0.00  0.13  0.00  0.00  0.00  0.00
  9  20.700  7.29   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.66  0.66  0.66  0.06  0.01  0.25  0.00  0.00  0.00  0.13  0.00  0.00  0.00  0.00
 10  20.500  7.29   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.66  0.66  0.66  0.06  0.01  0.25  0.00  0.00  0.00  0.13  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.32  0.06  0.05  0.00  0.01  0.00  0.00  0.31            0.05  0.00  0.10  0.00  0.00  0.00            3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
 ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
 NO.   DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
  6  21.300  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50  0.00     0.   0.00
  7  21.100  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50  0.00     0.   0.00
  8  20.900  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50  0.00     0.   0.00
  9  20.700  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50  0.00     0.   0.00
 10  20.500  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50  0.00     0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO.  3    Below B to Below C                        COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
 ELEM  TYPE       FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  11  UPR RCH   0.00283  32.10    0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50    0.00   0.00
********************************************************* HYDRAULIC PARAMETER VALUES *********************************************
 ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST    DIST          EFF    VELO     TIME                          AREA    AREA    PRISM   VELO            VELO
       km      km       m³/s          m/s    days      m      m       m³       m²      m²       m³    m/s     m²/s    m/s
  11  20.50   20.20   0.00283  0.0  0.00002  149.30   2.21  55.10 36531.30  16530.00 121.77     0.00  0.000    0.000  0.000
  12  20.20   19.90   0.00283  0.0  0.00002  149.30   2.21  55.10 36531.30  16530.00 121.77     0.00  0.000    0.000  0.000
  13  19.90   19.60   0.00283  0.0  0.00002  149.30   2.21  55.10 36531.30  16530.00 121.77     0.00  0.000    0.000  0.000
  14  19.60   19.30   0.00283  0.0  0.00002  149.30   2.21  55.10 36531.30  16530.00 121.77     0.00  0.000    0.000  0.000
  15  19.30   19.00   0.00283  0.0  0.00002  149.30   2.21  55.10 36531.30  16530.00 121.77     0.00  0.000    0.000  0.000
 TOT                                 746.50            182656.48   82650.00
 AVG                            0.0000          2.21  55.10                121.77
 CUM                                 1990.66
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
 ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN  ORGN   NH3  NH3  DENIT  PO4  ALG  MAC  COLI   NCM   NCM
 NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY  SOD  SOD  SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *   *   *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 11  20.200  7.30   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.53  0.53  0.53  0.06  0.01  0.25  0.00  0.00  0.00  0.12  0.00  0.00  0.00  0.00
 12  19.900  7.31   0.39  0.10  0.06  0.00  0.01  0.00  0.00  0.53  0.53  0.53  0.06  0.01  0.25  0.00  0.00  0.00  0.11  0.00  0.00  0.00  0.00
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 13  19.600 7.32   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.53 0.53 0.53  0.06 0.01  0.25 0.00  0.00 0.00 0.09 0.00  0.00  0.00  0.00
 14  19.300 7.33   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.52 0.52  0.06 0.01  0.25 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 15  19.000 7.34   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.52 0.52  0.06 0.01  0.25 0.00  0.00 0.00 0.07 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.32  0.06 0.05  0.00  0.01 0.00  0.00 0.25            0.05 0.00  0.10 0.00  0.00 0.00            3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 11  20.200 32.02 0.00    0.00    0.00 6.99  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.36  0.00     0.   0.00
 12  19.900 31.94 0.00    0.00    0.00 6.97  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.22  0.00     0.   0.00
 13  19.600 31.86 0.00    0.00    0.00 6.95  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.08  0.00     0.   0.00
 14  19.300 31.78 0.00    0.00    0.00 6.93  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  0.94  0.00     0.   0.00
 15  19.000 31.70 0.00    0.00    0.00 6.91  0.01  0.00  0.01  0.00  0.00  0.00  0.00  0.00  0.07  0.80  0.00     0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO.  4    Below C to Lock 2                        COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE       FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 16  UPR RCH   0.00283  31.70    0.00    0.00    0.00 6.91  0.01  0.00  0.01  0.00  0.00  0.00  0.00  0.07  0.80    0.00   0.00
EACH  INCR     0.21750  30.00    0.00    0.00    0.00 5.00  1.98  0.00            0.00  0.50  0.10  0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT  ADVCTV   TRAVEL   DEPTH   WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km     km       m³/s          m/s    days      m      m       m³       m²      m²       m³    m/s     m²/s    m/s
 16   19.00  18.69   0.22033  0.0  0.00176    2.00   2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.002  0.002
 17   18.69  18.39   0.43783  0.0  0.00350    1.01   2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.003  0.003
 18   18.39  18.08   0.65533  0.0  0.00524    0.67   2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.005  0.005
 19   18.08  17.78   0.87283  0.0  0.00698    0.51   2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.006  0.007
 TOT                                   4.19              152650.05   72346.00
 AVG                            0.0034          2.11   59.30                  125.12
 CUM                                1994.85
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN   NH3   NH3  DENIT   PO4   ALG   MAC   COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 16  18.695 7.34   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.13 0.00  0.00  0.00  0.00
 17  18.390 7.34   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.19 0.00  0.00  0.00  0.00
 18  18.085 7.33   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.25 0.00  0.00  0.00  0.00
 19  17.780 7.33   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.53 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.33  0.06 0.05  0.00  0.01 0.00  0.00 0.25            0.05 0.00  0.10 0.00  0.00 0.00            3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 16  18.695 31.73 0.00    0.00    0.00 5.67  1.47  0.00  1.47  0.00  0.00  0.33  0.10  0.44  0.07  1.50  0.00     0.   0.00
 17  18.390 31.75 0.00    0.00    0.00 5.71  1.48  0.00  1.48  0.00  0.00  0.34  0.17  0.51  0.07  2.20  0.00     0.   0.00
 18  18.085 31.77 0.00    0.00    0.00 5.75  1.48  0.00  1.48  0.00  0.00  0.34  0.20  0.53  0.07  2.90  0.00     0.   0.00
 19  17.780 31.80 0.00    0.00    0.00 5.79  1.48  0.00  1.48  0.00  0.00  0.34  0.20  0.54  0.07  3.60  0.00     0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO.  5    Lock 2 (Church) to ABTalisheek                COEF-1 Run
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********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A	COLI #/100mL	NCM
20	UPR RCH	0.87283	31.80	0.00	0.00	0.00	5.79	1.48	0.00	1.48	0.00	0.00	0.34	0.20	0.07	3.60	0.00	0.00
EACH	INCR	0.01867	30.00	0.00	0.00	0.00	5.00	3.96	0.00		0.00	0.50	0.10	0.00	0.00	0.00		
20	WSTLD	0.00008	30.00	0.00	0.00	0.00	5.00	2.05	0.00	2.05	0.00	0.00	3.49	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	PRISM m³	VELO m/s	TIDAL VELO m²/s	TIDAL m/s	DISPRSN	MEAN
20	17.78	17.49	0.89158	0.0	0.00742	0.45	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.006	0.007		
21	17.49	17.20	0.91024	0.0	0.00758	0.44	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.006	0.008		
22	17.20	16.91	0.92891	0.0	0.00773	0.43	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.006	0.008		
23	16.91	16.62	0.94758	0.0	0.00789	0.43	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.006	0.008		
24	16.62	16.33	0.96624	0.0	0.00804	0.42	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.006	0.008		
25	16.33	16.04	0.98491	0.0	0.00820	0.41	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.008		
26	16.04	15.75	1.00358	0.0	0.00835	0.40	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.008		
27	15.75	15.46	1.02224	0.0	0.00851	0.39	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.009		
28	15.46	15.17	1.04091	0.0	0.00866	0.39	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.009		
29	15.17	14.88	1.05958	0.0	0.00882	0.38	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.009		
30	14.88	14.59	1.07824	0.0	0.00897	0.37	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.009		
31	14.59	14.30	1.09691	0.0	0.00913	0.37	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.009		
32	14.30	14.01	1.11558	0.0	0.00929	0.36	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.009		
33	14.01	13.72	1.13424	0.0	0.00944	0.36	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.007	0.009		
34	13.72	13.43	1.15291	0.0	0.00960	0.35	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.008	0.010		
TOT					5.95			522604.66	273615.00								
AVG				0.0085		1.91	62.90				120.14						
CUM					2000.81												

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE **	SRCE **	DENIT PROD 1/da	PO4 PROD 1/da	ALG DECAY 1/da	MAC DECAY 1/da	COLI SETT 1/da	NCM	NCM
20	17.490	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.31	0.31	0.06	0.01	0.24	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
21	17.200	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.31	0.31	0.06	0.01	0.24	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
22	16.910	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.30	0.30	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
23	16.620	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.30	0.30	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
24	16.330	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.29	0.29	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
25	16.040	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.29	0.29	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
26	15.750	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.28	0.28	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
27	15.460	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.28	0.28	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
28	15.170	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
29	14.880	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
30	14.590	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
31	14.300	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.27	0.27	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
32	14.010	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.26	0.26	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
33	13.720	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.26	0.26	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
34	13.430	7.33	0.45	0.10	0.07	0.00	0.01	0.00	0.00	0.13	0.26	0.26	0.06	0.01	0.25	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.37	0.06	0.05	0.00	0.01	0.00	0.00	0.06		0.05	0.01	0.10	0.00	0.00	0.00		3.00	0.00	0.00				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
20	17.490	31.80	0.00	0.00	0.00	6.04	1.42	0.00	1.42	0.00	0.00	0.31	0.23	0.53	0.07	3.60	0.00	0.	0.00
21	17.200	31.80	0.00	0.00	0.00	6.24	1.37	0.00	1.37	0.00	0.00	0.28	0.25	0.53	0.07	3.60	0.00	0.	0.00
22	16.910	31.80	0.00	0.00	0.00	6.40	1.32	0.00	1.32	0.00	0.00	0.26	0.27	0.52	0.07	3.60	0.00	0.	0.00
23	16.620	31.80	0.00	0.00	0.00	6.54	1.28	0.00	1.28	0.00	0.00	0.24	0.28	0.52	0.07	3.60	0.00	0.	0.00
24	16.330	31.80	0.00	0.00	0.00	6.65	1.24	0.00	1.24	0.00	0.00	0.22	0.29	0.51	0.07	3.60	0.00	0.	0.00
25	16.040	31.80	0.00	0.00	0.00	6.74	1.21	0.00	1.21	0.00	0.00	0.20	0.30	0.51	0.07	3.60	0.00	0.	0.00
26	15.750	31.80	0.00	0.00	0.00	6.82	1.18	0.00	1.18	0.00	0.00	0.19	0.31	0.50	0.07	3.60	0.00	0.	0.00
27	15.460	31.80	0.00	0.00	0.00	6.88	1.15	0.00	1.15	0.00	0.00	0.18	0.32	0.50	0.07	3.60	0.00	0.	0.00
28	15.170	31.80	0.00	0.00	0.00	6.94	1.13	0.00	1.13	0.00	0.00	0.17	0.33	0.50	0.07	3.60	0.00	0.	0.00
29	14.880	31.80	0.00	0.00	0.00	6.98	1.10	0.00	1.10	0.00	0.00	0.16	0.33	0.49	0.07	3.60	0.00	0.	0.00
30	14.590	31.80	0.00	0.00	0.00	7.02	1.08	0.00	1.08	0.00	0.00	0.15	0.34	0.49	0.07	3.60	0.00	0.	0.00
31	14.300	31.80	0.00	0.00	0.00	7.06	1.06	0.00	1.06	0.00	0.00	0.14	0.34	0.48	0.07	3.60	0.00	0.	0.00
32	14.010	31.80	0.00	0.00	0.00	7.08	1.05	0.00	1.05	0.00	0.00	0.14	0.34	0.48	0.07	3.60	0.00	0.	0.00
33	13.720	31.80	0.00	0.00	0.00	7.11	1.03	0.00	1.03	0.00	0.00	0.13	0.35	0.48	0.07	3.60	0.00	0.	0.00
34	13.430	31.80	0.00	0.00	0.00	7.13	1.02	0.00	1.02	0.00	0.00	0.13	0.35	0.47	0.07	3.60	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204
REACH NO. 6 AB to Talisheek COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
35	UPR RCH	1.15291	31.80	0.00	0.00	0.00	7.13	1.02	0.00	1.02	0.00	0.00	0.13	0.35	0.07	3.60	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/s	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
35	13.43	13.14	1.15291	0.0	0.00960	0.35	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.008	0.010
36	13.14	12.85	1.15291	0.0	0.00960	0.35	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.008	0.010
37	12.85	12.56	1.15291	0.0	0.00960	0.35	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.008	0.010
38	12.56	12.27	1.15291	0.0	0.00960	0.35	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.008	0.010
39	12.27	11.98	1.15291	0.0	0.00960	0.35	1.91	62.90	34840.31	18241.00	120.14	0.00	0.000	0.008	0.010
TOT						1.75			174201.55	91205.00					
AVG				0.0096			1.91	62.90			120.14				
CUM						2002.56									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	ORGN DECAY 1/da	NH3 SRCE *	NH3 RATE **	SRCE **	DENIT PROD 1/da	PO4 PROD 1/da	ALG DECAY 1/da	MAC DECAY 1/da	COLI SETT 1/da	NCM	NCM
35	13.140	7.38	0.45	0.10	0.07	0.00	0.01	0.00	0.00	4.00	4.12	4.12	0.06	0.01	0.24	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00		
36	12.850	7.43	0.45	0.10	0.07	0.00	0.01	0.00	0.00	3.90	4.02	4.02	0.06	0.01	0.23	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00		
37	12.560	7.48	0.45	0.10	0.07	0.00	0.01	0.00	0.00	3.80	3.91	3.91	0.06	0.01	0.22	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00		
38	12.270	7.53	0.44	0.10	0.07	0.00	0.01	0.00	0.00	3.71	3.81	3.81	0.06	0.01	0.21	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00		
39	11.980	7.58	0.44	0.09	0.07	0.00	0.01	0.00	0.00	3.61	3.71	3.71	0.06	0.01	0.20	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00		
AVG 20 DEG C RATE			0.37	0.06	0.05	0.00	0.01	0.00	0.00	1.95			0.05	0.01	0.10	0.00	0.00	0.00			3.00	0.00	0.00		

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
35	13.140	31.40	0.00	0.00	0.00	6.56	0.96	0.00	0.96	0.00	0.00	0.12	0.35	0.47	0.07	3.04	0.00	0.	0.00

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 36  12.850  31.00  0.00    0.00    0.00  6.08  0.91  0.00  0.91  0.00  0.00  0.11  0.36  0.47  0.07  2.48   0.00     0.   0.00
 37  12.560  30.60  0.00    0.00    0.00  5.67  0.86  0.00  0.86  0.00  0.00  0.10  0.36  0.46  0.06  1.92   0.00     0.   0.00
 38  12.270  30.20  0.00    0.00    0.00  5.32  0.81  0.00  0.81  0.00  0.00  0.09  0.37  0.46  0.06  1.36   0.00     0.   0.00
 39  11.980  29.80  0.00    0.00    0.00  5.03  0.77  0.00  0.77  0.00  0.00  0.09  0.37  0.46  0.06  0.80   0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  7    Talisheek to Below G                    COEF-1 Run

*********************************************************** REACH INPUTS ***********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 40  UPR RCH   1.15291   29.80    0.00    0.00    0.00  5.03  0.77  0.00  0.77  0.00  0.00  0.09  0.37  0.06  0.80    0.00   0.00
EACH  INCR     0.14750   30.00    0.00    0.00    0.00  5.00  5.94  0.00              0.00  1.00  0.10  0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF     VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km       m³/s          m/s    days      m      m       m³       m²      m²       m³     m/s     m²/s    m/s
 40   11.98   11.58   1.30041   0.0  0.00499    0.92   3.75   69.50 102946.88   27452.50  260.62     0.00  0.000    0.007  0.005
 41   11.58   11.19   1.44791   0.0  0.00556    0.82   3.75   69.50 102946.88   27452.50  260.62     0.00  0.000    0.008  0.006
 42   11.19   10.79   1.59541   0.0  0.00612    0.75   3.75   69.50 102946.88   27452.50  260.62     0.00  0.000    0.009  0.006
 43   10.79   10.40   1.74291   0.0  0.00669    0.68   3.75   69.50 102946.88   27452.50  260.62     0.00  0.000    0.009  0.007
 TOT                                   3.17              411787.50  109810.00
 AVG                            0.0058           3.75   69.50                  260.62
 CUM                                2005.73
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da     *    1/da     *    **    **   1/da   1/da   1/da
 40   11.585  7.55   0.22   0.10  0.03   0.00   0.01  0.00   0.00  0.36  0.51  0.51   0.06  0.00   0.21  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
 41   11.190  7.51   0.23   0.10  0.03   0.00   0.01  0.00   0.00  0.36  0.56  0.56   0.06  0.00   0.21  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 42   10.795  7.48   0.23   0.10  0.03   0.00   0.01  0.00   0.00  0.37  0.60  0.60   0.06  0.00   0.22  0.00   0.00  0.00  0.27  0.00   0.00   0.00   0.00
 43   10.400  7.44   0.23   0.10  0.03   0.00   0.01  0.00   0.00  0.38  0.63  0.63   0.06  0.00   0.23  0.00   0.00  0.00  0.35  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE     0.19   0.06  0.03   0.00   0.01  0.00   0.00  0.19              0.05  0.00   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L    g/m³  #/100mL
 40   11.585  30.07  0.00    0.00    0.00  5.37  1.21  0.00  1.21  0.00  0.00  0.16  0.37  0.53  0.06  1.65   0.00     0.   0.00
 41   11.190  30.35  0.00    0.00    0.00  5.61  1.53  0.00  1.53  0.00  0.00  0.21  0.37  0.58  0.06  2.50   0.00     0.   0.00
 42   10.795  30.62  0.00    0.00    0.00  5.79  1.76  0.00  1.76  0.00  0.00  0.24  0.37  0.61  0.06  3.35   0.00     0.   0.00
 43   10.400  30.90  0.00    0.00    0.00  5.95  1.94  0.00  1.94  0.00  0.00  0.27  0.38  0.64  0.06  4.20   0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  8    Below G to Below H                    COEF-1 Run
*********************************************************** REACH INPUTS ***********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 44  UPR RCH   1.74291   30.90    0.00    0.00    0.00  5.95  1.94  0.00  1.94  0.00  0.00  0.27  0.38  0.06  4.20    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF     VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km       m³/s          m/s    days      m      m       m³       m²      m²       m³     m/s     m²/s    m/s
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44	10.40	10.10	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
45	10.10	9.80	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
46	9.80	9.50	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
47	9.50	9.20	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
48	9.20	8.90	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
49	8.90	8.60	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
50	8.60	8.30	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
51	8.30	8.00	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
52	8.00	7.70	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
53	7.70	7.40	1.74291	0.0	0.02143	0.16	1.64	49.60	24403.20	14880.00	81.34	0.00	0.000	0.015	0.021
TOT					1.62				244032.02	148800.00					
AVG					0.0214		1.64	49.60			81.34				
CUM					2007.35										

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	BOD#1 DECAY 1/da	BOD#1 SETT 1/da	ABOD#1 DECAY 1/da	BOD#2 DECAY 1/da	BOD#2 SETT 1/da	ABOD#2 DECAY 1/da	BKGD SOD *	FULL SOD *	CORR SOD *	ORGN DECAY 1/da	ORGN SETT 1/da	NH3 DECAY 1/da	NH3 SRCE *	DENIT RATE **	PO4 SRCE **	ALG PROD 1/da	MAC PROD 1/da	COLI DECAY 1/da	NCM DECAY 1/da	NCM SETT 1/da
44	10.100	7.44	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.62	0.62	0.06	0.01	0.23	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00
45	9.800	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.61	0.61	0.06	0.01	0.23	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00
46	9.500	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.61	0.61	0.06	0.01	0.23	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00
47	9.200	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.60	0.60	0.06	0.01	0.23	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00
48	8.900	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.59	0.59	0.06	0.01	0.23	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00
49	8.600	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.59	0.59	0.06	0.01	0.23	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
50	8.300	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.58	0.58	0.06	0.01	0.23	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00
51	8.000	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.58	0.58	0.06	0.01	0.23	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00
52	7.700	7.45	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.57	0.57	0.06	0.01	0.23	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00
53	7.400	7.46	0.52	0.10	0.08	0.00	0.01	0.00	0.00	0.38	0.56	0.56	0.06	0.01	0.23	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.43	0.06	0.06	0.00	0.01	0.00	0.00	0.19			0.05	0.01	0.10	0.00	0.00	0.00			3.00	0.00	0.00

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

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m^3	MACRO	COLI #/100mL	NCM
44	10.100	30.89	0.00	0.00	0.00	6.04	1.88	0.00	1.88	0.00	0.00	0.26	0.38	0.64	0.06	4.51	0.00	0.	0.00
45	9.800	30.88	0.00	0.00	0.00	6.12	1.83	0.00	1.83	0.00	0.00	0.25	0.39	0.64	0.06	4.82	0.00	0.	0.00
46	9.500	30.87	0.00	0.00	0.00	6.21	1.78	0.00	1.78	0.00	0.00	0.24	0.40	0.63	0.06	5.13	0.00	0.	0.00
47	9.200	30.86	0.00	0.00	0.00	6.29	1.73	0.00	1.73	0.00	0.00	0.23	0.40	0.63	0.06	5.44	0.00	0.	0.00
48	8.900	30.85	0.00	0.00	0.00	6.37	1.68	0.00	1.68	0.00	0.00	0.22	0.40	0.63	0.06	5.75	0.00	0.	0.00
49	8.600	30.84	0.00	0.00	0.00	6.45	1.64	0.00	1.64	0.00	0.00	0.21	0.41	0.62	0.06	6.06	0.00	0.	0.00
50	8.300	30.83	0.00	0.00	0.00	6.53	1.59	0.00	1.59	0.00	0.00	0.21	0.41	0.62	0.06	6.37	0.00	0.	0.00
51	8.000	30.82	0.00	0.00	0.00	6.61	1.55	0.00	1.55	0.00	0.00	0.20	0.41	0.61	0.06	6.68	0.00	0.	0.00
52	7.700	30.81	0.00	0.00	0.00	6.69	1.50	0.00	1.50	0.00	0.00	0.19	0.42	0.61	0.06	6.99	0.00	0.	0.00
53	7.400	30.80	0.00	0.00	0.00	6.76	1.46	0.00	1.46	0.00	0.00	0.19	0.42	0.60	0.06	7.30	0.00	0.	0.00

FINAL REPORT Headwater Pearl River DO Modeling 090204

REACH NO. 9 Below H to Evans Creek COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
54	UPR RCH	1.74291	30.80	0.00	0.00	0.00	6.76	1.46	0.00	1.46	0.00	0.00	0.19	0.42	0.06	7.30	0.00	0.00

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

ELEM	BEGIN	ENDING	FLOW	PCT	ADVCTV	TRAVEL	DEPTH	WIDTH	VOLUME	SURFACE	X-SECT	TIDAL	TIDAL	DISPRSN	MEAN

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 NO.   DIST   DIST          EFF    VELO     TIME                        AREA   AREA    PRISM   VELO          VELO
       km     km      m³/s        m/s    days     m      m      m³       m²     m²      m³     m/s    m²/s    m/s
  54   7.40   7.01   1.74291  0.0  0.00790    0.57   2.25   98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  55   7.01   6.62   1.74291  0.0  0.00790    0.57   2.25   98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  56   6.62   6.23   1.74291  0.0  0.00790    0.57   2.25   98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  57   6.23   5.84   1.74291  0.0  0.00790    0.57   2.25   98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  58   5.84   5.45   1.74291  0.0  0.00790    0.57   2.25   98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
 TOT                                   2.86            430413.75  191295.00
 AVG                          0.0079          2.25   98.10                 220.73
 CUM                                2010.20
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST D.O.   RATE DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  54   7.010 7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.62  1.79 1.79  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
  55   6.620 7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.62  1.78 1.78  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
  56   6.230 7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.62  1.76 1.76  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
  57   5.840 7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.62  1.75 1.75  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
  58   5.450 7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.62  1.74 1.74  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.31  0.06 0.04  0.00  0.01 0.00  0.00 0.82            0.05 0.00  0.10 0.00  0.00 0.00            3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
  54   7.010 30.80 0.00    0.00    0.00  6.73  1.34  0.00  1.34  0.00  0.00  0.16  0.42  0.59  0.06  7.30  0.00     0.   0.00
  55   6.620 30.80 0.00    0.00    0.00  6.72  1.23  0.00  1.23  0.00  0.00  0.15  0.43  0.57  0.06  7.30  0.00     0.   0.00
  56   6.230 30.80 0.00    0.00    0.00  6.71  1.13  0.00  1.13  0.00  0.00  0.13  0.42  0.55  0.06  7.30  0.00     0.   0.00
  57   5.840 30.80 0.00    0.00    0.00  6.71  1.04  0.00  1.04  0.00  0.00  0.11  0.42  0.54  0.06  7.30  0.00     0.   0.00
  58   5.450 30.80 0.00    0.00    0.00  6.72  0.95  0.00  0.95  0.00  0.00  0.10  0.42  0.52  0.06  7.30  0.00     0.   0.00
FINAL REPORT          Headwater                    Pearl River DO Modeling 090204
REACH NO. 10   Evans Creek to Possible Stream              COEF-1 Run
************************************************************** REACH INPUTS **************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
  59  UPR RCH   1.74291  30.80    0.00    0.00    0.00  6.72  0.95  0.00  0.95  0.00  0.00  0.10  0.42  0.06  7.30    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                        AREA   AREA    PRISM   VELO          VELO
       km     km      m³/s        m/s    days     m      m      m³       m²     m²      m³     m/s    m²/s    m/s
  59   5.45   5.20   1.74291  0.0  0.00790    0.37   2.25   98.10  55181.25  24525.00  220.72    0.00  0.000    0.007  0.008
  60   5.20   4.95   1.74291  0.0  0.00790    0.37   2.25   98.10  55181.25  24525.00  220.72    0.00  0.000    0.007  0.008
  61   4.95   4.70   1.74291  0.0  0.00790    0.37   2.25   98.10  55181.25  24525.00  220.72    0.00  0.000    0.007  0.008
 TOT                                   1.10            165543.73   73575.00
 AVG                          0.0079          2.25   98.10                 220.72
 CUM                                2011.30
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST D.O.   RATE DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  59   5.200 7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.13  1.24 1.24  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
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 60   4.950  7.46   0.38  0.10  0.06  0.00  0.01  0.00  0.00  1.13  1.24  1.24   0.06  0.01  0.23  0.00  0.00  0.00  0.60  0.00  0.00  0.00  0.00
 61   4.700  7.46   0.38  0.10  0.06  0.00  0.01  0.00  0.00  1.13  1.23  1.23   0.06  0.01  0.23  0.00  0.00  0.00  0.60  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.31  0.06  0.04  0.00  0.01  0.00  0.00  0.57             0.05  0.00  0.10  0.00  0.00  0.00             3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 59   5.200  30.80  0.00    0.00    0.00  6.79  0.90  0.00  0.90  0.00  0.00  0.09  0.42  0.51  0.06  7.30  0.00      0.   0.00
 60   4.950  30.80  0.00    0.00    0.00  6.86  0.85  0.00  0.85  0.00  0.00  0.09  0.41  0.50  0.06  7.30  0.00      0.   0.00
 61   4.700  30.80  0.00    0.00    0.00  6.93  0.81  0.00  0.81  0.00  0.00  0.08  0.41  0.49  0.06  7.30  0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO. 11    Possible Stream to Junior High                COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
 62  UPR RCH   1.74291   30.80    0.00    0.00    0.00  6.93  0.81  0.00  0.81  0.00  0.00  0.08  0.41  0.06  7.30    0.00   0.00
EACH  INCR     0.07500   30.00    0.00    0.00    0.00  5.00  5.94  0.00             0.00  0.50  0.10  0.00    0.00   0.00
************************************************ HYDRAULIC PARAMETER VALUES ************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF    VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km       m³/s          m/s    days      m      m       m³       m²      m²       m³     m/s     m²/s    m/s
 62   4.70    4.38   1.81791   0.0  0.00824    0.46   2.25   98.10  71735.62   31882.50  220.72     0.00   0.000    0.007   0.008
 63   4.38    4.05   1.89291   0.0  0.00858    0.44   2.25   98.10  71735.62   31882.50  220.72     0.00   0.000    0.008   0.009
 64   4.05    3.73   1.96791   0.0  0.00892    0.42   2.25   98.10  71735.62   31882.50  220.72     0.00   0.000    0.008   0.009
 65   3.73    3.40   2.04291   0.0  0.00926    0.41   2.25   98.10  71735.62   31882.50  220.72     0.00   0.000    0.008   0.009
 TOT                                   1.72              286942.50  127530.00
 AVG                          0.0087           2.25   98.10                  220.72
 CUM                                2013.03
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC  COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *    1/da  1/da   1/da     *    1/da     *    **    **    1/da   1/da   1/da
 62   4.375  7.45   0.38  0.10  0.06  0.00  0.01  0.00  0.00  1.13  1.25  1.25   0.06  0.01  0.23  0.00  0.00  0.00  0.65  0.00  0.00  0.00  0.00
 63   4.050  7.44   0.38  0.10  0.06  0.00  0.01  0.00  0.00  1.14  1.28  1.28   0.06  0.01  0.23  0.00  0.00  0.00  0.71  0.00  0.00  0.00  0.00
 64   3.725  7.43   0.38  0.10  0.06  0.00  0.01  0.00  0.00  1.14  1.29  1.29   0.06  0.01  0.23  0.00  0.00  0.00  0.76  0.00  0.00  0.00  0.00
 65   3.400  7.42   0.38  0.10  0.06  0.00  0.01  0.00  0.00  1.15  1.31  1.31   0.06  0.01  0.24  0.00  0.00  0.00  0.82  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.31  0.06  0.04  0.00  0.01  0.00  0.00  0.57             0.05  0.00  0.10  0.00  0.00  0.00             3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 62   4.375  30.88  0.00    0.00    0.00  6.94  0.95  0.00  0.95  0.00  0.00  0.09  0.39  0.48  0.06  7.93  0.00      0.   0.00
 63   4.050  30.95  0.00    0.00    0.00  6.95  1.07  0.00  1.07  0.00  0.00  0.09  0.37  0.47  0.06  8.55  0.00      0.   0.00
 64   3.725  31.02  0.00    0.00    0.00  6.98  1.18  0.00  1.18  0.00  0.00  0.10  0.35  0.45  0.06  9.18  0.00      0.   0.00
 65   3.400  31.10  0.00    0.00    0.00  7.01  1.27  0.00  1.27  0.00  0.00  0.10  0.34  0.44  0.06  9.80  0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO. 12    Junior High to Spillway                       COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
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 66  UPR RCH   2.04291   31.10    0.00    0.00    0.00   7.01   1.27   0.00   1.27   0.00   0.00   0.10   0.34   0.06   9.80    0.00    0.00
 66  WSTLD     0.00019   30.00    0.00    0.00    0.00   5.00   2.05   0.00   2.05   0.00   0.00   2.33   0.00   0.00   0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV    TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST        EFF    VELO     TIME                            AREA    AREA     PRISM    VELO            VELO
       km     km       m³/s        m/s    days      m       m       m³       m²       m²       m³     m/s     m²/s    m/s
 66    3.40   3.05   2.04310   0.0  0.01916    0.21    1.81   58.90  37313.15  20615.00  106.61     0.00   0.000    0.015   0.019
 67    3.05   2.70   2.04310   0.0  0.01916    0.21    1.81   58.90  37313.15  20615.00  106.61     0.00   0.000    0.015   0.019
 TOT                                   0.42                 74626.30   41230.00
 AVG                            0.0192          1.81   58.90                  106.61
 CUM                                2013.45
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da   1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da    *    1/da    *    **    **   1/da   1/da   1/da
 66    3.050  7.39   0.48   0.10  0.07   0.00   0.01  0.00   0.00  1.02  1.18  1.18   0.06  0.01   0.24  0.00   0.00  0.00  0.51  0.00   0.00   0.00   0.00
 67    2.700  7.35   0.48   0.10  0.07   0.00   0.01  0.00   0.00  1.04  1.19  1.19   0.06  0.01   0.24  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.39   0.06  0.06   0.00   0.01  0.00   0.00  0.50             0.05  0.01   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT     mg/L     mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    g/m³  #/100mL
 66    3.050  31.35  0.00     0.00     0.00   7.00   1.23   0.00   1.23   0.00   0.00   0.10   0.34   0.44   0.04   6.05    0.00      0.    0.00
 67    2.700  31.60  0.00     0.00     0.00   6.92   1.19   0.00   1.19   0.00   0.00   0.09   0.34   0.44   0.03   2.30    0.00      0.    0.00
FINAL REPORT            Headwater                          Pearl River DO Modeling 090204
REACH NO. 13    Spillway to Lock 1                          COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE       FLOW    TEMP    SALN    CM-I    CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
 68  UPR RCH   2.04310   31.60    0.00    0.00    0.00   6.92   1.19   0.00   1.19   0.00   0.00   0.09   0.34   0.03   2.30    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV    TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST        EFF    VELO     TIME                            AREA    AREA     PRISM    VELO            VELO
       km     km       m³/s        m/s    days      m       m       m³       m²       m²       m³     m/s     m²/s    m/s
 68    2.70   2.40   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 69    2.40   2.10   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 70    2.10   1.80   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 71    1.80   1.50   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 72    1.50   1.20   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 73    1.20   0.90   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 74    0.90   0.60   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 75    0.60   0.30   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 76    0.30   0.00   2.04310   0.0  0.01055    0.33    2.26   85.70  58104.60  25710.00  193.68     0.00   0.000    0.010   0.011
 TOT                                   2.96                 522941.38  231390.00
 AVG                            0.0105          2.26   85.70                  193.68
 CUM                                2016.41
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da   1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da    *    1/da    *    **    **   1/da   1/da   1/da
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68	2.400	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.15	0.15	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
69	2.100	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.14	0.14	0.06	0.01	0.24	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
70	1.800	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.13	0.13	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
71	1.500	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.13	0.13	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
72	1.200	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.12	0.12	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
73	0.900	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.11	0.11	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
74	0.600	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.11	0.11	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
75	0.300	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.10	0.10	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
76	0.000	7.35	0.38	0.10	0.06	0.00	0.01	0.00	0.00	0.00	0.10	0.10	0.06	0.01	0.25	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.31	0.06	0.04	0.00	0.01	0.00	0.00	0.00			0.05	0.00	0.10	0.00	0.00	0.00			3.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
68	2.400	31.60	0.00	0.00	0.00	6.97	1.13	0.00	1.13	0.00	0.00	0.09	0.34	0.43	0.03	2.30	0.00	0.	0.00
69	2.100	31.60	0.00	0.00	0.00	7.02	1.07	0.00	1.07	0.00	0.00	0.08	0.35	0.43	0.03	2.30	0.00	0.	0.00
70	1.800	31.60	0.00	0.00	0.00	7.07	1.02	0.00	1.02	0.00	0.00	0.08	0.35	0.43	0.03	2.30	0.00	0.	0.00
71	1.500	31.60	0.00	0.00	0.00	7.11	0.96	0.00	0.96	0.00	0.00	0.07	0.35	0.42	0.03	2.30	0.00	0.	0.00
72	1.200	31.60	0.00	0.00	0.00	7.15	0.92	0.00	0.92	0.00	0.00	0.06	0.36	0.42	0.03	2.30	0.00	0.	0.00
73	0.900	31.60	0.00	0.00	0.00	7.19	0.87	0.00	0.87	0.00	0.00	0.06	0.36	0.42	0.03	2.30	0.00	0.	0.00
74	0.600	31.60	0.00	0.00	0.00	7.23	0.83	0.00	0.83	0.00	0.00	0.06	0.36	0.41	0.03	2.30	0.00	0.	0.00
75	0.300	31.60	0.00	0.00	0.00	7.26	0.79	0.00	0.79	0.00	0.00	0.05	0.36	0.41	0.03	2.30	0.00	0.	0.00
76	0.000	31.60	0.00	0.00	0.00	7.28	0.74	0.00	0.74	0.00	0.00	0.05	0.36	0.41	0.03	2.30	0.00	0.	0.00

STREAM SUMMARY Pearl River DO Modeling 090204
Headwater COEF-1 Run

TRAVEL TIME = 2016.41 DAYS
MAXIMUM EFFLUENT = 0.01 PERCENT
FLOW = 0.00283 TO 2.04310 m³/s
DISPERSION = 0.0000 TO 0.0150 m²/s
VELOCITY = 0.00002 TO 0.02143 m/s
DEPTH = 1.64 TO 3.75 m
WIDTH = 49.60 TO 98.10 m
BOD DECAY = 0.09 TO 0.10 per day
NH3 DECAY = 0.20 TO 0.25 per day
SOD = 0.10 TO 4.12 g/m²/d
NH3 SOURCE = 0.00 TO 0.00 g/m²/d
REAERATION = 0.22 TO 0.52 per day
BOD SETTLING = 0.03 TO 0.08 per day
ORG-N DECAY = 0.06 TO 0.06 per day
ORG-N SETTLING = 0.00 TO 0.01 per day
TEMPERATURE = 29.80 TO 32.10 deg C
DISSOLVED OXYGEN = 5.03 TO 7.28 mg/L

Pearl River DO Modeling 090204
COEF-1 Run
REACH SUMMARY REPORT FOR Headwater

RCH NO.	REACH NAME	BEGIN DIST km	ENDING DIST km	REACH LENGTH km	TRAVEL TIME days	FLOW AT EOR m3/s	AVERAGE VELO m/s	AVG DEPTH m	AVG WIDTH m	FLOW AT EOR cfs	AVERAGE VELO fps	AVG DEPTH ft	AVG WIDTH ft
1	Lock 3 to Below A	23.00	21.50	1.50	746.50	0.00283	0.00002	2.210	55.10	0.100	0.000	7.251	180.78
2	Below A to Below B	21.50	20.50	1.00	497.66	0.00283	0.00002	2.210	55.10	0.100	0.000	7.251	180.78

3 Below B to Below C	20.50	19.00	1.50	746.50	0.00283	0.00002	2.210	55.10	0.100	0.000	7.251	180.78
4 Below C to Lock 2	19.00	17.78	1.22	4.19	0.87283	0.00337	2.110	59.30	30.820	0.011	6.923	194.56
5 Lock 2 (Church) to ABTalisheek	17.78	13.43	4.35	5.95	1.15291	0.00846	1.910	62.90	40.709	0.028	6.267	206.37
6 AB to Talisheek	13.43	11.98	1.45	1.75	1.15291	0.00960	1.910	62.90	40.709	0.031	6.267	206.37
7 Talisheek to Below G	11.98	10.40	1.58	3.17	1.74291	0.00577	3.750	69.50	61.542	0.019	12.304	228.03
8 Below G to Below H	10.40	7.40	3.00	1.62	1.74291	0.02143	1.640	49.60	61.542	0.070	5.381	162.74
9 Below H to Evans Creek	7.40	5.45	1.95	2.86	1.74291	0.00790	2.250	98.10	61.542	0.026	7.382	321.87
10 Evans Creek to Possible Stream	5.45	4.70	0.75	1.10	1.74291	0.00790	2.250	98.10	61.542	0.026	7.382	321.87
11 Possible Stream to Junior High	4.70	3.40	1.30	1.72	2.04291	0.00873	2.250	98.10	72.135	0.029	7.382	321.87
12 Junior High to Spillway	3.40	2.70	0.70	0.42	2.04310	0.01916	1.810	58.90	72.142	0.063	5.939	193.25
13 Spillway to Lock 1	2.70	0.00	2.70	2.96	2.04310	0.01055	2.260	85.70	72.142	0.035	7.415	281.18

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	NONP OUT	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N DECA	ORG-N BKGD	NCM BOD1	SOD ALG	SOD NCM	SOD PHOT	SOD RESP	ALG PHOT	ALG OUT	MAC IN	TOT	TOT
1	1.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	7.	0.	0.	0.	0.	-11.	0.	0.	0.	5.	0.	0.	-12.7	12.7	0.00	
2	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	6.	0.	0.	0.	0.	-11.	0.	0.	0.	5.	0.	0.	-12.7	12.7	0.00	
3	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	6.	0.	0.	0.	0.	-11.	0.	0.	0.	5.	0.	0.	-12.7	12.7	0.00	
4	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	6.	0.	0.	0.	0.	-11.	0.	0.	0.	5.	0.	0.	-12.7	12.7	0.00	
5	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	6.	0.	0.	0.	0.	-11.	0.	0.	0.	5.	0.	0.	-12.7	12.7	0.00	
6	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	4.	0.	0.	0.	0.	-7.	0.	0.	0.	3.	0.	0.	-9.0	9.0	0.00	
7	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	4.	0.	0.	0.	0.	-7.	0.	0.	0.	3.	0.	0.	-9.0	9.0	0.00	
8	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	4.	0.	0.	0.	0.	-7.	0.	0.	0.	3.	0.	0.	-9.0	9.0	0.00	
9	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	4.	0.	0.	0.	0.	-7.	0.	0.	0.	3.	0.	0.	-9.0	9.0	0.00	
10	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	4.	0.	0.	0.	0.	-7.	0.	0.	0.	3.	0.	0.	-9.0	9.0	0.00	
11	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	5.	0.	0.	0.	0.	-9.	0.	0.	0.	4.	0.	0.	-10.5	10.5	0.00	
12	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	5.	0.	0.	0.	0.	-9.	0.	0.	0.	4.	0.	0.	-10.5	10.5	0.00	
13	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	5.	0.	0.	0.	0.	-9.	0.	0.	0.	3.	0.	0.	-10.4	10.4	0.00	
14	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	6.	0.	0.	0.	0.	-9.	0.	0.	0.	3.	0.	0.	-10.4	10.4	0.00	
15	2.	0.	-2.	0.	0.	0.	0.	0.	0.	0.	6.	0.	0.	0.	0.	-9.	0.	0.	0.	3.	0.	0.	-10.4	10.4	0.00	
16	2.	0.	-108.	0.	0.	0.	94.	0.	0.	0.	0.	26.	-6.	0.	0.	0.	-9.	-4.	0.	0.	5.	0.	0.	-126.7	126.7	0.00
17	108.	0.	-216.	0.	0.	0.	94.	0.	0.	0.	0.	26.	-6.	0.	0.	0.	-9.	-4.	0.	0.	7.	0.	0.	-234.7	234.7	0.00
18	216.	0.	-325.	0.	0.	0.	94.	0.	0.	0.	0.	25.	-6.	0.	0.	0.	-9.	-4.	0.	0.	10.	0.	0.	-344.3	344.3	0.00
19	325.	0.	-437.	0.	0.	0.	94.	0.	0.	0.	0.	24.	-6.	0.	0.	0.	-10.	-4.	0.	0.	12.	0.	0.	-455.4	455.4	0.00
20	437.	0.	-465.	0.	0.	0.	8.	0.	0.	0.	0.	20.	-5.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-476.0	476.0	0.00
21	465.	0.	-491.	0.	0.	0.	8.	0.	0.	0.	0.	17.	-5.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-501.2	501.2	0.00
22	491.	0.	-514.	0.	0.	0.	8.	0.	0.	0.	0.	15.	-5.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-524.2	524.2	0.00
23	514.	0.	-535.	0.	0.	0.	8.	0.	0.	0.	0.	13.	-5.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-545.3	545.3	0.00
24	535.	0.	-555.	0.	0.	0.	8.	0.	0.	0.	0.	11.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-565.0	565.0	0.00
25	555.	0.	-574.	0.	0.	0.	8.	0.	0.	0.	0.	9.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-583.3	583.3	0.00
26	574.	0.	-591.	0.	0.	0.	8.	0.	0.	0.	0.	8.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-600.7	600.7	0.00
27	591.	0.	-608.	0.	0.	0.	8.	0.	0.	0.	0.	7.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-617.2	617.2	0.00
28	608.	0.	-624.	0.	0.	0.	8.	0.	0.	0.	0.	6.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-633.1	633.1	0.00
29	624.	0.	-639.	0.	0.	0.	8.	0.	0.	0.	0.	5.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-648.3	648.3	0.00
30	639.	0.	-654.	0.	0.	0.	8.	0.	0.	0.	0.	5.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-663.1	663.1	0.00
31	654.	0.	-669.	0.	0.	0.	8.	0.	0.	0.	0.	4.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-677.4	677.4	0.00
32	669.	0.	-683.	0.	0.	0.	8.	0.	0.	0.	0.	4.	-4.	0.	0.	0.	-2.	-3.	0.	0.	11.	0.	0.	-691.5	691.5	0.00
33	683.	0.	-697.	0.	0.	0.	8.	0.	0.	0.	0.	3.	-4.	0.	0.	0.	-2.	-2.	0.	0.	11.	0.	0.	-705.2	705.2	0.00
34	697.	0.	-710.	0.	0.	0.	8.	0.	0.	0.	0.	3.	-4.	0.	0.	0.	-2.	-2.	0.	0.	11.	0.	0.	-718.7	718.7	0.00
35	710.	0.	-653.	0.	0.	0.	0.	0.	0.	0.	0.	13.	-3.	0.	0.	0.	-73.	-2.	0.	0.	9.	0.	0.	-732.1	732.1	0.00
36	653.	0.	-605.	0.	0.	0.	0.	0.	0.	0.	0.	21.	-3.	0.	0.	0.	-71.	-2.	0.	0.	7.	0.	0.	-681.8	681.8	0.00
37	605.	0.	-565.	0.	0.	0.	0.	0.	0.	0.	0.	28.	-3.	0.	0.	0.	-69.	-2.	0.	0.	5.	0.	0.	-639.0	639.0	0.00
38	565.	0.	-530.	0.	0.	0.	0.	0.	0.	0.	0.	34.	-3.	0.	0.	0.	-68.	-2.	0.	0.	4.	0.	0.	-602.6	602.6	0.00
39	530.	0.	-501.	0.	0.	0.	0.	0.	0.	0.	0.	39.	-3.	0.	0.	0.	-66.	-2.	0.	0.	2.	0.	0.	-571.7	571.7	0.00
40	501.	0.	-603.	0.	0.	0.	64.	0.	0.	0.	0.	50.	-12.	0.	0.	0.	-10.	-4.	0.	0.	13.	0.	0.	-629.2	629.2	0.00
41	603.	0.	-701.	0.	0.	0.	64.	0.	0.	0.	0.	44.	-15.	0.	0.	0.	-10.	-5.	0.	0.	21.	0.	0.	-732.0	732.0	0.00
42	701.	0.	-798.	0.	0.	0.	64.	0.	0.	0.	0.	39.	-18.	0.	0.	0.	-10.	-6.	0.	0.	28.	0.	0.	-832.6	832.6	0.00
43	798.	0.	-896.	0.	0.	0.	64.	0.	0.	0.	0.	35.	-20.	0.	0.	0.	-10.	-7.	0.	0.	36.	0.	0.	-932.9	932.9	0.00
44	896.	0.	-909.	0.	0.	0.	0.	0.	0.	0.	0.	18.	-5.	0.	0.	0.	-6.	-4.	0.	0.	9.	0.	0.	-922.8	922.8	0.00
45	909.	0.	-922.	0.	0.	0.	0.	0.	0.	0.	0.	17.	-4.	0.	0.	0.	-6.	-4.	0.	0.	10.	0.	0.	-935.5	935.5	0.00
46	922.	0.	-935.	0.	0.	0.	0.	0.	0.	0.	0.	16.	-4.	0.	0.	0.	-6.	-3.	0.	0.	10.	0.	0.	-948.0	948.0	0.00

47	935.	0.	-947.	0.	0.	0.	0.	0.	0.	0.	0.	15.	-4.	0.	0.	0.	-6.	-3.	0.	0.	11.	0.	0.	-960.3	960.3	0.00
48	947.	0.	-960.	0.	0.	0.	0.	0.	0.	0.	0.	14.	-4.	0.	0.	0.	-6.	-3.	0.	0.	12.	0.	0.	-972.5	972.5	0.00
49	960.	0.	-972.	0.	0.	0.	0.	0.	0.	0.	0.	13.	-4.	0.	0.	0.	-6.	-3.	0.	0.	12.	0.	0.	-984.4	984.4	0.00
50	972.	0.	-984.	0.	0.	0.	0.	0.	0.	0.	0.	12.	-4.	0.	0.	0.	-6.	-3.	0.	0.	13.	0.	0.	-996.2	996.2	0.00
51	984.	0.	-995.	0.	0.	0.	0.	0.	0.	0.	0.	11.	-4.	0.	0.	0.	-6.	-3.	0.	0.	13.	0.	0.	-1007.8	1007.8	0.00
52	995.	0.	-1007.	0.	0.	0.	0.	0.	0.	0.	0.	10.	-4.	0.	0.	0.	-6.	-3.	0.	0.	14.	0.	0.	-1019.3	1019.3	0.00
53	1007.	0.	-1019.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-4.	0.	0.	0.	-6.	-3.	0.	0.	15.	0.	0.	-1030.6	1030.6	0.00
54	1019.	0.	-1014.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-11.	0.	0.	0.	-62.	-7.	0.	0.	52.	0.	0.	-1093.8	1093.8	0.00
55	1014.	0.	-1011.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-10.	0.	0.	0.	-62.	-6.	0.	0.	52.	0.	0.	-1089.7	1089.7	0.00
56	1011.	0.	-1010.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-10.	0.	0.	0.	-62.	-6.	0.	0.	52.	0.	0.	-1087.2	1087.2	0.00
57	1010.	0.	-1010.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-9.	0.	0.	0.	-62.	-5.	0.	0.	52.	0.	0.	-1086.1	1086.1	0.00
58	1010.	0.	-1011.	0.	0.	0.	0.	0.	0.	0.	0.	24.	-8.	0.	0.	0.	-62.	-5.	0.	0.	52.	0.	0.	-1086.0	1086.0	0.00
59	1011.	0.	-1023.	0.	0.	0.	0.	0.	0.	0.	0.	14.	-5.	0.	0.	0.	-28.	-3.	0.	0.	33.	0.	0.	-1058.3	1058.3	0.00

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	WSLD IN	WITH OUT	REAE DECA	BOD1 DECA	NH3-N DECA	ORG-N BKGD	NCM BOD1	SOD ALG	SOD NCM	SOD PHOT	SOD RESP	ALG PHOT	ALG OUT	MAC IN	TOT	TOT
60	1023.	0.	-1033.	0.	0.	0.	0.	0.	0.	0.	12.	-5.	0.	0.	0.	-28.	-3.	0.	0.	33.	0.	0.	-1068.4	1068.4	0.00
61	1033.	0.	-1043.	0.	0.	0.	0.	0.	0.	0.	11.	-4.	0.	0.	0.	-28.	-3.	0.	0.	33.	0.	0.	-1077.6	1077.6	0.00
62	1043.	0.	-1089.	0.	0.	0.	32.	0.	0.	0.	0.	14.	-7.	0.	0.	0.	-36.	-4.	0.	0.	47.	0.	0.	-1136.2	1136.2	0.00
63	1089.	0.	-1137.	0.	0.	0.	32.	0.	0.	0.	0.	13.	-8.	0.	0.	0.	-36.	-4.	0.	0.	51.	0.	0.	-1185.7	1185.7	0.00
64	1137.	0.	-1187.	0.	0.	0.	32.	0.	0.	0.	0.	12.	-8.	0.	0.	0.	-36.	-5.	0.	0.	55.	0.	0.	-1236.6	1236.6	0.00
65	1187.	0.	-1238.	0.	0.	0.	32.	0.	0.	0.	0.	11.	-9.	0.	0.	0.	-37.	-5.	0.	0.	59.	0.	0.	-1288.9	1288.9	0.00
66	1238.	0.	-1235.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-5.	0.	0.	0.	-21.	-3.	0.	0.	19.	0.	0.	-1263.9	1263.9	0.00
67	1235.	0.	-1221.	0.	0.	0.	0.	0.	0.	0.	0.	8.	-5.	0.	0.	0.	-21.	-3.	0.	0.	7.	0.	0.	-1250.0	1250.0	0.00
68	1221.	0.	-1230.	0.	0.	0.	0.	0.	0.	0.	0.	9.	-7.	0.	0.	0.	0.	-4.	0.	0.	11.	0.	0.	-1240.8	1240.8	0.00
69	1230.	0.	-1239.	0.	0.	0.	0.	0.	0.	0.	0.	7.	-6.	0.	0.	0.	0.	-4.	0.	0.	11.	0.	0.	-1249.2	1249.2	0.00
70	1239.	0.	-1247.	0.	0.	0.	0.	0.	0.	0.	0.	6.	-6.	0.	0.	0.	0.	-3.	0.	0.	11.	0.	0.	-1257.0	1257.0	0.00
71	1247.	0.	-1255.	0.	0.	0.	0.	0.	0.	0.	0.	5.	-6.	0.	0.	0.	0.	-3.	0.	0.	11.	0.	0.	-1264.3	1264.3	0.00
72	1255.	0.	-1263.	0.	0.	0.	0.	0.	0.	0.	0.	4.	-5.	0.	0.	0.	0.	-3.	0.	0.	11.	0.	0.	-1271.2	1271.2	0.00
73	1263.	0.	-1269.	0.	0.	0.	0.	0.	0.	0.	0.	4.	-5.	0.	0.	0.	0.	-3.	0.	0.	11.	0.	0.	-1277.6	1277.6	0.00
74	1269.	0.	-1276.	0.	0.	0.	0.	0.	0.	0.	0.	3.	-5.	0.	0.	0.	0.	-3.	0.	0.	11.	0.	0.	-1283.7	1283.7	0.00
75	1276.	0.	-1282.	0.	0.	0.	0.	0.	0.	0.	0.	2.	-5.	0.	0.	0.	0.	-3.	0.	0.	11.	0.	0.	-1289.4	1289.4	0.00
76	1282.	0.	-1286.	0.	0.	-2.	0.	0.	0.	0.	0.	2.	-4.	0.	0.	0.	0.	-3.	0.	0.	11.	0.	0.	-1295.0	1295.0	0.00

Pearl River DO Modeling 090204
COEF-1 Run
INPUT/OUTPUT LOADING SUMMARY

	FLOW	DO	BOD#1	BOD#2	ORG-N	NH3-N	NO3-N	PHOS	CHL A	NCM
	m³/s	kg/d	kg/d	kg/d	kg/d	kg/d	kg/d	kg/d		
HEADWATER FLOW	0.003	1.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
INCREMENTAL INFLOW	2.040	881.3	701.4	0.0	0.0	113.6	17.6	0.0	0.0	0.0
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FLOW THRU LOWER BNDRY	-2.043	-1285.6	-130.9	0.0	0.0	-8.4	-63.1	0.0	0.0	0.0
DISPERSION THRU LOWER BNDRY		-2.5	-0.8	0.0	0.0	0.1	-0.3	0.0	0.0	0.0
DISPERSION THRU HDWTR BNDRY		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NON-POINT INPUT		0.0	0.0	0.0	0.0			0.0		
NATURAL REAERATION		1013.6								
DAM REAERATION		0.0								
BACKGROUND SOD		-1231.0								
BOD#1 DECAY		-358.8	-358.8							
BOD#1 SETTLING		-211.1	-211.1							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0	0.0							
BOD#2 SETTLING		0.0	0.0							
ANAEROBIC BOD#2 DECAY				0.0						
ORG-N DECAY		0.0		0.0	0.0					
ORG-N SETTLING				0.0	0.0					
NH3 DECAY		0.0			-105.8	105.8				
BACKGROUND NH3 SOURCE						0.0				
OTHER DENITRIFICATION						0.0				
PHOSPHORUS SOURCE							0.0			
ALGAE PHOTOSYNTHESIS			1192.7			0.0	-59.6	0.0	0.0	
ALGAE RESPIRATION			0.0		0.0		0.0	0.0		
ALGAE SETTLING			0.0				0.0			
MACRO PHOTOSYNTHESIS				0.0		0.0	0.0	0.0		
NCM DECAY		0.0						0.0		
NCM SETTLING		0.0						0.0		
TOTAL INPUTS	2.043	3088.9	701.5	0.0	0.0	113.9	123.4	0.0	0.0	0.0
TOTAL OUTPUTS	-2.043	-3088.9	-701.5	0.0	0.0	-114.1	-123.1	0.0	0.0	0.0
NET CONVERGENCE ERROR		0.000	0.0	0.0	0.0	0.0	-0.3	0.3	0.0	0.0	0.0

.....EXECUTION COMPLETED

TMDL output file for subsegment 090207

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LA-QUAL Version 8.00
Louisiana Department of Environmental Quality
Input file is D:\Pearl\PEARLRIVERFromH\TMDL\Seg090207_TMDL_Update.txt
Output produced at 15:16 on 11/28/2007
$$$ DATA TYPE 1 (TITLES AND CONTROL CARDS) $$$
CARD TYPE      CONTROL TITLES
TITLE01        Middle/Middle West Rivers DO Modeling - 090207
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01
$$$ DATA TYPE 2 (MODEL OPTIONS) $$$
CARD TYPE      MODEL OPTION
MODOPT    NO   TEMPERATURE
MODOPT    NO   SALINITY
MODOPT    NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT    NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT   YES   DISSOLVED OXYGEN
MODOPT   YES   BOD1
MODOPT    NO   BOD2
MODOPT   YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT    NO   PHOSPHORUS
MODOPT    NO   CHLOROPHYLL A
MODOPT    NO   MACROPHYTES
MODOPT    NO   COLIFORM
MODOPT    NO   NONCONSERVATIVE MATERIAL
ENDATA02
$$$ DATA TYPE 3 (PROGRAM CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
PROGRAM        MAXImum Iteration Limit          =      5000.00000
PROGRAM        HYDRaulic calculation method     =         2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE           =         1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE           =         1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                       =         0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE         =         3.00000 (inhibit all rates but SOD)
PROGRAM        ORGN OXYGEN UPTAKE RATE          =         0.00000 mg O/mg N
PROGRAM        NH3 OXYGEN UPTAKE RATE           =         0.00000 mg O/mg N
PROGRAM        DISPERSION Equation              =         2.00000 (values entered as a function of D,Q,Vtidal)
PROGRAM        OCEAN Exchange Ratio             =         1.00000
PROGRAM        TIDE Height                      =         0.60000 meters
PROGRAM        TIDAL Period                     =        25.00000 hours
PROGRAM        PERIOD of Tidal Rise             =        12.50000 hours
PROGRAM        K2 MAXIMUM                       =        10.00000 per day
ENDATA03
$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
 CARD TYPE     RATE CODE     THETA VALUE
ENDATA04
$$$ CONSTANTS TYPE 5 (TEMPERATURE DATA) $$$
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CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA05
$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA06
$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA07
$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                        BEGIN      END    ELEM    REACH    ELEMS   BEGIN    END
CARD TYPE  REACH  ID  NAME                          REACH     REACH   LENGTH   LENGTH    PER RCH   ELEM   ELEM
                                          km        km      km      km            NUM    NUM
REACH ID    1   H1  Headwaters-MR-A                  22.11  TO  21.30  0.2700    0.81     3      1     3
REACH ID    2   M1  MR-B before split of MR/MRWest      21.30  TO  20.30  0.2500    1.00     4      4     7
REACH ID    3   M2  MR-C/MRWest-D                    20.30  TO  18.80  0.3000    1.50     5      8    12
REACH ID    4   M3  MR-E/MRWest-G                    18.80  TO  15.20  0.3000    3.60    12     13    24
REACH ID    5   M4  MR-H                          15.20  TO  12.80  0.3000    2.40     8     25    32
REACH ID    6   M5  MRWest-J                         12.80  TO  12.00  0.2000    0.80     4     33    36
REACH ID    7   M6                                12.00  TO  10.60  0.3500    1.40     4     37    40
REACH ID    8   M7  MREast-(L)/MRWest-(M)/MR-(N)        10.60  TO   8.20  0.2400    2.40    10     41    50
REACH ID    9   M8                                 8.20  TO   6.40  0.3000    1.80     6     51    56
REACH ID   10   M9  MRWest-O                         6.40  TO   4.50  0.3800    1.90     5     57    61
REACH ID   11   N1                                 4.50  TO   4.20  0.1500    0.30     2     62    63
REACH ID   12   N2                                 4.20  TO   3.50  0.3500    0.70     2     64    65
REACH ID   13   N3  MRWest-P                         3.50  TO   1.70  0.3000    1.80     6     66    71
REACH ID   14   N4                                 1.70  TO   1.50  0.1000    0.20     2     72    73
REACH ID   15   N5  MRWest-Q                         1.50  TO   0.15  0.2700    1.35     5     74    78
REACH ID   16   N6                                 0.15  TO   0.00  0.1500    0.15     1     79    79
ENDATA08
$$$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID      WIDTH      WIDTH      WIDTH      DEPTH      DEPTH      DEPTH     SLOPE   MANNINGS
                          "A"        "B"        "C"        "D"        "E"        "F"              "N"
HYDRO-1     1   H1      0.000      0.000     52.600      0.000      0.000      1.710    0.00010   0.025
HYDRO-1     2   M1      0.000      0.000     45.200      0.000      0.000      4.920    0.00010   0.025
HYDRO-1     3   M2      0.000      0.000     63.000      0.000      0.000      2.480    0.00010   0.025
HYDRO-1     4   M3      0.000      0.000    103.500      0.000      0.000      4.050    0.00010   0.025
HYDRO-1     5   M4      0.000      0.000    116.500      0.000      0.000      5.470    0.00010   0.025
HYDRO-1     6   M5      0.000      0.000    116.500      0.000      0.000      5.470    0.00010   0.025
HYDRO-1     7   M6      0.000      0.000    116.500      0.000      0.000      5.470    0.00010   0.025
HYDRO-1     8   M7      0.000      0.000    224.750      0.000      0.000      6.650    0.00010   0.025
HYDRO-1     9   M8      0.000      0.000    224.750      0.000      0.000      6.650    0.00010   0.025
HYDRO-1    10   M9      0.000      0.000    260.200      0.000      0.000      4.330    0.00010   0.025
HYDRO-1    11   N1      0.000      0.000    236.940      0.000      0.000      5.700    0.00010   0.025
HYDRO-1    12   N2      0.000      0.000    236.940      0.000      0.000      5.700    0.00010   0.025
HYDRO-1    13   N3      0.000      0.000    236.940      0.000      0.000      5.700    0.00010   0.025
HYDRO-1    14   N4      0.000      0.000    110.000      0.000      0.000      5.700    0.00010   0.025
HYDRO-1    15   N5      0.000      0.000    110.000      0.000      0.000      5.700    0.00010   0.025
HYDRO-1    16   N6      0.000      0.000    110.000      0.000      0.000      5.700    0.00010   0.025
ENDATA09
$$$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) $$$
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CARD TYPE  REACH  ID    TIDAL    DISPERSION    DISPERSION    DISPERSION    DISPERSION
                  RANGE      "A"          "B"          "C"          "D"
HYDR        1  H1    1.00      1.000        0.000        0.000        0.000
HYDR        2  M1    1.00      1.000        0.000        0.000        0.000
HYDR        3  M2    1.00      1.000        0.000        0.000        0.000
HYDR        4  M3    1.00      1.000        0.000        0.000        0.000
HYDR        5  M4    1.00      1.000        0.000        0.000        0.000
HYDR        6  M5    1.00      1.000        0.000        0.000        0.000
HYDR        7  M6    1.00      1.000        0.000        0.000        0.000
HYDR        8  M7    1.00      1.000        0.000        0.000        0.000
HYDR        9  M8    1.00      1.000        0.000        0.000        0.000
HYDR       10  M9    1.00      1.000        0.000        0.000        0.000
HYDR       11  N1    1.00      1.000        0.000        0.000        0.000
HYDR       12  N2    1.00      1.000        0.000        0.000        0.000
HYDR       13  N3    1.00      1.000        0.000        0.000        0.000
HYDR       14  N4    1.00      1.000        0.000        0.000        0.000
HYDR       15  N5    1.00      1.000        0.000        0.000        0.000
HYDR       16  N6    1.00      1.000        0.000        0.000        0.000
ENDATA10
$$$ DATA TYPE 11 (INITIAL CONDITIONS) $$$
CARD TYPE     REACH  ID     TEMP    SALIN     DO     NH3    NO3+2    PHOS    CHL A    MACRO
INITIAL        1  H1    27.80    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        2  M1    28.60    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        3  M2    30.60    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        4  M3    30.40    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        5  M4    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        6  M5    31.00    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        7  M6    31.00    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        8  M7    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL        9  M8    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL       10  M9    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL       11  N1    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL       12  N2    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL       13  N3    30.70    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL       14  N4    30.70    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL       15  N5    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL       16  N6    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
ENDATA11
$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                                  BOD    ANAER                    BOD2    ANAER
CARD    RCH  RCH  K2                K2     K2     K2   BKGRND    BOD     BOD    CONV    BOD2    BOD2    BOD2    CONV    BOD2
TYPE    NUM   ID  OPT              "A"    "B"    "C"    SOD   DECAY    SETT  TO SOD   DECAY   DECAY    SETT  TO SOD   DECAY
                                        g/m²/d per day    m/d          per day per day    m/d         per day
COEF-1    1  H1   3 OCONNER-DOBB   0.000  0.000  0.000  0.980  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    2  M1   3 OCONNER-DOBB   0.000  0.000  0.000  1.300  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    3  M2   3 OCONNER-DOBB   0.000  0.000  0.000  0.330  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    4  M3   3 OCONNER-DOBB   0.000  0.000  0.000  0.980  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    5  M4   3 OCONNER-DOBB   0.000  0.000  0.000  0.980  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    6  M5   3 OCONNER-DOBB   0.000  0.000  0.000  0.650  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    7  M6   3 OCONNER-DOBB   0.000  0.000  0.000  0.650  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
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COEF-1    8  M7   3 OCONNER-DOBB    0.000    0.000    0.000    0.650    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    9  M8   3 OCONNER-DOBB    0.000    0.000    0.000    0.650    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   10  M9   3 OCONNER-DOBB    0.000    0.000    0.000    0.650    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   11  N1   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   12  N2   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   13  N3   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   14  N4   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   15  N5   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   16  N6   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
ENDATA12
$$$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) $$$
CARD TYPE     REACH  ID      ORG-N     ORG-N   ORGN CONV      NH3      NH3     PHOS     DENIT
                          DECA     SETT  TO NH3 SRCE    DECA     SRCE     SRCE     RATE
COEF-2          1  H1     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          2  M1     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          3  M2     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          4  M3     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          5  M4     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          6  M5     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          7  M6     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          8  M7     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          9  M8     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         10  M9     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         11  N1     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         12  N2     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         13  N3     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         14  N4     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         15  N5     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         16  N6     0.050    0.010    1.000    0.100    0.000    0.000    0.001
ENDATA13
$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$
CARD TYPE     REACH  ID     SECCHI   ALGAE:    ALGAE   ALG CONV    ALGAE    ALGAE    MACRO    MACRO
                          DEPTH    CHL A     SETT    TO SOD     GROW     RESP     GROW     RESP
COEF-3          1  H1     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          2  M1     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          3  M2     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          4  M3     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          5  M4     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          6  M5     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          7  M6     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          8  M7     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          9  M8     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         10  M9     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         11  N1     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         12  N2     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         13  N3     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         14  N4     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         15  N5     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         16  N6     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
ENDATA14
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$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
CARD TYPE     REACH ID   COLIFORM      NCM      NCM   NCM CONV
                DIE-OFF    DECAY     SETT    TO SOD
COEF-4         1  H1     0.000    0.000    0.000    0.000
COEF-4         2  M1     0.000    0.000    0.000    0.000
COEF-4         3  M2     0.000    0.000    0.000    0.000
COEF-4         4  M3     0.000    0.000    0.000    0.000
COEF-4         5  M4     0.000    0.000    0.000    0.000
COEF-4         6  M5     0.000    0.000    0.000    0.000
COEF-4         7  M6     0.000    0.000    0.000    0.000
COEF-4         8  M7     0.000    0.000    0.000    0.000
COEF-4         9  M8     0.000    0.000    0.000    0.000
COEF-4        10  M9     0.000    0.000    0.000    0.000
COEF-4        11  N1     0.000    0.000    0.000    0.000
COEF-4        12  N2     0.000    0.000    0.000    0.000
COEF-4        13  N3     0.000    0.000    0.000    0.000
COEF-4        14  N4     0.000    0.000    0.000    0.000
COEF-4        15  N5     0.000    0.000    0.000    0.000
COEF-4        16  N6     0.000    0.000    0.000    0.000
ENDATA15
$$$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE     REACH ID     OUTFLOW     INFLOW      TEMP     SALIN      CM-I     CM-II   IN/DIST  OUT/DIST
INCR-1         1  H1     0.00000    0.69700    30.00     0.00     0.00     0.00   0.86049   0.00000
INCR-1         2  M1     0.00000    2.48700    30.00     0.00     0.00     0.00   2.48700   0.00000
INCR-1         3  M2     0.00000    4.45500    30.00     0.00     0.00     0.00   2.97000   0.00000
INCR-1         4  M3     0.00000    3.08400    30.00     0.00     0.00     0.00   0.85667   0.00000
INCR-1         5  M4     0.00000    1.50000    30.00     0.00     0.00     0.00   0.62500   0.00000
INCR-1         6  M5     0.00000    1.50000    30.00     0.00     0.00     0.00   1.87500   0.00000
INCR-1         7  M6     0.00000    1.50000    30.00     0.00     0.00     0.00   1.07143   0.00000
INCR-1         8  M7     0.00000    1.50000    30.00     0.00     0.00     0.00   0.62500   0.00000
INCR-1         9  M8     0.00000    1.50000    30.00     0.00     0.00     0.00   0.83333   0.00000
INCR-1        10  M9     0.00000    1.50000    30.00     0.00     0.00     0.00   0.78947   0.00000
INCR-1        11  N1     0.00000    1.50000    30.00     0.00     0.00     0.00   5.00000   0.00000
INCR-1        12  N2     0.00000    1.50000    30.00     0.00     0.00     0.00   2.14286   0.00000
INCR-1        13  N3     0.00000    1.50000    30.00     0.00     0.00     0.00   0.83333   0.00000
INCR-1        14  N4     0.00000    1.50000    30.00     0.00     0.00     0.00   7.50000   0.00000
INCR-1        15  N5     0.00000    1.50000    30.00     0.00     0.00     0.00   1.11111   0.00000
INCR-1        16  N6     0.00000    1.50000    30.00     0.00     0.00     0.00  10.00000   0.00000
ENDATA16
$$$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE     REACH ID       DO      BOD     ORG-N     NH3-N     NO3-N     BOD#2
INCR-2         1  H1     5.00     0.05     0.30     0.00     0.20     0.00
INCR-2         2  M1     5.00     0.05     0.30     0.00     0.20     0.00
INCR-2         3  M2     5.00     0.05     0.30     0.00     0.20     0.00
INCR-2         4  M3     5.00     0.42     0.30     0.00     0.20     0.00
INCR-2         5  M4     5.00     0.42     0.30     0.00     0.20     0.00
INCR-2         6  M5     5.00     1.06     0.30     0.00     0.20     0.00
INCR-2         7  M6     5.00     1.06     0.30     0.00     0.20     0.00
INCR-2         8  M7     5.00     1.06     0.30     0.00     0.20     0.00
INCR-2         9  M8     5.00     1.06     0.30     0.00     0.20     0.00
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INCR-2      10  M9     5.00   1.06   0.30   0.00   0.20   0.00
INCR-2      11  N1     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      12  N2     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      13  N3     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      14  N4     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      15  N5     5.00   0.85   0.30   0.00   0.20   0.00
INCR-2      16  N6     5.00   0.85   0.30   0.00   0.20   0.00
ENDATA17
$$$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
 CARD TYPE    REACH  ID     PHOS   CHL A   COLI    NCM
INCR-3       1  H1     0.00   0.00   0.00   0.00
INCR-3       2  M1     0.00   0.00   0.00   0.00
INCR-3       3  M2     0.00   0.00   0.00   0.00
INCR-3       4  M3     0.00   0.00   0.00   0.00
INCR-3       5  M4     0.00   0.00   0.00   0.00
INCR-3       6  M5     0.00   0.00   0.00   0.00
INCR-3       7  M6     0.00   0.00   0.00   0.00
INCR-3       8  M7     0.00   0.00   0.00   0.00
INCR-3       9  M8     0.00   0.00   0.00   0.00
INCR-3      10  M9     0.00   0.00   0.00   0.00
INCR-3      11  N1     0.00   0.00   0.00   0.00
INCR-3      12  N2     0.00   0.00   0.00   0.00
INCR-3      13  N3     0.00   0.00   0.00   0.00
INCR-3      14  N4     0.00   0.00   0.00   0.00
INCR-3      15  N5     0.00   0.00   0.00   0.00
INCR-3      16  N6     0.00   0.00   0.00   0.00
ENDATA18
$$$ DATA TYPE 19 (NONPOINT SOURCE DATA) $$$
CARD TYPE    REACH  ID    BOD#1   ORG-N   COLI    NCM     DO    BOD#2
ENDATA19
$$$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) $$$
CARD TYPE    ELEMENT  NAME            UNIT    FLOW    FLOW   TEMP   SALIN    CM-I    CM-II
                                      m³/s    cfs   deg C    ppt    mg/L    mg/L
HDWTR-1      1        Headwater   0   1.11000   39.195   30.00   0.00   0.000   0.000
ENDATA20
$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE    ELEMENT  NAME                DO    BOD#1   ORG-N   NH3-N   NO3-N   BOD#2
                                       mg/L    mg/L    mg/L    mg/L    mg/L    mg/L
HDWTR-2      1        Headwater      5.00    0.42    0.00    0.10    0.10    0.00
ENDATA21
$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT  NAME                PHOS   CHL A   COLI    NCM
                                       mg/L    mg/L    mg/L    mg/L
HDWTR-3      1        Headwater      0.00    0.00    0.00    0.00
ENDATA22
$$$ DATA TYPE 23 (JUNCTION DATA) $$$
CARD TYPE   JUNCTION   UPSTRM   RIVER   NAME
         ELEMENT  ELEMENT   KILOM
ENDATA23
$$$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
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CARD TYPE  ELEMENT    RKILO  NAME                  FLOW      FLOW     FLOW    TEMP    SALIN     CM-I     CM-II
                                              m³/s       cfs      MGD   deg C      ppt      mg/L      mg/L
WSTLD-1       1      22.11  test                0.00000    0.00000    0.000   20.00     0.00     0.000     0.000
ENDATA24
$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                   % BOD                      %
CARD TYPE     ELEMENT   NAME                     DO       BOD      RMVL     ORG-N     NH3-N    NITRIF     NO3-N     BOD#2
                                              mg/L      mg/L              mg/L      mg/L              mg/L      mg/L
WSTLD-2          1     test                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
ENDATA25
$$$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE     ELEMENT   NAME                     PHOS     CHL A      COLI       NCM
                                              mg/L      mg/L      mg/L      mg/L
WSTLD-3          1     test                   0.00      0.00      0.00      0.00
ENDATA26
$$$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) $$$
CARD TYPE    CONSTITUENT                    CONCENTRATION
LOWER BC     TEMPERATURE                    =     26.250     deg C
LOWER BC     SALINITY                       =      0.000     ppt
LOWER BC     CONSERVATIVE MATERIAL I        =      7.625     mg/L
LOWER BC     CONSERVATIVE MATERIAL II       =      0.000     mg/L
LOWER BC     DISSOLVED OXYGEN               =      5.000     mg/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND      =      4.000     mg/L
LOWER BC     ORGANIC NITROGEN               =      0.000     mg/L
LOWER BC     AMMONIA NITROGEN               =      0.000     mg/L
LOWER BC     NITRATE + NITRITE              =      0.000     mg/L
LOWER BC     PHOSPHORUS                     =      0.000     mg/L
LOWER BC     CHLOROPHYLL A                  =      0.000     µg/L
LOWER BC     COLIFORM                       =      0.000     #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL       =     11.160
ENDATA27
$$$ DATA TYPE 28 (DAM DATA) $$$
CARD TYPE     ELEMENT   NAME                 EQN      "A"      "B"      "H"
ENDATA28
$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$
CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8
SENSITIV        TRANGE       -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        OXR          -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        VELOCITY     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        DISPERSI     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        REAERATI     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        BOD DECA     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        BOD SETT     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        BENTHAL      -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
ENDATA29
$$$ DATA TYPE 30 (PLOT CONTROL CARDS) $$$
NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =  16
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
ENDATA30
```

$$$ DATA TYPE 31 (OVERLAY PLOT DATA) $$$
ENDATA31
.....NO ERRORS DETECTED IN INPUT DATA
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 4 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
INTERMEDIATE REPORT
Dissolved Oxygen Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	5.06	5.11	5.13							
M1	2	4	5.10	5.08	5.07	5.07						
M2	3	8	5.12	5.15	5.18	5.20	5.22					
M3	4	13	5.22	5.23	5.24	5.24	5.25	5.25	5.25	5.26	5.26	5.26
M3	4	23	5.26	5.27								
M4	5	25	5.28	5.28	5.29	5.29	5.30	5.30	5.30	5.31		
M5	6	33	5.32	5.32	5.33	5.34						
M6	7	37	5.36	5.37	5.39	5.41						
M7	8	41	5.44	5.46	5.49	5.51	5.54	5.56	5.58	5.60	5.62	5.64
M8	9	51	5.66	5.68	5.69	5.71	5.72	5.74				
M9	10	57	5.75	5.76	5.78	5.79	5.80					
N1	11	62	5.80	5.81								
N2	12	64	5.85	5.89								
N3	13	66	5.93	5.97	6.01	6.05	6.08	6.11				
N4	14	72	6.08	6.07								
N5	15	74	6.07	6.08	6.08	6.09	6.07					
N6	16	79	5.82									

INTERMEDIATE REPORT
Effective BOD Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.36	0.31	0.26							
M1	2	4	0.20	0.17	0.15	0.14						
M2	3	8	0.12	0.11	0.10	0.09	0.09					
M3	4	13	0.10	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.15
M3	4	23	0.15	0.16								
M4	5	25	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17		
M5	6	33	0.19	0.22	0.23	0.25						
M6	7	37	0.27	0.28	0.30	0.31						
M7	8	41	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
M8	9	51	0.31	0.32	0.32	0.32	0.32	0.33				
M9	10	57	0.33	0.33	0.34	0.34	0.34					
N1	11	62	0.35	0.35								
N2	12	64	0.36	0.36								
N3	13	66	0.35	0.35	0.35	0.34	0.34	0.34				
N4	14	72	0.35	0.35								
N5	15	74	0.36	0.36	0.36	0.37	0.45					
N6	16	79	1.18									

INTERMEDIATE REPORT

Biochemical Oxygen Demand Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.36	0.31	0.26							
M1	2	4	0.20	0.17	0.15	0.14						
M2	3	8	0.12	0.11	0.10	0.09	0.09					
M3	4	13	0.10	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.15
M3	4	23	0.15	0.16								
M4	5	25	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17		
M5	6	33	0.19	0.22	0.23	0.25						
M6	7	37	0.27	0.28	0.30	0.31						
M7	8	41	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
M8	9	51	0.31	0.32	0.32	0.32	0.32	0.33				
M9	10	57	0.33	0.33	0.34	0.34	0.34					
N1	11	62	0.35	0.35								
N2	12	64	0.36	0.36								
N3	13	66	0.35	0.35	0.35	0.34	0.34	0.34				
N4	14	72	0.35	0.35								
N5	15	74	0.36	0.36	0.36	0.37	0.45					
N6	16	79	1.18									

INTERMEDIATE REPORT

Organic Nitrogen Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.04	0.08	0.11							
M1	2	4	0.16	0.18	0.20	0.21						
M2	3	8	0.22	0.23	0.24	0.25	0.25					
M3	4	13	0.25	0.25	0.25	0.25	0.24	0.24	0.24	0.24	0.24	0.24
M3	4	23	0.24	0.24								
M4	5	25	0.24	0.24	0.23	0.23	0.23	0.23	0.23	0.23		
M5	6	33	0.23	0.23	0.23	0.23						
M6	7	37	0.23	0.23	0.23	0.23						
M7	8	41	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.20	0.20	0.20
M8	9	51	0.20	0.20	0.19	0.19	0.19	0.19				
M9	10	57	0.19	0.19	0.18	0.18	0.18					
N1	11	62	0.19	0.19								
N2	12	64	0.19	0.19								
N3	13	66	0.19	0.19	0.19	0.18	0.18	0.18				
N4	14	72	0.19	0.19								
N5	15	74	0.19	0.19	0.19	0.19	0.19					
N6	16	79	0.15									

INTERMEDIATE REPORT

Ammonia Nitrogen Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.08	0.07	0.06							
M1	2	4	0.04	0.04	0.03	0.03						
M2	3	8	0.03	0.02	0.02	0.02	0.02					
M3	4	13	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
M3	4	23	0.03	0.03								

M4	5	25	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04		
M5	6	33	0.04	0.04	0.04	0.03						
M6	7	37	0.04	0.04	0.04	0.04						
M7	8	41	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
M8	9	51	0.04	0.04	0.04	0.04	0.04	0.04				
M9	10	57	0.04	0.04	0.04	0.04	0.04					
N1	11	62	0.04	0.04								
N2	12	64	0.04	0.04								
N3	13	66	0.04	0.04	0.04	0.04	0.04	0.04				
N4	14	72	0.04	0.04								
N5	15	74	0.04	0.04	0.04	0.04	0.04					
N6	16	79	0.03									

INTERMEDIATE REPORT

Nitrate+Nitrite Nitrogen — Middle/Middle West Rivers DO Modeling - 090207

mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.12	0.13	0.14							
M1	2	4	0.16	0.17	0.17	0.18						
M2	3	8	0.18	0.18	0.19	0.19	0.19					
M3	4	13	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
M3	4	23	0.19	0.19								
M4	5	25	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.20		
M5	6	33	0.20	0.20	0.20	0.20						
M6	7	37	0.20	0.20	0.20	0.20						
M7	8	41	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
M8	9	51	0.21	0.22	0.22	0.22	0.22	0.22				
M9	10	57	0.22	0.22	0.22	0.23	0.23					
N1	11	62	0.23	0.23								
N2	12	64	0.23	0.23								
N3	13	66	0.23	0.23	0.23	0.23	0.23	0.23				
N4	14	72	0.23	0.23								
N5	15	74	0.23	0.23	0.23	0.23	0.22					
N6	16	79	0.18									

INTERMEDIATE REPORT

Total Nitrogen — Middle/Middle West Rivers DO Modeling - 090207

mg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.24	0.28	0.31							
M1	2	4	0.36	0.38	0.40	0.42						
M2	3	8	0.43	0.44	0.45	0.45	0.46					
M3	4	13	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
M3	4	23	0.46	0.46								
M4	5	25	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46		
M5	6	33	0.46	0.46	0.46	0.46						
M6	7	37	0.46	0.46	0.46	0.46						
M7	8	41	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
M8	9	51	0.46	0.46	0.46	0.45	0.45	0.45				
M9	10	57	0.45	0.45	0.45	0.45	0.45					
N1	11	62	0.45	0.46								
N2	12	64	0.46	0.46								

N3	13	66	0.46	0.46	0.45	0.45	0.45	0.45
N4	14	72	0.46	0.46				
N5	15	74	0.46	0.46	0.46	0.46	0.45	
N6	16	79	0.36					

INTERMEDIATE REPORT

Chlorophyll a — Middle/Middle West Rivers DO Modeling - 090207

µg/L — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.00	1.00	1.00							
M1	2	4	1.00	1.00	1.00	1.00						
M2	3	8	1.00	1.00	1.00	1.00	1.00					
M3	4	13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
M3	4	23	1.00	1.00								
M4	5	25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
M5	6	33	1.00	1.00	1.00	1.00						
M6	7	37	1.00	1.00	1.00	1.00						
M7	8	41	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
M8	9	51	1.00	1.00	1.00	1.00	1.00	1.00				
M9	10	57	1.00	1.00	1.00	1.00	1.00					
N1	11	62	1.00	1.00								
N2	12	64	1.00	1.00								
N3	13	66	1.00	1.00	1.00	1.00	1.00	1.00				
N4	14	72	1.00	1.00								
N5	15	74	1.00	1.00	1.00	1.00	1.00					
N6	16	79	0.00									

INTERMEDIATE REPORT

Temperature — Middle/Middle West Rivers DO Modeling - 090207

deg C — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	28.07	28.33	28.60							
M1	2	4	29.10	29.60	30.10	30.60						
M2	3	8	30.56	30.52	30.48	30.44	30.40					
M3	4	13	30.41	30.42	30.42	30.43	30.44	30.45	30.46	30.47	30.48	30.48
M3	4	23	30.49	30.50								
M4	5	25	30.56	30.62	30.69	30.75	30.81	30.88	30.94	31.00		
M5	6	33	31.00	31.00	31.00	31.00						
M6	7	37	30.88	30.75	30.62	30.50						
M7	8	41	30.50	30.50	30.50	30.50	30.50	30.50	30.50	30.50	30.50	30.50
M8	9	51	30.50	30.50	30.50	30.50	30.50	30.50				
M9	10	57	30.50	30.50	30.50	30.50	30.50					
N1	11	62	30.50	30.50								
N2	12	64	30.60	30.70								
N3	13	66	30.70	30.70	30.70	30.70	30.70	30.70				
N4	14	72	30.60	30.50								
N5	15	74	30.50	30.50	30.50	30.50	30.50					
N6	16	79	26.25									

INTERMEDIATE REPORT

Salinity — Middle/Middle West Rivers DO Modeling - 090207

ppt — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9

H1	1	1	0.00	0.00	0.00							
M1	2	4	0.00	0.00	0.00	0.00						
M2	3	8	0.00	0.00	0.00	0.00	0.00					
M3	4	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M3	4	23	0.00	0.00								
M4	5	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
M5	6	33	0.00	0.00	0.00	0.00						
M6	7	37	0.00	0.00	0.00	0.00						
M7	8	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M8	9	51	0.00	0.00	0.00	0.00	0.00	0.00				
M9	10	57	0.00	0.00	0.00	0.00	0.00					
N1	11	62	0.00	0.00								
N2	12	64	0.00	0.00								
N3	13	66	0.00	0.00	0.00	0.00	0.00	0.00				
N4	14	72	0.00	0.00								
N5	15	74	0.00	0.00	0.00	0.00	0.00					
N6	16	79	0.00									

INTERMEDIATE REPORT

River Distance — Middle/Middle West Rivers DO Modeling - 090207

km — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	22.	22.	21.							
M1	2	4	21.	21.	21.	20.						
M2	3	8	20.	20.	19.	19.	19.					
M3	4	13	18.	18.	18.	18.	17.	17.	17.	16.	16.	16.
M3	4	23	16.	15.								
M4	5	25	15.	15.	14.	14.	14.	13.	13.	13.		
M5	6	33	13.	12.	12.	12.						
M6	7	37	12.	11.	11.	11.						
M7	8	41	10.	10.	10.	10.	9.	9.	9.	9.	8.	8.
M8	9	51	8.	8.	7.	7.	7.	6.				
M9	10	57	6.	6.	5.	5.	4.					
N1	11	62	4.	4.								
N2	12	64	4.	4.								
N3	13	66	3.	3.	3.	2.	2.	2.				
N4	14	72	2.	2.								
N5	15	74	1.	1.	1.	0.	0.					
N6	16	79	0.									

INTERMEDIATE REPORT

Flow — Middle/Middle West Rivers DO Modeling - 090207

m^3/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.3	1.6	1.8							
M1	2	4	2.4	3.1	3.7	4.3						
M2	3	8	5.2	6.1	7.0	7.9	8.7					
M3	4	13	9.0	9.3	9.5	9.8	10.0	10.3	10.5	10.8	11.1	11.3
M3	4	23	11.6	11.8								
M4	5	25	12.0	12.2	12.4	12.6	12.8	13.0	13.1	13.3		
M5	6	33	13.7	14.1	14.5	14.8						
M6	7	37	15.2	15.6	16.0	16.3						

M7	8	41	16.5	16.6	16.8	16.9	17.1	17.2	17.4	17.5	17.7	17.8
M8	9	51	18.1	18.3	18.6	18.8	19.1	19.3				
M9	10	57	19.6	19.9	20.2	20.5	20.8					
N1	11	62	21.6	22.3								
N2	12	64	23.1	23.8								
N3	13	66	24.1	24.3	24.6	24.8	25.1	25.3				
N4	14	72	26.1	26.8								
N5	15	74	27.1	27.4	27.7	28.0	28.3					
N6	16	79	29.8									

INTERMEDIATE REPORT

Dispersion — Middle/Middle West Rivers DO Modeling - 090207

m²/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.0	1.0	1.0							
M1	2	4	1.0	1.0	1.0	1.0						
M2	3	8	1.0	1.0	1.0	1.0	1.0					
M3	4	13	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
M3	4	23	1.0	1.0								
M4	5	25	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
M5	6	33	1.0	1.0	1.0	1.0						
M6	7	37	1.0	1.0	1.0	1.0						
M7	8	41	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
M8	9	51	1.0	1.0	1.0	1.0	1.0	1.0				
M9	10	57	1.0	1.0	1.0	1.0	1.0					
N1	11	62	1.0	1.0								
N2	12	64	1.0	1.0								
N3	13	66	1.0	1.0	1.0	1.0	1.0	1.0				
N4	14	72	1.0	1.0								
N5	15	74	1.0	1.0	1.0	1.0	1.0					
N6	16	79	1.0									

INTERMEDIATE REPORT

Advective Velocity — Middle/Middle West Rivers DO Modeling - 090207

m/s — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.0	0.0	0.0							
M1	2	4	0.0	0.0	0.0	0.0						
M2	3	8	0.0	0.0	0.0	0.1	0.1					
M3	4	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M3	4	23	0.0	0.0								
M4	5	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
M5	6	33	0.0	0.0	0.0	0.0						
M6	7	37	0.0	0.0	0.0	0.0						
M7	8	41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M8	9	51	0.0	0.0	0.0	0.0	0.0	0.0				
M9	10	57	0.0	0.0	0.0	0.0	0.0					
N1	11	62	0.0	0.0								
N2	12	64	0.0	0.0								
N3	13	66	0.0	0.0	0.0	0.0	0.0	0.0				
N4	14	72	0.0	0.0								

N5	15	74	0.0	0.0	0.0	0.0	0.0
N6	16	79	0.0				

INTERMEDIATE REPORT

Depth — Middle/Middle West Rivers DO Modeling - 090207
m — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.7	1.7	1.7							
M1	2	4	4.9	4.9	4.9	4.9						
M2	3	8	2.5	2.5	2.5	2.5	2.5					
M3	4	13	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
M3	4	23	4.1	4.1								
M4	5	25	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5		
M5	6	33	5.5	5.5	5.5	5.5						
M6	7	37	5.5	5.5	5.5	5.5						
M7	8	41	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
M8	9	51	6.7	6.7	6.7	6.7	6.7	6.7				
M9	10	57	4.3	4.3	4.3	4.3	4.3					
N1	11	62	5.7	5.7								
N2	12	64	5.7	5.7								
N3	13	66	5.7	5.7	5.7	5.7	5.7	5.7				
N4	14	72	5.7	5.7								
N5	15	74	5.7	5.7	5.7	5.7	5.7					
N6	16	79	5.7									

INTERMEDIATE REPORT

Width — Middle/Middle West Rivers DO Modeling - 090207
m — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	52.6	52.6	52.6							
M1	2	4	45.2	45.2	45.2	45.2						
M2	3	8	63.0	63.0	63.0	63.0	63.0					
M3	4	13	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
M3	4	23	103.5	103.5								
M4	5	25	116.5	116.5	116.5	116.5	116.5	116.5	116.5	116.5		
M5	6	33	116.5	116.5	116.5	116.5						
M6	7	37	116.5	116.5	116.5	116.5						
M7	8	41	224.8	224.8	224.8	224.8	224.8	224.8	224.8	224.8	224.8	224.8
M8	9	51	224.8	224.8	224.8	224.8	224.8	224.8				
M9	10	57	260.2	260.2	260.2	260.2	260.2					
N1	11	62	236.9	236.9								
N2	12	64	236.9	236.9								
N3	13	66	236.9	236.9	236.9	236.9	236.9	236.9				
N4	14	72	110.0	110.0								
N5	15	74	110.0	110.0	110.0	110.0	110.0					
N6	16	79	110.0									

INTERMEDIATE REPORT

Cross-Sectional Area — Middle/Middle West Rivers DO Modeling - 090207
m^2 — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	89.9	89.9	89.9							
M1	2	4	222.4	222.4	222.4	222.4						

M2	3	8	156.2	156.2	156.2	156.2	156.2					
M3	4	13	419.2	419.2	419.2	419.2	419.2	419.2	419.2	419.2	419.2	419.2
M3	4	23	419.2	419.2								
M4	5	25	637.3	637.3	637.3	637.3	637.3	637.3	637.3	637.3		
M5	6	33	637.3	637.3	637.3	637.3						
M6	7	37	637.3	637.3	637.3	637.3						
M7	8	41	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6
M8	9	51	1494.6	1494.6	1494.6	1494.6	1494.6	1494.6				
M9	10	57	1126.7	1126.7	1126.7	1126.7	1126.7					
N1	11	62	1350.6	1350.6								
N2	12	64	1350.6	1350.6								
N3	13	66	1350.6	1350.6	1350.6	1350.6	1350.6	1350.6				
N4	14	72	627.0	627.0								
N5	15	74	627.0	627.0	627.0	627.0	627.0					
N6	16	79	627.0									

INTERMEDIATE REPORT

Reaeration Rate per day — Middle/Middle West Rivers DO Modeling - 090207 COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.476	0.478	0.481							
M1	2	4	0.168	0.170	0.171	0.173						
M2	3	8	0.343	0.343	0.342	0.342	0.342					
M3	4	13	0.209	0.209	0.209	0.209	0.209	0.210	0.210	0.210	0.210	0.210
M3	4	23	0.210	0.210								
M4	5	25	0.155	0.156	0.156	0.156	0.156	0.156	0.156	0.157		
M5	6	33	0.157	0.157	0.157	0.157						
M6	7	37	0.156	0.156	0.156	0.155						
M7	8	41	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128
M8	9	51	0.128	0.128	0.128	0.128	0.128	0.128				
M9	10	57	0.196	0.196	0.196	0.196	0.196					
N1	11	62	0.149	0.149								
N2	12	64	0.149	0.150								
N3	13	66	0.150	0.150	0.150	0.150	0.150	0.150				
N4	14	72	0.149	0.149								
N5	15	74	0.149	0.149	0.149	0.149	0.149					
N6	16	79	0.138									

INTERMEDIATE REPORT

BOD Decay Rate per day — Middle/Middle West Rivers DO Modeling - 090207 COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.06	0.06	0.06							
M1	2	4	0.06	0.06	0.06	0.07						
M2	3	8	0.06	0.06	0.06	0.06	0.06					
M3	4	13	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
M3	4	23	0.06	0.06								
M4	5	25	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07		
M5	6	33	0.07	0.07	0.07	0.07						
M6	7	37	0.07	0.07	0.07	0.06						
M7	8	41	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
M8	9	51	0.06	0.06	0.06	0.06	0.06	0.06				

M9	10	57	0.06	0.06	0.06	0.06	0.06					
N1	11	62	0.06	0.06								
N2	12	64	0.07	0.07								
N3	13	66	0.07	0.07	0.07	0.07	0.07	0.07				
N4	14	72	0.07	0.06								
N5	15	74	0.06	0.06	0.06	0.06	0.06					
N6	16	79	0.05									

INTERMEDIATE REPORT

BOD Settling Rate Middle/Middle West Rivers DO Modeling - 090207
per day COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.07	0.07	0.07							
M1	2	4	0.03	0.03	0.03	0.03						
M2	3	8	0.05	0.05	0.05	0.05	0.05					
M3	4	13	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
M3	4	23	0.03	0.03								
M4	5	25	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
M5	6	33	0.02	0.02	0.02	0.02						
M6	7	37	0.02	0.02	0.02	0.02						
M7	8	41	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
M8	9	51	0.02	0.02	0.02	0.02	0.02	0.02				
M9	10	57	0.03	0.03	0.03	0.03	0.03					
N1	11	62	0.02	0.02								
N2	12	64	0.02	0.02								
N3	13	66	0.02	0.02	0.02	0.02	0.02	0.02				
N4	14	72	0.02	0.02								
N5	15	74	0.02	0.02	0.02	0.02	0.02					
N6	16	79	0.02									

INTERMEDIATE REPORT

Ammonia Decay Rate Middle/Middle West Rivers DO Modeling - 090207
per day COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	0.17	0.18	0.18							
M1	2	4	0.19	0.20	0.21	0.21						
M2	3	8	0.21	0.21	0.21	0.21	0.21					
M3	4	13	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
M3	4	23	0.21	0.21								
M4	5	25	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.22		
M5	6	33	0.22	0.22	0.22	0.22						
M6	7	37	0.22	0.22	0.22	0.21						
M7	8	41	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.22
M8	9	51	0.22	0.22	0.22	0.22	0.22	0.22				
M9	10	57	0.22	0.22	0.22	0.22	0.22					
N1	11	62	0.22	0.22								
N2	12	64	0.22	0.22								
N3	13	66	0.22	0.22	0.22	0.22	0.22	0.22				
N4	14	72	0.22	0.22								
N5	15	74	0.22	0.22	0.22	0.22	0.22					
N6	16	79	0.15									

INTERMEDIATE REPORT

Sediment Oxygen Demand — Middle/Middle West Rivers DO Modeling - 090207

g/m²/d — COEF-1 Run

ID	RCH	ELEM	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
H1	1	1	1.67	1.69	1.72							
M1	2	4	2.33	2.40	2.47	2.55						
M2	3	8	0.66	0.65	0.65	0.65	0.65					
M3	4	13	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.91	1.91	1.92
M3	4	23	1.92	1.92								
M4	5	25	1.93	1.93	1.94	1.95	1.96	1.97	1.97	1.98		
M5	6	33	1.32	1.33	1.33	1.33						
M6	7	37	1.32	1.32	1.31	1.30						
M7	8	41	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
M8	9	51	1.30	1.30	1.30	1.30	1.30	1.30				
M9	10	57	1.30	1.30	1.30	1.30	1.30					
N1	11	62	0.10	0.10								
N2	12	64	0.10	0.10								
N3	13	66	0.10	0.10	0.10	0.10	0.10	0.10				
N4	14	72	0.10	0.10								
N5	15	74	0.10	0.10	0.10	0.11	0.12					
N6	16	79	0.18									

CONDENSED CAPSULE SUMMARY FOR Headwater

DIST	FLOW	TEMP	SALN	DO	REAER EBOD1	EBOD2	BOD1 ORGN	BOD1 NH3	BOD2 CHLA	BOD2 RATE	NH3 DECA	NH3 SETT	CHLA DECA	CHLA SETT	SOD
km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	µg/L	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
HDWTR	1.11000	30.00	0.00	5.00	0.42	0.00	0.00	0.10	1.00						
21.84	1.34233	28.07	0.00	5.06	0.36	0.00	0.04	0.08	1.00	0.48	0.06	0.07	0.01	0.00	0.17	1.67
21.57	1.57467	28.33	0.00	5.11	0.31	0.00	0.08	0.07	1.00	0.48	0.06	0.07	0.01	0.00	0.18	1.69
21.30	1.80700	28.60	0.00	5.13	0.26	0.00	0.11	0.06	1.00	0.48	0.06	0.07	0.01	0.00	0.18	1.72
21.05	2.42875	29.10	0.00	5.10	0.20	0.00	0.16	0.04	1.00	0.17	0.06	0.03	0.01	0.00	0.19	2.33
20.80	3.05050	29.60	0.00	5.08	0.17	0.00	0.18	0.04	1.00	0.17	0.06	0.03	0.01	0.00	0.20	2.40
20.55	3.67225	30.10	0.00	5.07	0.15	0.00	0.20	0.03	1.00	0.17	0.06	0.03	0.01	0.00	0.21	2.47
20.30	4.29400	30.60	0.00	5.07	0.14	0.00	0.21	0.03	1.00	0.17	0.07	0.03	0.01	0.00	0.21	2.55
20.00	5.18500	30.56	0.00	5.12	0.12	0.00	0.22	0.03	1.00	0.34	0.06	0.05	0.01	0.00	0.21	0.66
19.70	6.07600	30.52	0.00	5.15	0.11	0.00	0.23	0.02	1.00	0.34	0.06	0.05	0.01	0.00	0.21	0.65
19.40	6.96700	30.48	0.00	5.18	0.10	0.00	0.24	0.02	1.00	0.34	0.06	0.05	0.01	0.00	0.21	0.65
19.10	7.85800	30.44	0.00	5.20	0.09	0.00	0.25	0.02	1.00	0.34	0.06	0.05	0.01	0.00	0.21	0.65
18.80	8.74900	30.40	0.00	5.22	0.09	0.00	0.25	0.02	1.00	0.34	0.06	0.05	0.01	0.00	0.21	0.65
18.50	9.00600	30.41	0.00	5.22	0.10	0.00	0.25	0.02	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.90
18.20	9.26300	30.42	0.00	5.23	0.11	0.00	0.25	0.02	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.90
17.90	9.52000	30.42	0.00	5.24	0.11	0.00	0.25	0.02	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.90
17.60	9.77700	30.43	0.00	5.24	0.12	0.00	0.25	0.02	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.91
17.30	10.03400	30.44	0.00	5.25	0.12	0.00	0.24	0.02	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.91
17.00	10.29100	30.45	0.00	5.25	0.13	0.00	0.24	0.02	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.91
16.70	10.54800	30.46	0.00	5.25	0.14	0.00	0.24	0.03	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.91
16.40	10.80500	30.47	0.00	5.26	0.14	0.00	0.24	0.03	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.91
16.10	11.06200	30.48	0.00	5.26	0.15	0.00	0.24	0.03	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.91
15.80	11.31900	30.48	0.00	5.26	0.15	0.00	0.24	0.03	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.92
15.50	11.57600	30.49	0.00	5.26	0.15	0.00	0.24	0.03	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.92
15.20	11.83300	30.50	0.00	5.27	0.16	0.00	0.24	0.03	1.00	0.21	0.06	0.03	0.01	0.00	0.21	1.92
14.90	12.02050	30.56	0.00	5.28	0.16	0.00	0.24	0.03	1.00	0.16	0.06	0.02	0.01	0.00	0.21	1.93

14.60	12.20800	30.62	0.00	5.28	0.16	0.00	0.24	0.03	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.93
14.30	12.39550	30.69	0.00	5.29	0.16	0.00	0.23	0.03	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.94
14.00	12.58300	30.75	0.00	5.29	0.16	0.00	0.23	0.03	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.95
13.70	12.77050	30.81	0.00	5.30	0.16	0.00	0.23	0.03	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.96
13.40	12.95800	30.88	0.00	5.30	0.17	0.00	0.23	0.03	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.97
13.10	13.14550	30.94	0.00	5.30	0.17	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.97
12.80	13.33300	31.00	0.00	5.31	0.17	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.98
12.60	13.70800	31.00	0.00	5.32	0.19	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.32
12.40	14.08300	31.00	0.00	5.32	0.22	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.33
12.20	14.45800	31.00	0.00	5.33	0.23	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.33
12.00	14.83300	31.00	0.00	5.34	0.25	0.00	0.23	0.03	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.33
11.65	15.20800	30.88	0.00	5.36	0.27	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.32
11.30	15.58300	30.75	0.00	5.37	0.28	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.32
10.95	15.95800	30.62	0.00	5.39	0.30	0.00	0.23	0.04	1.00	0.16	0.07	0.02	0.01	0.00	0.22	1.31
10.60	16.33300	30.50	0.00	5.41	0.31	0.00	0.23	0.04	1.00	0.16	0.06	0.02	0.01	0.00	0.21	1.30
10.36	16.48300	30.50	0.00	5.44	0.31	0.00	0.22	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.21	1.30
10.12	16.63300	30.50	0.00	5.46	0.31	0.00	0.22	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.21	1.30
9.88	16.78300	30.50	0.00	5.49	0.31	0.00	0.22	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.21	1.30
9.64	16.93300	30.50	0.00	5.51	0.31	0.00	0.21	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
9.40	17.08300	30.50	0.00	5.54	0.31	0.00	0.21	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
9.16	17.23300	30.50	0.00	5.56	0.31	0.00	0.21	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
8.92	17.38300	30.50	0.00	5.58	0.31	0.00	0.21	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
8.68	17.53300	30.50	0.00	5.60	0.31	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
8.44	17.68299	30.50	0.00	5.62	0.31	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
8.20	17.83299	30.50	0.00	5.64	0.31	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
7.90	18.08299	30.50	0.00	5.66	0.31	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
7.60	18.33299	30.50	0.00	5.68	0.32	0.00	0.20	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
7.30	18.58299	30.50	0.00	5.69	0.32	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
7.00	18.83299	30.50	0.00	5.71	0.32	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
6.70	19.08299	30.50	0.00	5.72	0.32	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
6.40	19.33299	30.50	0.00	5.74	0.33	0.00	0.19	0.04	1.00	0.13	0.06	0.02	0.01	0.00	0.22	1.30
6.02	19.63299	30.50	0.00	5.75	0.33	0.00	0.19	0.04	1.00	0.20	0.06	0.03	0.01	0.00	0.22	1.30
5.64	19.93299	30.50	0.00	5.76	0.33	0.00	0.19	0.04	1.00	0.20	0.06	0.03	0.01	0.00	0.22	1.30
5.26	20.23299	30.50	0.00	5.78	0.34	0.00	0.18	0.04	1.00	0.20	0.06	0.03	0.01	0.00	0.22	1.30
4.88	20.53299	30.50	0.00	5.79	0.34	0.00	0.18	0.04	1.00	0.20	0.06	0.03	0.01	0.00	0.22	1.30
4.50	20.83299	30.50	0.00	5.80	0.34	0.00	0.18	0.04	1.00	0.20	0.06	0.03	0.01	0.00	0.22	1.30
4.35	21.58299	30.50	0.00	5.80	0.35	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.10
4.20	22.33299	30.50	0.00	5.81	0.35	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.10
3.85	23.08299	30.60	0.00	5.85	0.36	0.00	0.19	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
3.50	23.83299	30.70	0.00	5.89	0.36	0.00	0.19	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
3.20	24.08299	30.70	0.00	5.93	0.35	0.00	0.19	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
2.90	24.33299	30.70	0.00	5.97	0.35	0.00	0.19	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
2.60	24.58299	30.70	0.00	6.01	0.35	0.00	0.19	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
2.30	24.83299	30.70	0.00	6.05	0.34	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
2.00	25.08299	30.70	0.00	6.08	0.34	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
1.70	25.33299	30.70	0.00	6.11	0.34	0.00	0.18	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
1.60	26.08299	30.60	0.00	6.08	0.35	0.00	0.19	0.04	1.00	0.15	0.07	0.02	0.01	0.00	0.22	0.10
1.50	26.83299	30.50	0.00	6.07	0.35	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.10
1.23	27.13299	30.50	0.00	6.07	0.36	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.10
0.96	27.43299	30.50	0.00	6.08	0.36	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.10

0.69	27.73299	30.50	0.00	6.08	0.36	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.10
0.42	28.03299	30.50	0.00	6.09	0.37	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.11
0.15	28.33299	30.50	0.00	6.07	0.45	0.00	0.19	0.04	1.00	0.15	0.06	0.02	0.01	0.00	0.22	0.12
0.00	29.83299	26.25	0.00	5.82	1.18	0.00	0.15	0.03	0.00	0.14	0.05	0.02	0.01	0.00	0.15	0.18

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST	FLOW	TEMP	SALN	DO	EBOD1	EBOD2	ORG-N	NH3	CHLA	DISP	DEPTH	WIDTH	ADVEC VELO	MEAN VELO	DO SAT	REAER RATE	BOD1 DECA	BOD1 SETT	BOD2 DECA	BOD2 SETT	NH3 DECA	SOD
	km	m³/s	deg C	ppt	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	m²/s	m	m	m/s	m/s	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	g/m²/d
	HDWTR	1.110	30.0	0.0	5.0	0.4	0.0	0.0	0.1	1.0														
	WASTELOAD # 001 (test) ENTERS HERE WITHOUT ANY FLOW																							
1	H1 1	21.84	1.342	28.1	0.0	5.1	0.4	0.0	0.0	0.1	1.0	1.0	1.71	52.6	0.015	0.015	7.8	0.476	0.06	0.07	0.01	0.00	0.17	1.67
2	H1 1	21.57	1.575	28.3	0.0	5.1	0.3	0.0	0.1	0.1	1.0	1.0	1.71	52.6	0.018	0.018	7.8	0.478	0.06	0.07	0.01	0.00	0.18	1.69
3	H1 1	21.30	1.807	28.6	0.0	5.1	0.3	0.0	0.1	0.1	1.0	1.0	1.71	52.6	0.020	0.020	7.7	0.481	0.06	0.07	0.01	0.00	0.18	1.72
4	M1 2	21.05	2.429	29.1	0.0	5.1	0.2	0.0	0.2	0.0	1.0	1.0	4.92	45.2	0.011	0.011	7.7	0.168	0.06	0.03	0.01	0.00	0.19	2.33
5	M1 2	20.80	3.050	29.6	0.0	5.1	0.2	0.0	0.2	0.0	1.0	1.0	4.92	45.2	0.014	0.014	7.6	0.170	0.06	0.03	0.01	0.00	0.20	2.40
6	M1 2	20.55	3.672	30.1	0.0	5.1	0.2	0.0	0.2	0.0	1.0	1.0	4.92	45.2	0.017	0.017	7.5	0.171	0.06	0.03	0.01	0.00	0.21	2.47
7	M1 2	20.30	4.294	30.6	0.0	5.1	0.1	0.0	0.2	0.0	1.0	1.0	4.92	45.2	0.019	0.019	7.5	0.173	0.07	0.03	0.01	0.00	0.21	2.55
8	M2 3	20.00	5.185	30.6	0.0	5.1	0.1	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.033	0.033	7.5	0.343	0.06	0.05	0.01	0.00	0.21	0.66
9	M2 3	19.70	6.076	30.5	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.039	0.039	7.5	0.343	0.06	0.05	0.01	0.00	0.21	0.65
10	M2 3	19.40	6.967	30.5	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.045	0.045	7.5	0.342	0.06	0.05	0.01	0.00	0.21	0.65
11	M2 3	19.10	7.858	30.4	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.050	0.050	7.5	0.342	0.06	0.05	0.01	0.00	0.21	0.65
12	M2 3	18.80	8.749	30.4	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	2.48	63.0	0.056	0.056	7.5	0.342	0.06	0.05	0.01	0.00	0.21	0.65
13	M3 4	18.50	9.006	30.4	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.021	0.021	7.5	0.209	0.06	0.03	0.01	0.00	0.21	1.90
14	M3 4	18.20	9.263	30.4	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.022	0.022	7.5	0.209	0.06	0.03	0.01	0.00	0.21	1.90
15	M3 4	17.90	9.520	30.4	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.023	0.023	7.5	0.209	0.06	0.03	0.01	0.00	0.21	1.90
16	M3 4	17.60	9.777	30.4	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.023	0.023	7.5	0.209	0.06	0.03	0.01	0.00	0.21	1.91
17	M3 4	17.30	10.034	30.4	0.0	5.2	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.024	0.024	7.5	0.209	0.06	0.03	0.01	0.00	0.21	1.91
18	M3 4	17.00	10.291	30.5	0.0	5.3	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.025	0.025	7.5	0.210	0.06	0.03	0.01	0.00	0.21	1.91
19	M3 4	16.70	10.548	30.5	0.0	5.3	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.025	0.025	7.5	0.210	0.06	0.03	0.01	0.00	0.21	1.91
20	M3 4	16.40	10.805	30.5	0.0	5.3	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.026	0.026	7.5	0.210	0.06	0.03	0.01	0.00	0.21	1.91
21	M3 4	16.10	11.062	30.5	0.0	5.3	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.026	0.026	7.5	0.210	0.06	0.03	0.01	0.00	0.21	1.91
22	M3 4	15.80	11.319	30.5	0.0	5.3	0.1	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.027	0.027	7.5	0.210	0.06	0.03	0.01	0.00	0.21	1.92
23	M3 4	15.50	11.576	30.5	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.028	0.028	7.5	0.210	0.06	0.03	0.01	0.00	0.21	1.92
24	M3 4	15.20	11.833	30.5	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	4.05	103.5	0.028	0.028	7.5	0.210	0.06	0.03	0.01	0.00	0.21	1.92
25	M4 5	14.90	12.020	30.6	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.019	0.019	7.5	0.155	0.06	0.02	0.01	0.00	0.21	1.93
26	M4 5	14.60	12.208	30.6	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.019	0.019	7.5	0.156	0.07	0.02	0.01	0.00	0.22	1.93
27	M4 5	14.30	12.395	30.7	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.019	0.020	7.5	0.156	0.07	0.02	0.01	0.00	0.22	1.94
28	M4 5	14.00	12.583	30.8	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.020	0.020	7.5	0.156	0.07	0.02	0.01	0.00	0.22	1.95
29	M4 5	13.70	12.770	30.8	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.020	0.021	7.5	0.156	0.07	0.02	0.01	0.00	0.22	1.96
30	M4 5	13.40	12.958	30.9	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.020	0.022	7.4	0.156	0.07	0.02	0.01	0.00	0.22	1.97
31	M4 5	13.10	13.145	30.9	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.021	0.022	7.4	0.156	0.07	0.02	0.01	0.00	0.22	1.97
32	M4 5	12.80	13.333	31.0	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.021	0.023	7.4	0.157	0.07	0.02	0.01	0.00	0.22	1.98
33	M5 6	12.60	13.708	31.0	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.022	0.023	7.4	0.157	0.07	0.02	0.01	0.00	0.22	1.32
34	M5 6	12.40	14.083	31.0	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.022	0.024	7.4	0.157	0.07	0.02	0.01	0.00	0.22	1.33
35	M5 6	12.20	14.458	31.0	0.0	5.3	0.2	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.023	0.025	7.4	0.157	0.07	0.02	0.01	0.00	0.22	1.33
36	M5 6	12.00	14.833	31.0	0.0	5.3	0.3	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.023	0.025	7.4	0.157	0.07	0.02	0.01	0.00	0.22	1.33
37	M6 7	11.65	15.208	30.9	0.0	5.4	0.3	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.024	0.026	7.4	0.156	0.07	0.02	0.01	0.00	0.22	1.32
38	M6 7	11.30	15.583	30.8	0.0	5.4	0.3	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.024	0.027	7.5	0.156	0.07	0.02	0.01	0.00	0.22	1.32
39	M6 7	10.95	15.958	30.6	0.0	5.4	0.3	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.025	0.028	7.5	0.156	0.07	0.02	0.01	0.00	0.22	1.31
40	M6 7	10.60	16.333	30.5	0.0	5.4	0.3	0.0	0.2	0.0	1.0	1.0	5.47	116.5	0.026	0.029	7.5	0.155	0.06	0.02	0.01	0.00	0.21	1.30
41	M7 8	10.36	16.483	30.5	0.0	5.4	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.011	0.013	7.5	0.128	0.06	0.02	0.01	0.00	0.21	1.30
42	M7 8	10.12	16.633	30.5	0.0	5.5	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.011	0.013	7.5	0.128	0.06	0.02	0.01	0.00	0.21	1.30
43	M7 8	9.88	16.783	30.5	0.0	5.5	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.011	0.014	7.5	0.128	0.06	0.02	0.01	0.00	0.21	1.30

44	M7	8	9.64	16.933	30.5	0.0	5.5	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.011	0.014	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
45	M7	8	9.40	17.083	30.5	0.0	5.5	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.011	0.014	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
46	M7	8	9.16	17.233	30.5	0.0	5.6	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.015	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
47	M7	8	8.92	17.383	30.5	0.0	5.6	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.015	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
48	M7	8	8.68	17.533	30.5	0.0	5.6	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.016	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
49	M7	8	8.44	17.683	30.5	0.0	5.6	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.016	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
50	M7	8	8.20	17.833	30.5	0.0	5.6	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.017	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
51	M8	9	7.90	18.083	30.5	0.0	5.7	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.017	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
52	M8	9	7.60	18.333	30.5	0.0	5.7	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.018	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
53	M8	9	7.30	18.583	30.5	0.0	5.7	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.012	0.018	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
54	M8	9	7.00	18.833	30.5	0.0	5.7	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.019	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
55	M8	9	6.70	19.083	30.5	0.0	5.7	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.019	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
56	M8	9	6.40	19.333	30.5	0.0	5.7	0.3	0.0	0.2	0.0	1.0	1.0	6.65	224.8	0.013	0.020	7.5	0.128	0.06	0.02	0.01	0.00	0.22	1.30
57	M9	10	6.02	19.633	30.5	0.0	5.8	0.3	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.017	0.028	7.5	0.196	0.06	0.03	0.01	0.00	0.22	1.30
58	M9	10	5.64	19.933	30.5	0.0	5.8	0.3	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.018	0.029	7.5	0.196	0.06	0.03	0.01	0.00	0.22	1.30
59	M9	10	5.26	20.233	30.5	0.0	5.8	0.3	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.018	0.030	7.5	0.196	0.06	0.03	0.01	0.00	0.22	1.30
60	M9	10	4.88	20.533	30.5	0.0	5.8	0.3	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.018	0.031	7.5	0.196	0.06	0.03	0.01	0.00	0.22	1.30
61	M9	10	4.50	20.833	30.5	0.0	5.8	0.3	0.0	0.2	0.0	1.0	1.0	4.33	260.2	0.018	0.032	7.5	0.196	0.06	0.03	0.01	0.00	0.22	1.30
62	N1	11	4.35	21.583	30.5	0.0	5.8	0.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.016	0.027	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.10
63	N1	11	4.20	22.333	30.5	0.0	5.8	0.4	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.017	0.028	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.10
64	N2	12	3.85	23.083	30.6	0.0	5.9	0.4	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.017	0.029	7.5	0.149	0.07	0.02	0.01	0.00	0.22	0.10
65	N2	12	3.50	23.833	30.7	0.0	5.9	0.4	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.018	0.030	7.5	0.150	0.07	0.02	0.01	0.00	0.22	0.10
66	N3	13	3.20	24.083	30.7	0.0	5.9	0.4	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.018	0.030	7.5	0.150	0.07	0.02	0.01	0.00	0.22	0.10
67	N3	13	2.90	24.333	30.7	0.0	6.0	0.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.018	0.031	7.5	0.150	0.07	0.02	0.01	0.00	0.22	0.10
68	N3	13	2.60	24.583	30.7	0.0	6.0	0.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.018	0.032	7.5	0.150	0.07	0.02	0.01	0.00	0.22	0.10
69	N3	13	2.30	24.833	30.7	0.0	6.0	0.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.018	0.032	7.5	0.150	0.07	0.02	0.01	0.00	0.22	0.10
70	N3	13	2.00	25.083	30.7	0.0	6.1	0.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.019	0.033	7.5	0.150	0.07	0.02	0.01	0.00	0.22	0.10
71	N3	13	1.70	25.333	30.7	0.0	6.1	0.3	0.0	0.2	0.0	1.0	1.0	5.70	236.9	0.019	0.034	7.5	0.150	0.07	0.02	0.01	0.00	0.22	0.10
72	N4	14	1.60	26.083	30.6	0.0	6.1	0.3	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.042	0.073	7.5	0.149	0.07	0.02	0.01	0.00	0.22	0.10

EXPANDED CAPSULE SUMMARY FOR Headwater

IOR	REACH	DIST km	FLOW m³/s	TEMP deg C	SALN ppt	DO mg/L	EBOD1 mg/L	EBOD2 mg/L	ORG-N mg/L	NH3 µg/L	CHLA m²/s	ADVEC DISP m	MEAN DEPTH m	DO REAER m/s	BOD1 SETT m/s	BOD1 DECA mg/L	BOD2 SETT 1/da	BOD2 DECA 1/da	NH3 SETT 1/da	NH3 DECA 1/da	SOD g/m²/d
73	N4 14	1.50	26.833	30.5	0.0	6.1	0.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.043	0.074	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.10
74	N5 15	1.23	27.133	30.5	0.0	6.1	0.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.043	0.075	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.10
75	N5 15	0.96	27.433	30.5	0.0	6.1	0.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.044	0.075	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.10
76	N5 15	0.69	27.733	30.5	0.0	6.1	0.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.044	0.076	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.10
77	N5 15	0.42	28.033	30.5	0.0	6.1	0.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.045	0.077	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.11
78	N5 15	0.15	28.333	30.5	0.0	6.1	0.4	0.0	0.2	0.0	1.0	1.0	5.70	110.0	0.045	0.077	7.5	0.149	0.06	0.02	0.01	0.00	0.22	0.12
79	N6 16	0.00	29.833	26.2	0.0	5.8	1.2	0.0	0.2	0.0	0.0	1.0	5.70	110.0	0.048	0.078	8.1	0.138	0.05	0.02	0.01	0.00	0.15	0.18

SPECIAL REPORT: Headwater

WATER QUALITY CONSTITUENT VALUES

ELEM NO.	ENDING km	TEMP deg C	SALN ppt	CM-I *	CM-II *	DO mg/L	BOD1 mg/L	BOD2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORG-N mg/L	NH3-N mg/L	NO3-N µg/L	TOTN **	PHOS	CHL A #/100mL	MACRO *	COLI	NCM
1	21.840	28.07	0.0	0.0	0.0	5.06	0.36	0.00	0.36	0.00	0.04	0.08	0.12	0.24	0.05	1.0	0.0	0.	0.00
2	21.570	28.33	0.0	0.0	0.0	5.11	0.31	0.00	0.31	0.00	0.08	0.07	0.13	0.28	0.05	1.0	0.0	0.	0.00
3	21.300	28.60	0.0	0.0	0.0	5.13	0.26	0.00	0.26	0.00	0.11	0.06	0.14	0.31	0.05	1.0	0.0	0.	0.00
4	21.050	29.10	0.0	0.0	0.0	5.10	0.20	0.00	0.20	0.00	0.16	0.04	0.16	0.36	0.05	1.0	0.0	0.	0.00
5	20.800	29.60	0.0	0.0	0.0	5.08	0.17	0.00	0.17	0.00	0.18	0.04	0.17	0.38	0.05	1.0	0.0	0.	0.00
6	20.550	30.10	0.0	0.0	0.0	5.07	0.15	0.00	0.15	0.00	0.20	0.03	0.17	0.40	0.05	1.0	0.0	0.	0.00
7	20.300	30.60	0.0	0.0	0.0	5.07	0.14	0.00	0.14	0.00	0.21	0.03	0.18	0.42	0.05	1.0	0.0	0.	0.00
8	20.000	30.56	0.0	0.0	0.0	5.12	0.12	0.00	0.12	0.00	0.22	0.03	0.18	0.43	0.05	1.0	0.0	0.	0.00
9	19.700	30.52	0.0	0.0	0.0	5.15	0.11	0.00	0.11	0.00	0.23	0.02	0.18	0.44	0.05	1.0	0.0	0.	0.00
10	19.400	30.48	0.0	0.0	0.0	5.18	0.10	0.00	0.10	0.00	0.24	0.02	0.19	0.45	0.05	1.0	0.0	0.	0.00
11	19.100	30.44	0.0	0.0	0.0	5.20	0.09	0.00	0.09	0.00	0.25	0.02	0.19	0.45	0.05	1.0	0.0	0.	0.00
12	18.800	30.40	0.0	0.0	0.0	5.22	0.09	0.00	0.09	0.00	0.25	0.02	0.19	0.46	0.05	1.0	0.0	0.	0.00
13	18.500	30.41	0.0	0.0	0.0	5.22	0.10	0.00	0.10	0.00	0.25	0.02	0.19	0.46	0.05	1.0	0.0	0.	0.00
14	18.200	30.42	0.0	0.0	0.0	5.23	0.11	0.00	0.11	0.00	0.25	0.02	0.19	0.46	0.05	1.0	0.0	0.	0.00
15	17.900	30.42	0.0	0.0	0.0	5.24	0.11	0.00	0.11	0.00	0.25	0.02	0.19	0.46	0.05	1.0	0.0	0.	0.00
16	17.600	30.43	0.0	0.0	0.0	5.24	0.12	0.00	0.12	0.00	0.25	0.02	0.19	0.46	0.05	1.0	0.0	0.	0.00
17	17.300	30.44	0.0	0.0	0.0	5.25	0.12	0.00	0.12	0.00	0.24	0.02	0.19	0.46	0.05	1.0	0.0	0.	0.00
18	17.000	30.45	0.0	0.0	0.0	5.25	0.13	0.00	0.13	0.00	0.24	0.02	0.19	0.46	0.05	1.0	0.0	0.	0.00
19	16.700	30.46	0.0	0.0	0.0	5.25	0.14	0.00	0.14	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
20	16.400	30.47	0.0	0.0	0.0	5.26	0.14	0.00	0.14	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
21	16.100	30.48	0.0	0.0	0.0	5.26	0.15	0.00	0.15	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
22	15.800	30.48	0.0	0.0	0.0	5.26	0.15	0.00	0.15	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
23	15.500	30.49	0.0	0.0	0.0	5.26	0.15	0.00	0.15	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
24	15.200	30.50	0.0	0.0	0.0	5.27	0.16	0.00	0.16	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
25	14.900	30.56	0.0	0.0	0.0	5.28	0.16	0.00	0.16	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
26	14.600	30.62	0.0	0.0	0.0	5.28	0.16	0.00	0.16	0.00	0.24	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
27	14.300	30.69	0.0	0.0	0.0	5.29	0.16	0.00	0.16	0.00	0.23	0.03	0.19	0.46	0.05	1.0	0.0	0.	0.00
28	14.000	30.75	0.0	0.0	0.0	5.29	0.16	0.00	0.16	0.00	0.23	0.03	0.20	0.46	0.05	1.0	0.0	0.	0.00
29	13.700	30.81	0.0	0.0	0.0	5.30	0.16	0.00	0.16	0.00	0.23	0.03	0.20	0.46	0.05	1.0	0.0	0.	0.00
30	13.400	30.88	0.0	0.0	0.0	5.30	0.17	0.00	0.17	0.00	0.23	0.03	0.20	0.46	0.05	1.0	0.0	0.	0.00
31	13.100	30.94	0.0	0.0	0.0	5.30	0.17	0.00	0.17	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
32	12.800	31.00	0.0	0.0	0.0	5.31	0.17	0.00	0.17	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
33	12.600	31.00	0.0	0.0	0.0	5.32	0.19	0.00	0.19	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
34	12.400	31.00	0.0	0.0	0.0	5.32	0.22	0.00	0.22	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00

35	12.200	31.00	0.0	0.0	0.0	5.33	0.23	0.00	0.23	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
36	12.000	31.00	0.0	0.0	0.0	5.34	0.25	0.00	0.25	0.00	0.23	0.03	0.20	0.46	0.05	1.0	0.0	0.	0.00
37	11.650	30.88	0.0	0.0	0.0	5.36	0.27	0.00	0.27	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
38	11.300	30.75	0.0	0.0	0.0	5.37	0.28	0.00	0.28	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
39	10.950	30.62	0.0	0.0	0.0	5.39	0.30	0.00	0.30	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
40	10.600	30.50	0.0	0.0	0.0	5.41	0.31	0.00	0.31	0.00	0.23	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
41	10.360	30.50	0.0	0.0	0.0	5.44	0.31	0.00	0.31	0.00	0.22	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
42	10.120	30.50	0.0	0.0	0.0	5.46	0.31	0.00	0.31	0.00	0.22	0.04	0.20	0.46	0.05	1.0	0.0	0.	0.00
43	9.880	30.50	0.0	0.0	0.0	5.49	0.31	0.00	0.31	0.00	0.22	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
44	9.640	30.50	0.0	0.0	0.0	5.51	0.31	0.00	0.31	0.00	0.21	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
45	9.400	30.50	0.0	0.0	0.0	5.54	0.31	0.00	0.31	0.00	0.21	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
46	9.160	30.50	0.0	0.0	0.0	5.56	0.31	0.00	0.31	0.00	0.21	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
47	8.920	30.50	0.0	0.0	0.0	5.58	0.31	0.00	0.31	0.00	0.21	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
48	8.680	30.50	0.0	0.0	0.0	5.60	0.31	0.00	0.31	0.00	0.20	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
49	8.440	30.50	0.0	0.0	0.0	5.62	0.31	0.00	0.31	0.00	0.20	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
50	8.200	30.50	0.0	0.0	0.0	5.64	0.31	0.00	0.31	0.00	0.20	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
51	7.900	30.50	0.0	0.0	0.0	5.66	0.31	0.00	0.31	0.00	0.20	0.04	0.21	0.46	0.05	1.0	0.0	0.	0.00
52	7.600	30.50	0.0	0.0	0.0	5.68	0.32	0.00	0.32	0.00	0.20	0.04	0.22	0.46	0.05	1.0	0.0	0.	0.00
53	7.300	30.50	0.0	0.0	0.0	5.69	0.32	0.00	0.32	0.00	0.19	0.04	0.22	0.46	0.05	1.0	0.0	0.	0.00
54	7.000	30.50	0.0	0.0	0.0	5.71	0.32	0.00	0.32	0.00	0.19	0.04	0.22	0.45	0.05	1.0	0.0	0.	0.00
55	6.700	30.50	0.0	0.0	0.0	5.72	0.32	0.00	0.32	0.00	0.19	0.04	0.22	0.45	0.05	1.0	0.0	0.	0.00
56	6.400	30.50	0.0	0.0	0.0	5.74	0.33	0.00	0.33	0.00	0.19	0.04	0.22	0.45	0.05	1.0	0.0	0.	0.00
57	6.020	30.50	0.0	0.0	0.0	5.75	0.33	0.00	0.33	0.00	0.19	0.04	0.22	0.45	0.05	1.0	0.0	0.	0.00
58	5.640	30.50	0.0	0.0	0.0	5.76	0.33	0.00	0.33	0.00	0.19	0.04	0.22	0.45	0.05	1.0	0.0	0.	0.00
59	5.260	30.50	0.0	0.0	0.0	5.78	0.34	0.00	0.34	0.00	0.18	0.04	0.22	0.45	0.05	1.0	0.0	0.	0.00
60	4.880	30.50	0.0	0.0	0.0	5.79	0.34	0.00	0.34	0.00	0.18	0.04	0.23	0.45	0.05	1.0	0.0	0.	0.00
61	4.500	30.50	0.0	0.0	0.0	5.80	0.34	0.00	0.34	0.00	0.18	0.04	0.23	0.45	0.05	1.0	0.0	0.	0.00
62	4.350	30.50	0.0	0.0	0.0	5.80	0.35	0.00	0.35	0.00	0.19	0.04	0.23	0.45	0.05	1.0	0.0	0.	0.00
63	4.200	30.50	0.0	0.0	0.0	5.81	0.35	0.00	0.35	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
64	3.850	30.60	0.0	0.0	0.0	5.85	0.36	0.00	0.36	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
65	3.500	30.70	0.0	0.0	0.0	5.89	0.36	0.00	0.36	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
66	3.200	30.70	0.0	0.0	0.0	5.93	0.35	0.00	0.35	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
67	2.900	30.70	0.0	0.0	0.0	5.97	0.35	0.00	0.35	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
68	2.600	30.70	0.0	0.0	0.0	6.01	0.35	0.00	0.35	0.00	0.19	0.04	0.23	0.45	0.05	1.0	0.0	0.	0.00
69	2.300	30.70	0.0	0.0	0.0	6.05	0.34	0.00	0.34	0.00	0.18	0.04	0.23	0.45	0.05	1.0	0.0	0.	0.00
70	2.000	30.70	0.0	0.0	0.0	6.08	0.34	0.00	0.34	0.00	0.18	0.04	0.23	0.45	0.05	1.0	0.0	0.	0.00
71	1.700	30.70	0.0	0.0	0.0	6.11	0.34	0.00	0.34	0.00	0.18	0.04	0.23	0.45	0.05	1.0	0.0	0.	0.00
72	1.600	30.60	0.0	0.0	0.0	6.08	0.35	0.00	0.35	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
73	1.500	30.50	0.0	0.0	0.0	6.07	0.35	0.00	0.35	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
74	1.230	30.50	0.0	0.0	0.0	6.07	0.36	0.00	0.36	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
75	0.960	30.50	0.0	0.0	0.0	6.08	0.36	0.00	0.36	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
76	0.690	30.50	0.0	0.0	0.0	6.08	0.36	0.00	0.36	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
77	0.420	30.50	0.0	0.0	0.0	6.09	0.37	0.00	0.37	0.00	0.19	0.04	0.23	0.46	0.05	1.0	0.0	0.	0.00
78	0.150	30.50	0.0	0.0	0.0	6.07	0.45	0.00	0.45	0.00	0.19	0.04	0.22	0.45	0.05	1.0	0.0	0.	0.00
79	0.000	26.25	0.0	0.0	0.0	5.82	1.18	0.00	1.18	0.00	0.15	0.03	0.18	0.36	0.00	0.0	0.0	0.	0.00

SPECIAL REPORT: Headwater

BIOLOGICAL AND PHYSICAL COEFFICIENTS

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#1 SETT	BOD#2 DECAY	ABOD#2 SOD	FULL SOD	CORR DECAY	ORG-N SETT	ORG-N DECAY	NH3 SRCE	NH3 RATE	DENIT SRCE	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM SETT	NCM

	km	mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da		
1	21.840	7.82	0.48	0.06	0.07	0.00	0.01	0.00	0.00	1.67	1.67	0.06	0.01	0.17	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
2	21.570	7.78	0.48	0.06	0.07	0.00	0.01	0.00	0.00	1.69	1.69	0.06	0.01	0.18	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
3	21.300	7.75	0.48	0.06	0.07	0.00	0.01	0.00	0.00	1.72	1.72	0.06	0.01	0.18	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
4	21.050	7.68	0.17	0.06	0.03	0.00	0.01	0.00	0.00	2.33	2.33	0.06	0.00	0.19	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
5	20.800	7.61	0.17	0.06	0.03	0.00	0.01	0.00	0.00	2.40	2.40	0.06	0.00	0.20	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
6	20.550	7.55	0.17	0.06	0.03	0.00	0.01	0.00	0.00	2.47	2.47	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
7	20.300	7.48	0.17	0.07	0.03	0.00	0.01	0.00	0.00	2.55	2.55	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
8	20.000	7.49	0.34	0.06	0.05	0.00	0.01	0.00	0.00	0.66	0.66	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
9	19.700	7.49	0.34	0.06	0.05	0.00	0.01	0.00	0.00	0.65	0.65	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
10	19.400	7.50	0.34	0.06	0.05	0.00	0.01	0.00	0.00	0.65	0.65	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
11	19.100	7.50	0.34	0.06	0.05	0.00	0.01	0.00	0.00	0.65	0.65	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
12	18.800	7.51	0.34	0.06	0.05	0.00	0.01	0.00	0.00	0.65	0.65	0.06	0.01	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
13	18.500	7.51	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.90	1.90	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
14	18.200	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.90	1.90	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
15	17.900	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.90	1.90	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
16	17.600	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
17	17.300	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
18	17.000	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
19	16.700	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
20	16.400	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
21	16.100	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
22	15.800	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.92	1.92	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
23	15.500	7.49	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.92	1.92	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
24	15.200	7.49	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.92	1.92	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
25	14.900	7.49	0.16	0.06	0.02	0.00	0.01	0.00	0.00	1.93	1.93	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
26	14.600	7.48	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.93	1.93	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
27	14.300	7.47	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.94	1.94	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
28	14.000	7.46	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.95	1.95	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
29	13.700	7.45	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.96	1.96	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
30	13.400	7.45	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.97	1.97	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
31	13.100	7.44	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.97	1.97	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
32	12.800	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.98	1.98	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
33	12.600	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.32	1.32	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
34	12.400	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.33	1.33	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
35	12.200	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.33	1.33	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
36	12.000	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.33	1.33	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
37	11.650	7.45	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.32	1.32	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
38	11.300	7.46	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.32	1.32	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
39	10.950	7.48	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.31	1.31	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
40	10.600	7.49	0.16	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
41	10.360	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
42	10.120	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
43	9.880	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
44	9.640	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
45	9.400	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
46	9.160	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
47	8.920	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
48	8.680	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
49	8.440	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00

50	8.200	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
51	7.900	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
52	7.600	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
53	7.300	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
54	7.000	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
55	6.700	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
56	6.400	7.49	0.13	0.06	0.02	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
57	6.020	7.49	0.20	0.06	0.03	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
58	5.640	7.49	0.20	0.06	0.03	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
59	5.260	7.49	0.20	0.06	0.03	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
60	4.880	7.49	0.20	0.06	0.03	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
61	4.500	7.49	0.20	0.06	0.03	0.00	0.01	0.00	0.00	1.30	1.30	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
62	4.350	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
63	4.200	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
64	3.850	7.48	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
65	3.500	7.47	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
66	3.200	7.47	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
67	2.900	7.47	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
68	2.600	7.47	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
69	2.300	7.47	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
70	2.000	7.47	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
71	1.700	7.47	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
72	1.600	7.48	0.15	0.07	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
73	1.500	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
74	1.230	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
75	0.960	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
76	0.690	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.10	0.10	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
77	0.420	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.11	0.11	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
78	0.150	7.49	0.15	0.06	0.02	0.00	0.01	0.00	0.00	0.12	0.12	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
79	0.000	8.08	0.14	0.05	0.02	0.00	0.01	0.00	0.00	0.18	0.18	0.06	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SPECIAL REPORT: Headwater

HYDRAULIC PARAMETER VALUES

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW VELO	ADVCTV	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	PRISM	VELO	TIDAL VELO	TIDAL	DISPRSN	MEAN
	km	km	m³/s	m/s	m	m	m³	m²	m²	m³	m/s	m²/s	m/s		
1	22.11	21.84	1.3423	0.015	1.71	52.6	24285.	14202.0	89.9	8521.	0.002	1.000	0.015		
2	21.84	21.57	1.5747	0.018	1.71	52.6	24285.	14202.0	89.9	17042.	0.004	1.000	0.018		
3	21.57	21.30	1.8070	0.020	1.71	52.6	24285.	14202.0	89.9	25564.	0.006	1.000	0.020		
4	21.30	21.05	2.4288	0.011	4.92	45.2	55596.	11300.0	222.4	32344.	0.003	1.000	0.011		
5	21.05	20.80	3.0505	0.014	4.92	45.2	55596.	11300.0	222.4	39124.	0.004	1.000	0.014		
6	20.80	20.55	3.6722	0.017	4.92	45.2	55596.	11300.0	222.4	45904.	0.005	1.000	0.017		
7	20.55	20.30	4.2940	0.019	4.92	45.2	55596.	11300.0	222.4	52684.	0.005	1.000	0.019		
8	20.30	20.00	5.1850	0.033	2.48	63.0	46872.	18900.0	156.2	64024.	0.009	1.000	0.033		
9	20.00	19.70	6.0760	0.039	2.48	63.0	46872.	18900.0	156.2	75364.	0.011	1.000	0.039		
10	19.70	19.40	6.9670	0.045	2.48	63.0	46872.	18900.0	156.2	86704.	0.012	1.000	0.045		
11	19.40	19.10	7.8580	0.050	2.48	63.0	46872.	18900.0	156.2	98044.	0.014	1.000	0.050		
12	19.10	18.80	8.7490	0.056	2.48	63.0	46872.	18900.0	156.2	109384.	0.016	1.000	0.056		
13	18.80	18.50	9.0060	0.021	4.05	103.5	125753.	31050.0	419.2	128014.	0.007	1.000	0.021		
14	18.50	18.20	9.2630	0.022	4.05	103.5	125753.	31050.0	419.2	146644.	0.008	1.000	0.022		
15	18.20	17.90	9.5200	0.023	4.05	103.5	125753.	31050.0	419.2	165274.	0.009	1.000	0.023		

16	17.90	17.60	9.7770	0.023	4.05	103.5	125753.	31050.0	419.2	183904.	0.010	1.000	0.023
17	17.60	17.30	10.0340	0.024	4.05	103.5	125753.	31050.0	419.2	202534.	0.011	1.000	0.024
18	17.30	17.00	10.2910	0.025	4.05	103.5	125753.	31050.0	419.2	221164.	0.012	1.000	0.025
19	17.00	16.70	10.5480	0.025	4.05	103.5	125753.	31050.0	419.2	239794.	0.013	1.000	0.025
20	16.70	16.40	10.8050	0.026	4.05	103.5	125753.	31050.0	419.2	258424.	0.014	1.000	0.026
21	16.40	16.10	11.0620	0.026	4.05	103.5	125753.	31050.0	419.2	277054.	0.015	1.000	0.026
22	16.10	15.80	11.3190	0.027	4.05	103.5	125753.	31050.0	419.2	295684.	0.016	1.000	0.027
23	15.80	15.50	11.5760	0.028	4.05	103.5	125753.	31050.0	419.2	314314.	0.017	1.000	0.028
24	15.50	15.20	11.8330	0.028	4.05	103.5	125753.	31050.0	419.2	332944.	0.018	1.000	0.028
25	15.20	14.90	12.0205	0.019	5.47	116.5	191176.	34950.0	637.3	353914.	0.012	1.000	0.019
26	14.90	14.60	12.2080	0.019	5.47	116.5	191176.	34950.0	637.3	374884.	0.013	1.000	0.019
27	14.60	14.30	12.3955	0.019	5.47	116.5	191176.	34950.0	637.3	395854.	0.014	1.000	0.020
28	14.30	14.00	12.5830	0.020	5.47	116.5	191176.	34950.0	637.3	416824.	0.015	1.000	0.020
29	14.00	13.70	12.7705	0.020	5.47	116.5	191176.	34950.0	637.3	437794.	0.015	1.000	0.021
30	13.70	13.40	12.9580	0.020	5.47	116.5	191176.	34950.0	637.3	458764.	0.016	1.000	0.022
31	13.40	13.10	13.1455	0.021	5.47	116.5	191176.	34950.0	637.3	479734.	0.017	1.000	0.022
32	13.10	12.80	13.3330	0.021	5.47	116.5	191176.	34950.0	637.3	500704.	0.017	1.000	0.023
33	12.80	12.60	13.7080	0.022	5.47	116.5	127451.	23300.0	637.3	514684.	0.018	1.000	0.023
34	12.60	12.40	14.0830	0.022	5.47	116.5	127451.	23300.0	637.3	528664.	0.018	1.000	0.024
35	12.40	12.20	14.4580	0.023	5.47	116.5	127451.	23300.0	637.3	542644.	0.019	1.000	0.025
36	12.20	12.00	14.8330	0.023	5.47	116.5	127451.	23300.0	637.3	556624.	0.019	1.000	0.025
37	12.00	11.65	15.2080	0.024	5.47	116.5	223039.	40775.0	637.3	581089.	0.020	1.000	0.026
38	11.65	11.30	15.5830	0.024	5.47	116.5	223039.	40775.0	637.3	605554.	0.021	1.000	0.027
39	11.30	10.95	15.9580	0.025	5.47	116.5	223039.	40775.0	637.3	630019.	0.022	1.000	0.028
40	10.95	10.60	16.3330	0.026	5.47	116.5	223039.	40775.0	637.3	654484.	0.023	1.000	0.029
41	10.60	10.36	16.4830	0.011	6.65	224.8	358701.	53940.0	1494.6	686848.	0.010	1.000	0.013
42	10.36	10.12	16.6330	0.011	6.65	224.8	358701.	53940.0	1494.6	719212.	0.011	1.000	0.013
43	10.12	9.88	16.7830	0.011	6.65	224.8	358701.	53940.0	1494.6	751576.	0.011	1.000	0.014
44	9.88	9.64	16.9330	0.011	6.65	224.8	358701.	53940.0	1494.6	783940.	0.012	1.000	0.014
45	9.64	9.40	17.0830	0.011	6.65	224.8	358701.	53940.0	1494.6	816304.	0.012	1.000	0.014
46	9.40	9.16	17.2330	0.012	6.65	224.8	358701.	53940.0	1494.6	848668.	0.013	1.000	0.015
47	9.16	8.92	17.3830	0.012	6.65	224.8	358701.	53940.0	1494.6	881032.	0.013	1.000	0.015
48	8.92	8.68	17.5330	0.012	6.65	224.8	358701.	53940.0	1494.6	913396.	0.014	1.000	0.016
49	8.68	8.44	17.6830	0.012	6.65	224.8	358701.	53940.0	1494.6	945760.	0.014	1.000	0.016
50	8.44	8.20	17.8330	0.012	6.65	224.8	358701.	53940.0	1494.6	978124.	0.015	1.000	0.017
51	8.20	7.90	18.0830	0.012	6.65	224.8	448376.	67425.0	1494.6	1018579.	0.015	1.000	0.017
52	7.90	7.60	18.3330	0.012	6.65	224.8	448376.	67425.0	1494.6	1059034.	0.016	1.000	0.018
53	7.60	7.30	18.5830	0.012	6.65	224.8	448376.	67425.0	1494.6	1099489.	0.016	1.000	0.018
54	7.30	7.00	18.8330	0.013	6.65	224.8	448376.	67425.0	1494.6	1139944.	0.017	1.000	0.019
55	7.00	6.70	19.0830	0.013	6.65	224.8	448376.	67425.0	1494.6	1180399.	0.018	1.000	0.019
56	6.70	6.40	19.3330	0.013	6.65	224.8	448376.	67425.0	1494.6	1220854.	0.018	1.000	0.020
57	6.40	6.02	19.6330	0.017	4.33	260.2	428133.	98876.0	1126.7	1280179.	0.025	1.000	0.028
58	6.02	5.64	19.9330	0.018	4.33	260.2	428133.	98876.0	1126.7	1339505.	0.026	1.000	0.029
59	5.64	5.26	20.2330	0.018	4.33	260.2	428133.	98876.0	1126.7	1398830.	0.028	1.000	0.030
60	5.26	4.88	20.5330	0.018	4.33	260.2	428133.	98876.0	1126.7	1458156.	0.029	1.000	0.031
61	4.88	4.50	20.8330	0.018	4.33	260.2	428133.	98876.0	1126.7	1517482.	0.030	1.000	0.032
62	4.50	4.35	21.5830	0.016	5.70	236.9	202584.	35541.0	1350.6	1538806.	0.025	1.000	0.027
63	4.35	4.20	22.3330	0.017	5.70	236.9	202584.	35541.0	1350.6	1560131.	0.026	1.000	0.028
64	4.20	3.85	23.0830	0.017	5.70	236.9	472695.	82929.0	1350.6	1609888.	0.026	1.000	0.029
65	3.85	3.50	23.8330	0.018	5.70	236.9	472695.	82929.0	1350.6	1659646.	0.027	1.000	0.030

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  66   3.50   3.20   24.0830  0.018   5.70  236.9  405167.   71082.0  1350.6  1702295.   0.028    1.000   0.030
  67   3.20   2.90   24.3330  0.018   5.70  236.9  405167.   71082.0  1350.6  1744944.   0.029    1.000   0.031
  68   2.90   2.60   24.5830  0.018   5.70  236.9  405167.   71082.0  1350.6  1787594.   0.029    1.000   0.032
  69   2.60   2.30   24.8330  0.018   5.70  236.9  405167.   71082.0  1350.6  1830243.   0.030    1.000   0.032
  70   2.30   2.00   25.0830  0.019   5.70  236.9  405167.   71082.0  1350.6  1872892.   0.031    1.000   0.033
  71   2.00   1.70   25.3330  0.019   5.70  236.9  405167.   71082.0  1350.6  1915541.   0.032    1.000   0.034
  72   1.70   1.60   26.0830  0.042   5.70  110.0   62700.   11000.0   627.0  1922141.   0.068    1.000   0.073
  73   1.60   1.50   26.8330  0.043   5.70  110.0   62700.   11000.0   627.0  1928741.   0.068    1.000   0.074
  74   1.50   1.23   27.1330  0.043   5.70  110.0  169290.   29700.0   627.0  1946561.   0.069    1.000   0.075
  75   1.23   0.96   27.4330  0.044   5.70  110.0  169290.   29700.0   627.0  1964381.   0.070    1.000   0.075
  76   0.96   0.69   27.7330  0.044   5.70  110.0  169290.   29700.0   627.0  1982201.   0.070    1.000   0.076
  77   0.69   0.42   28.0330  0.045   5.70  110.0  169290.   29700.0   627.0  2000021.   0.071    1.000   0.077
  78   0.42   0.15   28.3330  0.045   5.70  110.0  169290.   29700.0   627.0  2017841.   0.072    1.000   0.077
  79   0.15   0.00   29.8330  0.048   5.70  110.0   94050.   16500.0   627.0  2027741.   0.072    1.000   0.078
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  1    Headwaters-MR-A                      COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I    CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.               deg C     ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  1  HDWTR    1.11000  30.00    0.00    0.00    0.00   5.00   0.42   0.00   0.42   0.00   0.00   0.10   0.10   0.00   1.00    0.00    0.00
EACH  INCR    0.23233  30.00    0.00    0.00    0.00   5.00   0.05   0.00                0.30   0.00   0.20   0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV    TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.    DIST    DIST          EFF     VELO      TIME                          AREA    AREA     PRISM    VELO            VELO
        km      km      m³/s          m/s     days      m       m       m³       m²       m²       m³      m/s     m²/s     m/s
  1   22.11   21.84    1.34233   0.0   0.01492    0.21    1.71   52.60  24285.42   14202.00   89.95   8521.20   0.002    1.000   0.015
  2   21.84   21.57    1.57467   0.0   0.01751    0.18    1.71   52.60  24285.42   14202.00   89.95  17042.40   0.004    1.000   0.018
  3   21.57   21.30    1.80700   0.0   0.02009    0.16    1.71   52.60  24285.42   14202.00   89.95  25563.60   0.006    1.000   0.020
 TOT                                          0.54              72856.26   42606.00
 AVG                                     0.0173          1.71   52.60                  89.95
 CUM                                          0.54
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da   1/da   1/da   1/da   1/da   1/da    *     *     *    1/da   1/da   1/da     *    1/da     *    **    **    1/da   1/da   1/da
  1  21.840  7.82    0.48   0.06  0.07   0.00   0.01  0.00   0.00  1.63  1.67  1.67   0.06  0.01   0.17  0.00   0.00  0.00  0.07  0.00   0.00   0.00   0.00
  2  21.570  7.78    0.48   0.06  0.07   0.00   0.01  0.00   0.00  1.66  1.69  1.69   0.06  0.01   0.18  0.00   0.00  0.00  0.07  0.00   0.00   0.00   0.00
  3  21.300  7.75    0.48   0.06  0.07   0.00   0.01  0.00   0.00  1.68  1.72  1.72   0.06  0.01   0.18  0.00   0.00  0.00  0.07  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.41   0.04  0.06   0.00   0.01  0.00   0.00  0.98              0.05  0.01   0.10  0.00   0.00  0.00              0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT     mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    g/m³  #/100mL
  1  21.840  28.07  0.00    0.00    0.00   5.06   0.36   0.00   0.36   0.00   0.04   0.08   0.12   0.24   0.05   1.00    0.00      0.    0.00
  2  21.570  28.33  0.00    0.00    0.00   5.11   0.31   0.00   0.31   0.00   0.08   0.07   0.13   0.28   0.05   1.00    0.00      0.    0.00
  3  21.300  28.60  0.00    0.00    0.00   5.13   0.26   0.00   0.26   0.00   0.11   0.06   0.14   0.31   0.05   1.00    0.00      0.    0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  2    MR-B before split of MR/MRWest               COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I    CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
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NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
  4 UPR RCH  1.80700  28.60   0.00    0.00   0.00  5.13  0.26  0.00  0.26  0.00  0.11  0.06  0.14  0.05  1.00    0.00   0.00
EACH INCR    0.62175  30.00   0.00    0.00   0.00  5.00  0.05  0.00             0.30  0.00  0.20  0.00   0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN ENDING    FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST  DIST        EFF   VELO    TIME                        AREA   AREA   PRISM   VELO          VELO
      km    km      m³/s        m/s   days     m     m      m³      m²     m²      m³    m/s    m²/s   m/s
  4  21.30  21.05  2.42875  0.0  0.01092   0.26  4.92  45.20 55596.00 11300.00 222.38 32343.60  0.003   1.000  0.011
  5  21.05  20.80  3.05050  0.0  0.01372   0.21  4.92  45.20 55596.00 11300.00 222.38 39123.60  0.004   1.000  0.014
  6  20.80  20.55  3.67225  0.0  0.01651   0.18  4.92  45.20 55596.00 11300.00 222.38 45903.60  0.005   1.000  0.017
  7  20.55  20.30  4.29400  0.0  0.01931   0.15  4.92  45.20 55596.00 11300.00 222.38 52683.60  0.005   1.000  0.019
 TOT                                 0.80            222384.00  45200.00
 AVG                          0.0145          4.92  45.20                222.38
 CUM                                 1.34
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI  NCM   NCM
NO.   DIST D.O.   RATE DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
         mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  4  21.050 7.68   0.17  0.06 0.03  0.00  0.01 0.00  0.00 2.31 2.33 2.33  0.06 0.00  0.19 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
  5  20.800 7.61   0.17  0.06 0.03  0.00  0.01 0.00  0.00 2.38 2.40 2.40  0.06 0.00  0.20 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
  6  20.550 7.55   0.17  0.06 0.03  0.00  0.01 0.00  0.00 2.46 2.47 2.47  0.06 0.00  0.21 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
  7  20.300 7.48   0.17  0.07 0.03  0.00  0.01 0.00  0.00 2.53 2.55 2.55  0.06 0.00  0.21 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.14  0.04 0.02  0.00  0.01 0.00  0.00 1.30            0.05 0.00  0.10 0.00  0.00 0.00            0.00  0.00  0.00
*  g/m²/d          **  mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO   COLI   NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
  4  21.050 29.10 0.00    0.00    0.00  5.10  0.20  0.00  0.20  0.00  0.16  0.04  0.16  0.36  0.05  1.00   0.00     0.   0.00
  5  20.800 29.60 0.00    0.00    0.00  5.08  0.17  0.00  0.17  0.00  0.18  0.04  0.17  0.38  0.05  1.00   0.00     0.   0.00
  6  20.550 30.10 0.00    0.00    0.00  5.07  0.15  0.00  0.15  0.00  0.20  0.03  0.17  0.40  0.05  1.00   0.00     0.   0.00
  7  20.300 30.60 0.00    0.00    0.00  5.07  0.14  0.00  0.14  0.00  0.21  0.03  0.18  0.42  0.05  1.00   0.00     0.   0.00
FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  3   MR-C/MRWest-D                       COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A   COLI   NCM
NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
  8  UPR RCH  4.29400  30.60   0.00    0.00   0.00  5.07  0.14  0.00  0.14  0.00  0.21  0.03  0.18  0.05  1.00   0.00   0.00
EACH INCR    0.89100  30.00   0.00    0.00   0.00  5.00  0.05  0.00             0.30  0.00  0.20  0.00   0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN ENDING    FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST  DIST        EFF   VELO    TIME                        AREA   AREA   PRISM   VELO          VELO
      km    km      m³/s        m/s   days     m     m      m³      m²     m²      m³    m/s    m²/s   m/s
  8  20.30  20.00  5.18500  0.0  0.03319   0.10  2.48  63.00 46872.00 18900.00 156.24 64023.60  0.009   1.000  0.033
  9  20.00  19.70  6.07600  0.0  0.03889   0.09  2.48  63.00 46872.00 18900.00 156.24 75363.60  0.011   1.000  0.039
 10  19.70  19.40  6.96700  0.0  0.04459   0.08  2.48  63.00 46872.00 18900.00 156.24 86703.60  0.012   1.000  0.045
 11  19.40  19.10  7.85800  0.0  0.05029   0.07  2.48  63.00 46872.00 18900.00 156.24 98043.60  0.014   1.000  0.050
 12  19.10  18.80  8.74900  0.0  0.05600   0.06  2.48  63.00 46872.00 18900.00 156.24 109383.60  0.016   1.000  0.056
 TOT                                 0.40            234360.00  94500.00
 AVG                          0.0431          2.48  63.00                156.24
 CUM                                 1.75
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********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  8  20.000  7.49   0.34  0.06  0.05  0.00  0.01  0.00  0.00  0.64  0.66  0.66  0.06  0.01  0.21  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
  9  19.700  7.49   0.34  0.06  0.05  0.00  0.01  0.00  0.00  0.64  0.65  0.65  0.06  0.01  0.21  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 10  19.400  7.50   0.34  0.06  0.05  0.00  0.01  0.00  0.00  0.64  0.65  0.65  0.06  0.01  0.21  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 11  19.100  7.50   0.34  0.06  0.05  0.00  0.01  0.00  0.00  0.64  0.65  0.65  0.06  0.01  0.21  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 12  18.800  7.51   0.34  0.06  0.05  0.00  0.01  0.00  0.00  0.64  0.65  0.65  0.06  0.01  0.21  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.28  0.04  0.04  0.00  0.01  0.00  0.00  0.33            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
  8  20.000  30.56  0.00    0.00    0.00  5.12  0.12  0.00  0.12  0.00  0.22  0.03  0.18  0.43  0.05  1.00   0.00      0.   0.00
  9  19.700  30.52  0.00    0.00    0.00  5.15  0.11  0.00  0.11  0.00  0.23  0.02  0.18  0.44  0.05  1.00   0.00      0.   0.00
 10  19.400  30.48  0.00    0.00    0.00  5.18  0.10  0.00  0.10  0.00  0.24  0.02  0.19  0.45  0.05  1.00   0.00      0.   0.00
 11  19.100  30.44  0.00    0.00    0.00  5.20  0.09  0.00  0.09  0.00  0.25  0.02  0.19  0.45  0.05  1.00   0.00      0.   0.00
 12  18.800  30.40  0.00    0.00    0.00  5.22  0.09  0.00  0.09  0.00  0.25  0.02  0.19  0.46  0.05  1.00   0.00      0.   0.00
FINAL REPORT            Headwater                          Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  4    MR-E/MRWest-G                                  COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE       FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  13  UPR RCH   8.74900   30.40    0.00    0.00   0.00  5.22  0.09  0.00  0.09  0.00  0.25  0.02  0.19  0.05  1.00    0.00   0.00
EACH  INCR     0.25700   30.00    0.00    0.00   0.00  5.00  0.42  0.00            0.30  0.00  0.20  0.00   0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING      FLOW   PCT   ADVCTV    TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
NO.    DIST    DIST           EFF    VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km      m³/s          m/s    days      m       m       m³        m²       m²       m³     m/s     m²/s     m/s
  13  18.80   18.50   9.00600   0.0  0.02149    0.16    4.05  103.50 125752.51   31050.00  419.18 128013.60   0.007    1.000   0.021
  14  18.50   18.20   9.26300   0.0  0.02210    0.16    4.05  103.50 125752.51   31050.00  419.18 146643.61   0.008    1.000   0.022
  15  18.20   17.90   9.52000   0.0  0.02271    0.15    4.05  103.50 125752.51   31050.00  419.18 165273.61   0.009    1.000   0.023
  16  17.90   17.60   9.77700   0.0  0.02332    0.15    4.05  103.50 125752.51   31050.00  419.18 183903.61   0.010    1.000   0.023
  17  17.60   17.30  10.03400   0.0  0.02394    0.15    4.05  103.50 125752.51   31050.00  419.18 202533.61   0.011    1.000   0.024
  18  17.30   17.00  10.29100   0.0  0.02455    0.14    4.05  103.50 125752.51   31050.00  419.18 221163.61   0.012    1.000   0.025
  19  17.00   16.70  10.54800   0.0  0.02516    0.14    4.05  103.50 125752.51   31050.00  419.18 239793.61   0.013    1.000   0.025
  20  16.70   16.40  10.80500   0.0  0.02578    0.13    4.05  103.50 125752.51   31050.00  419.18 258423.61   0.014    1.000   0.026
  21  16.40   16.10  11.06200   0.0  0.02639    0.13    4.05  103.50 125752.51   31050.00  419.18 277053.62   0.015    1.000   0.026
  22  16.10   15.80  11.31900   0.0  0.02700    0.13    4.05  103.50 125752.51   31050.00  419.18 295683.62   0.016    1.000   0.027
  23  15.80   15.50  11.57600   0.0  0.02762    0.13    4.05  103.50 125752.51   31050.00  419.18 314313.62   0.017    1.000   0.028
  24  15.50   15.20  11.83300   0.0  0.02823    0.12    4.05  103.50 125752.51   31050.00  419.18 332943.62   0.018    1.000   0.028
 TOT                                     1.69            1509030.12  372600.00
 AVG                            0.0247          4.05  103.50                 419.17
 CUM                                     3.44
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  13  18.500  7.51   0.21  0.06  0.03  0.00  0.01  0.00  0.00  1.89  1.90  1.90  0.06  0.00  0.21  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
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14	18.200	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.89	1.90	1.90	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
15	17.900	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.89	1.90	1.90	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
16	17.600	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.89	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
17	17.300	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.89	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
18	17.000	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.89	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
19	16.700	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.89	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
20	16.400	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.89	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
21	16.100	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.90	1.91	1.91	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
22	15.800	7.50	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.90	1.92	1.92	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
23	15.500	7.49	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.90	1.92	1.92	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
24	15.200	7.49	0.21	0.06	0.03	0.00	0.01	0.00	0.00	1.90	1.92	1.92	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
AVG 20 DEG C RATE			0.17	0.04	0.02	0.00	0.01	0.00	0.00	0.98			0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
13	18.500	30.41	0.00	0.00	0.00	5.22	0.10	0.00	0.10	0.00	0.25	0.02	0.19	0.46	0.05	1.00	0.00	0.	0.00
14	18.200	30.42	0.00	0.00	0.00	5.23	0.11	0.00	0.11	0.00	0.25	0.02	0.19	0.46	0.05	1.00	0.00	0.	0.00
15	17.900	30.42	0.00	0.00	0.00	5.24	0.11	0.00	0.11	0.00	0.25	0.02	0.19	0.46	0.05	1.00	0.00	0.	0.00
16	17.600	30.43	0.00	0.00	0.00	5.24	0.12	0.00	0.12	0.00	0.25	0.02	0.19	0.46	0.05	1.00	0.00	0.	0.00
17	17.300	30.44	0.00	0.00	0.00	5.25	0.12	0.00	0.12	0.00	0.24	0.02	0.19	0.46	0.05	1.00	0.00	0.	0.00
18	17.000	30.45	0.00	0.00	0.00	5.25	0.13	0.00	0.13	0.00	0.24	0.02	0.19	0.46	0.05	1.00	0.00	0.	0.00
19	16.700	30.46	0.00	0.00	0.00	5.25	0.14	0.00	0.14	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
20	16.400	30.47	0.00	0.00	0.00	5.26	0.14	0.00	0.14	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
21	16.100	30.48	0.00	0.00	0.00	5.26	0.15	0.00	0.15	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
22	15.800	30.48	0.00	0.00	0.00	5.26	0.15	0.00	0.15	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
23	15.500	30.49	0.00	0.00	0.00	5.26	0.15	0.00	0.15	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
24	15.200	30.50	0.00	0.00	0.00	5.27	0.16	0.00	0.16	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207

REACH NO. 5 MR-H COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
25	UPR RCH	11.83300	30.50	0.00	0.00	0.00	5.27	0.16	0.00	0.16	0.00	0.24	0.03	0.19	0.05	1.00	0.00	0.00
EACH	INCR	0.18750	30.00	0.00	0.00	0.00	5.00	0.42	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT m/s	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
25	15.20	14.90	12.02050	0.0	0.01886	0.18	5.47	116.50	191176.50	34950.00	637.26	353913.62	0.012	1.000	0.019
26	14.90	14.60	12.20800	0.0	0.01916	0.18	5.47	116.50	191176.50	34950.00	637.26	374883.62	0.013	1.000	0.019
27	14.60	14.30	12.39550	0.0	0.01945	0.18	5.47	116.50	191176.50	34950.00	637.26	395853.62	0.014	1.000	0.020
28	14.30	14.00	12.58300	0.0	0.01975	0.18	5.47	116.50	191176.50	34950.00	637.26	416823.62	0.015	1.000	0.020
29	14.00	13.70	12.77050	0.0	0.02004	0.17	5.47	116.50	191176.50	34950.00	637.26	437793.62	0.015	1.000	0.021
30	13.70	13.40	12.95800	0.0	0.02033	0.17	5.47	116.50	191176.50	34950.00	637.26	458763.62	0.016	1.000	0.022
31	13.40	13.10	13.14550	0.0	0.02063	0.17	5.47	116.50	191176.50	34950.00	637.26	479733.62	0.017	1.000	0.022
32	13.10	12.80	13.33300	0.0	0.02092	0.17	5.47	116.50	191176.50	34950.00	637.26	500703.62	0.017	1.000	0.023
TOT					1.40			1529412.00	279600.00						
AVG			0.0199				5.47	116.50			637.25				
CUM					4.83										

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	NH3 RATE	DENIT SRCE	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da	
25	14.900	7.49	0.16	0.06	0.02	0.00	0.01	0.00	0.00	1.91	1.93	1.93	0.06	0.00	0.21	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
26	14.600	7.48	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.91	1.93	1.93	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
27	14.300	7.47	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.92	1.94	1.94	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
28	14.000	7.46	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.93	1.95	1.95	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
29	13.700	7.45	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.94	1.96	1.96	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
30	13.400	7.45	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.94	1.97	1.97	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
31	13.100	7.44	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.95	1.97	1.97	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
32	12.800	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.96	1.98	1.98	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
AVG 20 DEG C RATE			0.13	0.04	0.02	0.00	0.01	0.00	0.00	0.98			0.05	0.00	0.10	0.00	0.00	0.00			0.00	0.00	0.00	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS µg/L	CHL A g/m³	MACRO	COLI #/100mL	NCM
25	14.900	30.56	0.00	0.00	0.00	5.28	0.16	0.00	0.16	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
26	14.600	30.62	0.00	0.00	0.00	5.28	0.16	0.00	0.16	0.00	0.24	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
27	14.300	30.69	0.00	0.00	0.00	5.29	0.16	0.00	0.16	0.00	0.23	0.03	0.19	0.46	0.05	1.00	0.00	0.	0.00
28	14.000	30.75	0.00	0.00	0.00	5.29	0.16	0.00	0.16	0.00	0.23	0.03	0.20	0.46	0.05	1.00	0.00	0.	0.00
29	13.700	30.81	0.00	0.00	0.00	5.30	0.16	0.00	0.16	0.00	0.23	0.03	0.20	0.46	0.05	1.00	0.00	0.	0.00
30	13.400	30.88	0.00	0.00	0.00	5.30	0.17	0.00	0.17	0.00	0.23	0.03	0.20	0.46	0.05	1.00	0.00	0.	0.00
31	13.100	30.94	0.00	0.00	0.00	5.30	0.17	0.00	0.17	0.00	0.23	0.04	0.20	0.46	0.05	1.00	0.00	0.	0.00
32	12.800	31.00	0.00	0.00	0.00	5.31	0.17	0.00	0.17	0.00	0.23	0.04	0.20	0.46	0.05	1.00	0.00	0.	0.00

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 6 MRWest-J COEF-1 Run

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

ELEM NO.	TYPE	FLOW deg C	TEMP ppt	SALN mg/L	CM-I mg/L	CM-II mg/L	DO mg/L	BOD#1 mg/L	BOD#2 mg/L	EBOD#1 mg/L	EBOD#2 mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS µg/L	CHL A #/100mL	COLI	NCM
33	UPR RCH	13.33300	31.00	0.00	0.00	0.00	5.31	0.17	0.00	0.17	0.00	0.23	0.04	0.20	0.05	1.00	0.00	0.00
EACH	INCR	0.37500	30.00	0.00	0.00	0.00	5.00	1.06	0.00		0.30	0.00	0.20	0.00	0.00	0.00		

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

NO.	BEGIN DIST km	ENDING DIST km	FLOW EFF m³/s	PCT VELO m/s	ADVCTV TIME days	TRAVEL m	DEPTH m	WIDTH m	VOLUME m³	SURFACE AREA m²	X-SECT AREA m²	TIDAL PRISM m³	TIDAL VELO m/s	DISPRSN m²/s	MEAN VELO m/s
33	12.80	12.60	13.70800	0.0	0.02151	0.11	5.47	116.50	127451.00	23300.00	637.26	514683.62	0.018	1.000	0.023
34	12.60	12.40	14.08300	0.0	0.02210	0.10	5.47	116.50	127451.00	23300.00	637.26	528663.62	0.018	1.000	0.024
35	12.40	12.20	14.45800	0.0	0.02269	0.10	5.47	116.50	127451.00	23300.00	637.26	542643.62	0.019	1.000	0.025
36	12.20	12.00	14.83300	0.0	0.02328	0.10	5.47	116.50	127451.00	23300.00	637.26	556623.62	0.019	1.000	0.025
TOT					0.41				509804.00	93200.00					
AVG				0.0224		5.47	116.50				637.26				
CUM					5.25										

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	BOD#1 DECAY	BOD#1 SETT	ABOD#1 DECAY	BOD#2 DECAY	BOD#2 SETT	ABOD#2 DECAY	BKGD SOD	FULL SOD	CORR SOD	ORGN DECAY	ORGN SETT	NH3 DECAY	NH3 SRCE	NH3 RATE	DENIT SRCE	PO4 PROD	ALG PROD	MAC DECAY	COLI DECAY	NCM DECAY	NCM SETT
		mg/L	1/da	1/da	1/da	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da	
33	12.600	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.30	1.32	1.32	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	
34	12.400	7.43	0.16	0.07	0.02	0.00	0.01	0.00	0.00	1.30	1.33	1.33	0.06	0.00	0.22	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	

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 35  12.200 7.43   0.16  0.07 0.02  0.00  0.01 0.00  0.00 1.30 1.33 1.33  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 36  12.000 7.43   0.16  0.07 0.02  0.00  0.01 0.00  0.00 1.30 1.33 1.33  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.13  0.04 0.02  0.00  0.01 0.00  0.00 0.65            0.05 0.00  0.10 0.00  0.00 0.00            0.00  0.00  0.00
*  g/m²/d          **  mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO   COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 33  12.600 31.00 0.00    0.00    0.00  5.32  0.19  0.00  0.19  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.   0.00
 34  12.400 31.00 0.00    0.00    0.00  5.32  0.22  0.00  0.22  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.   0.00
 35  12.200 31.00 0.00    0.00    0.00  5.33  0.23  0.00  0.23  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.   0.00
 36  12.000 31.00 0.00    0.00    0.00  5.34  0.25  0.00  0.25  0.00  0.23  0.03  0.20  0.46  0.05  1.00   0.00     0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  7                                       COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A   COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 37  UPR RCH  14.83300  31.00    0.00    0.00    0.00  5.34  0.25  0.00  0.25  0.00  0.23  0.03  0.20  0.05  1.00    0.00   0.00
EACH  INCR     0.37500  30.00    0.00    0.00    0.00  5.00  1.06  0.00            0.30  0.00  0.20  0.00    0.00   0.00
************************************************ HYDRAULIC PARAMETER VALUES ************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST           EFF    VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km      m³/s          m/s    days      m      m      m³       m²      m²       m³     m/s     m²/s     m/s
 37  12.00   11.65  15.20800  0.0  0.02386    0.17   5.47  116.50 223039.25   40775.00  637.26 581088.62  0.020    1.000   0.026
 38  11.65   11.30  15.58300  0.0  0.02445    0.17   5.47  116.50 223039.25   40775.00  637.26 605553.62  0.021    1.000   0.027
 39  11.30   10.95  15.95800  0.0  0.02504    0.16   5.47  116.50 223039.25   40775.00  637.26 630018.62  0.022    1.000   0.028
 40  10.95   10.60  16.33300  0.0  0.02563    0.16   5.47  116.50 223039.25   40775.00  637.26 654483.62  0.023    1.000   0.029
 TOT                                   0.66              892157.00  163100.00
 AVG                          0.0247           5.47  116.50                  637.26
 CUM                                  5.90
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 37  11.650 7.45   0.16  0.07 0.02  0.00  0.01 0.00  0.00 1.29 1.32 1.32  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 38  11.300 7.46   0.16  0.07 0.02  0.00  0.01 0.00  0.00 1.28 1.32 1.32  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 39  10.950 7.48   0.16  0.07 0.02  0.00  0.01 0.00  0.00 1.27 1.31 1.31  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 40  10.600 7.49   0.16  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.21 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.13  0.04 0.02  0.00  0.01 0.00  0.00 0.65            0.05 0.00  0.10 0.00  0.00 0.00            0.00  0.00  0.00
*  g/m²/d          **  mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO   COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 37  11.650 30.88 0.00    0.00    0.00  5.36  0.27  0.00  0.27  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.   0.00
 38  11.300 30.75 0.00    0.00    0.00  5.37  0.28  0.00  0.28  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.   0.00
 39  10.950 30.62 0.00    0.00    0.00  5.39  0.30  0.00  0.30  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.   0.00
 40  10.600 30.50 0.00    0.00    0.00  5.41  0.31  0.00  0.31  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  8    MREast-(L)/MRWest-(M)/MR-(N)                COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A   COLI    NCM
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NO.                  deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 41  UPR RCH  16.33300  30.50    0.00    0.00    0.00  5.41  0.31  0.00  0.31  0.00  0.23  0.04  0.20  0.05  1.00    0.00    0.00
EACH  INCR     0.15000  30.00    0.00    0.00    0.00  5.00  1.06  0.00              0.30  0.00  0.20  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km      m³/s          m/s    days     m      m      m³       m²     m²      m³     m/s    m²/s    m/s
 41  10.60  10.36  16.48300  0.0  0.01103    0.25   6.65  224.75 358701.00  53940.00 1494.59 686847.62  0.010    1.000  0.013
 42  10.36  10.12  16.63300  0.0  0.01113    0.25   6.65  224.75 358701.00  53940.00 1494.59 719211.62  0.011    1.000  0.013
 43  10.12   9.88  16.78300  0.0  0.01123    0.25   6.65  224.75 358701.00  53940.00 1494.59 751575.62  0.011    1.000  0.014
 44   9.88   9.64  16.93300  0.0  0.01133    0.25   6.65  224.75 358701.00  53940.00 1494.59 783939.62  0.012    1.000  0.014
 45   9.64   9.40  17.08300  0.0  0.01143    0.24   6.65  224.75 358701.00  53940.00 1494.59 816303.62  0.012    1.000  0.014
 46   9.40   9.16  17.23300  0.0  0.01153    0.24   6.65  224.75 358701.00  53940.00 1494.59 848667.62  0.013    1.000  0.015
 47   9.16   8.92  17.38300  0.0  0.01163    0.24   6.65  224.75 358701.00  53940.00 1494.59 881031.62  0.013    1.000  0.015
 48   8.92   8.68  17.53300  0.0  0.01173    0.24   6.65  224.75 358701.00  53940.00 1494.59 913395.62  0.014    1.000  0.016
 49   8.68   8.44  17.68299  0.0  0.01183    0.23   6.65  224.75 358701.00  53940.00 1494.59 945759.62  0.014    1.000  0.016
 50   8.44   8.20  17.83299  0.0  0.01193    0.23   6.65  224.75 358701.00  53940.00 1494.59 978123.62  0.015    1.000  0.017
 TOT                                  2.42              3587010.00  539400.00
 AVG                          0.0115          6.65  224.75                1494.59
 CUM                                  8.32
************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN  ORGN   NH3   NH3  DENIT   PO4   ALG   MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da  1/da  1/da   1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da     *    1/da    *    **    **   1/da   1/da   1/da
 41  10.360  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 42  10.120  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 43   9.880  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 44   9.640  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 45   9.400  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 46   9.160  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 47   8.920  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 48   8.680  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 49   8.440  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 50   8.200  7.49   0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.11   0.04  0.02   0.00   0.01  0.00   0.00  0.65              0.05  0.00   0.10  0.00   0.00  0.00              0.00   0.00   0.00
*  g/m²/d          **   mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING   TEMP  SALN    CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C  PPT     mg/L     mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
 41  10.360  30.50  0.00     0.00     0.00   5.44   0.31   0.00   0.31   0.00   0.22   0.04   0.20   0.46   0.05   1.00   0.00      0.   0.00
 42  10.120  30.50  0.00     0.00     0.00   5.46   0.31   0.00   0.31   0.00   0.22   0.04   0.20   0.46   0.05   1.00   0.00      0.   0.00
 43   9.880  30.50  0.00     0.00     0.00   5.49   0.31   0.00   0.31   0.00   0.22   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
 44   9.640  30.50  0.00     0.00     0.00   5.51   0.31   0.00   0.31   0.00   0.21   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
 45   9.400  30.50  0.00     0.00     0.00   5.54   0.31   0.00   0.31   0.00   0.21   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
 46   9.160  30.50  0.00     0.00     0.00   5.56   0.31   0.00   0.31   0.00   0.21   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
 47   8.920  30.50  0.00     0.00     0.00   5.58   0.31   0.00   0.31   0.00   0.21   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
 48   8.680  30.50  0.00     0.00     0.00   5.60   0.31   0.00   0.31   0.00   0.20   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
 49   8.440  30.50  0.00     0.00     0.00   5.62   0.31   0.00   0.31   0.00   0.20   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
 50   8.200  30.50  0.00     0.00     0.00   5.64   0.31   0.00   0.31   0.00   0.20   0.04   0.21   0.46   0.05   1.00   0.00      0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
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REACH NO.  9                                        COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 51  UPR RCH  17.83299  30.50    0.00    0.00    0.00  5.64  0.31  0.00  0.31  0.00  0.20  0.04  0.21  0.05  1.00    0.00    0.00
EACH  INCR     0.25000  30.00    0.00    0.00    0.00  5.00  1.06  0.00              0.30  0.00  0.20  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km     km      m³/s          m/s    days      m      m      m³       m²      m²      m³     m/s     m²/s     m/s
  51   8.20   7.90   18.08299   0.0  0.01210    0.29   6.65  224.75 448376.25   67425.00 1494.591018578.62   0.015    1.000   0.017
  52   7.90   7.60   18.33299   0.0  0.01227    0.28   6.65  224.75 448376.25   67425.00 1494.591059033.62   0.016    1.000   0.018
  53   7.60   7.30   18.58299   0.0  0.01243    0.28   6.65  224.75 448376.25   67425.00 1494.591099488.62   0.016    1.000   0.018
  54   7.30   7.00   18.83299   0.0  0.01260    0.28   6.65  224.75 448376.25   67425.00 1494.591139943.62   0.017    1.000   0.019
  55   7.00   6.70   19.08299   0.0  0.01277    0.27   6.65  224.75 448376.25   67425.00 1494.591180398.62   0.018    1.000   0.019
  56   6.70   6.40   19.33299   0.0  0.01294    0.27   6.65  224.75 448376.25   67425.00 1494.591220853.62   0.018    1.000   0.020
 TOT                                   1.67              2690257.50  404550.00
 AVG                            0.0125          6.65  224.75                1494.59
 CUM                                   9.99
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC  COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
           mg/L    1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *    1/da  1/da   1/da     *    1/da     *    **    **    1/da   1/da   1/da
 51   7.900  7.49    0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 52   7.600  7.49    0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 53   7.300  7.49    0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 54   7.000  7.49    0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 55   6.700  7.49    0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 56   6.400  7.49    0.13   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE     0.11   0.04  0.02   0.00   0.01  0.00   0.00  0.65              0.05  0.00   0.10  0.00   0.00  0.00              0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L     mg/L  mg/L   mg/L   mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
 51   7.900  30.50  0.00    0.00    0.00  5.66  0.31  0.00  0.31  0.00  0.20  0.04  0.21  0.46  0.05  1.00    0.00      0.   0.00
 52   7.600  30.50  0.00    0.00    0.00  5.68  0.32  0.00  0.32  0.00  0.20  0.04  0.22  0.46  0.05  1.00    0.00      0.   0.00
 53   7.300  30.50  0.00    0.00    0.00  5.69  0.32  0.00  0.32  0.00  0.19  0.04  0.22  0.46  0.05  1.00    0.00      0.   0.00
 54   7.000  30.50  0.00    0.00    0.00  5.71  0.32  0.00  0.32  0.00  0.19  0.04  0.22  0.45  0.05  1.00    0.00      0.   0.00
 55   6.700  30.50  0.00    0.00    0.00  5.72  0.32  0.00  0.32  0.00  0.19  0.04  0.22  0.45  0.05  1.00    0.00      0.   0.00
 56   6.400  30.50  0.00    0.00    0.00  5.74  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.45  0.05  1.00    0.00      0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 10    MRWest-O                                 COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                 deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 57  UPR RCH  19.33299  30.50    0.00    0.00    0.00  5.74  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.05  1.00    0.00    0.00
EACH  INCR     0.30000  30.00    0.00    0.00    0.00  5.00  1.06  0.00              0.30  0.00  0.20  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
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      km     km      m³/s          m/s    days      m      m      m³       m²      m²       m³    m/s     m²/s    m/s
 57   6.40   6.02   19.63299   0.0   0.01743    0.25   4.33  260.20 428133.09   98876.01 1126.671280179.25   0.025    1.000   0.028
 58   6.02   5.64   19.93299   0.0   0.01769    0.25   4.33  260.20 428133.09   98876.01 1126.671339504.88   0.026    1.000   0.029
 59   5.64   5.26   20.23299   0.0   0.01796    0.24   4.33  260.20 428133.09   98876.01 1126.671398830.50   0.028    1.000   0.030
 60   5.26   4.88   20.53299   0.0   0.01822    0.24   4.33  260.20 428133.09   98876.01 1126.671458156.12   0.029    1.000   0.031
 61   4.88   4.50   20.83299   0.0   0.01849    0.24   4.33  260.20 428133.09   98876.01 1126.671517481.75   0.030    1.000   0.032
 TOT                                   1.23            2140665.50  494380.03
 AVG                            0.0180          4.33  260.20                1126.67
 CUM                                   11.21
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 57   6.020  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 58   5.640  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 59   5.260  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 60   4.880  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 61   4.500  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.16  0.04  0.02  0.00  0.01  0.00  0.00  0.65            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 57   6.020  30.50  0.00    0.00    0.00  5.75  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.45  0.05  1.00  0.00     0.   0.00
 58   5.640  30.50  0.00    0.00    0.00  5.76  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.45  0.05  1.00  0.00     0.   0.00
 59   5.260  30.50  0.00    0.00    0.00  5.78  0.34  0.00  0.34  0.00  0.18  0.04  0.22  0.45  0.05  1.00  0.00     0.   0.00
 60   4.880  30.50  0.00    0.00    0.00  5.79  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.45  0.05  1.00  0.00     0.   0.00
 61   4.500  30.50  0.00    0.00    0.00  5.80  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.45  0.05  1.00  0.00     0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 11                                   COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                   deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 62  UPR RCH  20.83299  30.50    0.00    0.00    0.00  5.80  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.05  1.00    0.00    0.00
EACH  INCR     0.75000  30.00    0.00    0.00    0.00  5.00  0.63  0.00            0.30  0.00  0.20  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT  ADVCTV   TRAVEL   DEPTH   WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF    VELO     TIME                     AREA    AREA    PRISM    VELO            VELO
      km     km      m³/s          m/s    days      m      m      m³       m²      m²       m³    m/s     m²/s    m/s
 62   4.50   4.35   21.58299   0.0   0.01598    0.11   5.70  236.94 202583.70   35541.00 1350.561538806.38   0.025    1.000   0.027
 63   4.35   4.20   22.33299   0.0   0.01654    0.10   5.70  236.94 202583.70   35541.00 1350.561560131.00   0.026    1.000   0.028
 TOT                                   0.21            405167.41   71082.00
 AVG                            0.0163          5.70  236.94                1350.56
 CUM                                   11.43
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 62   4.350  7.49   0.15  0.06  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 63   4.200  7.49   0.15  0.06  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
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AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.03          0.05  0.00  0.10  0.00  0.00  0.00          0.00  0.00  0.00
*  g/m²/d        **  mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING  TEMP  SALN   CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO   COLI   NCM
NO.   DIST  DEG C  PPT   mg/L   mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  g/m³  #/100mL
 62   4.350  30.50  0.00   0.00   0.00  5.80  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.45  0.05  1.00  0.00     0.  0.00
 63   4.200  30.50  0.00   0.00   0.00  5.81  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.46  0.05  1.00  0.00     0.  0.00
FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 12                                       COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE     FLOW   TEMP   SALN   CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A   COLI   NCM
NO.            deg C   ppt   mg/L   mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 64  UPR RCH  22.33299  30.50   0.00   0.00   0.00  5.81  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.05  1.00   0.00   0.00
EACH  INCR    0.75000  30.00   0.00   0.00   0.00  5.00  0.63  0.00          0.30  0.00  0.20  0.00   0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING    FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST      EFF   VELO   TIME                          AREA   AREA   PRISM   VELO          VELO
      km     km      m³/s      m/s   days    m     m     m³      m²     m²     m³    m/s    m²/s    m/s
 64   4.20   3.85  23.08299  0.0  0.01709   0.24  5.70  236.94 472695.28  82929.00 1350.561609888.38  0.026   1.000  0.029
 65   3.85   3.50  23.83299  0.0  0.01765   0.23  5.70  236.94 472695.28  82929.00 1350.561659645.75  0.027   1.000  0.030
TOT                                  0.47            945390.56  165858.00
AVG                            0.0174          5.70  236.94                1350.56
CUM                                 11.89
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN   NH3   NH3  DENIT  PO4   ALG   MAC   COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
        mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 64   3.850  7.48   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 65   3.500  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.03          0.05  0.00  0.10  0.00  0.00  0.00          0.00  0.00  0.00
*  g/m²/d        **  mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING  TEMP  SALN   CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO   COLI   NCM
NO.   DIST  DEG C  PPT   mg/L   mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  g/m³  #/100mL
 64   3.850  30.60  0.00   0.00   0.00  5.85  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.46  0.05  1.00  0.00     0.  0.00
 65   3.500  30.70  0.00   0.00   0.00  5.89  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.46  0.05  1.00  0.00     0.  0.00
FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 13   MRWest-P                            COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE     FLOW   TEMP   SALN   CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A   COLI   NCM
NO.            deg C   ppt   mg/L   mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 66  UPR RCH  23.83299  30.70   0.00   0.00   0.00  5.89  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.05  1.00   0.00   0.00
EACH  INCR    0.25000  30.00   0.00   0.00   0.00  5.00  0.63  0.00          0.30  0.00  0.20  0.00   0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING    FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST      EFF   VELO   TIME                          AREA   AREA   PRISM   VELO          VELO
      km     km      m³/s      m/s   days    m     m     m³      m²     m²     m³    m/s    m²/s    m/s
 66   3.50   3.20  24.08299  0.0  0.01783   0.19  5.70  236.94 405167.41  71082.00 1350.561702295.00  0.028   1.000  0.030
 67   3.20   2.90  24.33299  0.0  0.01802   0.19  5.70  236.94 405167.41  71082.00 1350.561744944.25  0.029   1.000  0.031
 68   2.90   2.60  24.58299  0.0  0.01820   0.19  5.70  236.94 405167.41  71082.00 1350.561787593.50  0.029   1.000  0.032
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 69   2.60   2.30  24.83299  0.0  0.01839    0.19    5.70  236.94 405167.41   71082.00 1350.561830242.75  0.030    1.000  0.032
 70   2.30   2.00  25.08299  0.0  0.01857    0.19    5.70  236.94 405167.41   71082.00 1350.561872892.00  0.031    1.000  0.033
 71   2.00   1.70  25.33299  0.0  0.01876    0.19    5.70  236.94 405167.41   71082.00 1350.561915541.25  0.032    1.000  0.034
 TOT                                        1.14            2431004.50  426492.00
 AVG                              0.0183          5.70  236.94                 1350.56
 CUM                                        13.03
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
 ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT   PO4   ALG   MAC   COLI   NCM   NCM
 NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da  1/da   1/da   1/da   1/da  1/da   1/da    *    *    *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
 66   3.200  7.47    0.15   0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 67   2.900  7.47    0.15   0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 68   2.600  7.47    0.15   0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 69   2.300  7.47    0.15   0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 70   2.000  7.47    0.15   0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 71   1.700  7.47    0.15   0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.12   0.04  0.02   0.00   0.01  0.00   0.00  0.03              0.05  0.00   0.10  0.00   0.00  0.00              0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
 ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
 NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    g/m³  #/100mL
 66   3.200  30.70  0.00    0.00    0.00  5.93  0.35   0.00  0.35   0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00      0.   0.00
 67   2.900  30.70  0.00    0.00    0.00  5.97  0.35   0.00  0.35   0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00      0.   0.00
 68   2.600  30.70  0.00    0.00    0.00  6.01  0.35   0.00  0.35   0.00  0.19  0.04  0.23  0.45  0.05  1.00   0.00      0.   0.00
 69   2.300  30.70  0.00    0.00    0.00  6.05  0.34   0.00  0.34   0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00      0.   0.00
 70   2.000  30.70  0.00    0.00    0.00  6.08  0.34   0.00  0.34   0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00      0.   0.00
 71   1.700  30.70  0.00    0.00    0.00  6.11  0.34   0.00  0.34   0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00      0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 14                                   COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  72  UPR RCH  25.33299  30.70    0.00    0.00    0.00  6.11  0.34   0.00  0.34   0.00  0.18  0.04  0.23  0.05  1.00    0.00    0.00
 EACH  INCR     0.75000  30.00    0.00    0.00    0.00  5.00  0.63   0.00              0.30  0.00  0.20  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
 ELEM   BEGIN  ENDING     FLOW   PCT  ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.    DIST    DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
        km      km      m³/s          m/s    days      m       m       m³       m²      m²       m³     m/s     m²/s     m/s
  72   1.70    1.60   26.08299  0.0  0.04160    0.03    5.70  110.00  62700.00   11000.00  627.001922141.25  0.068    1.000  0.073
  73   1.60    1.50   26.83299  0.0  0.04280    0.03    5.70  110.00  62700.00   11000.00  627.001928741.25  0.068    1.000  0.074
 TOT                                        0.05            125400.00   22000.00
 AVG                              0.0422          5.70  110.00                  627.00
 CUM                                        13.09
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
 ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT   PO4   ALG   MAC   COLI   NCM   NCM
 NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da  1/da   1/da   1/da   1/da  1/da   1/da    *    *    *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
 72   1.600  7.48    0.15   0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 73   1.500  7.49    0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
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AVG 20 DEG C RATE    0.12   0.04  0.02   0.00   0.01  0.00   0.00  0.03            0.05  0.00   0.10  0.00   0.00  0.00            0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
 72   1.600  30.60  0.00    0.00    0.00  6.08   0.35   0.00   0.35   0.00   0.19   0.04   0.23   0.46   0.05   1.00   0.00      0.   0.00
 73   1.500  30.50  0.00    0.00    0.00  6.07   0.35   0.00   0.35   0.00   0.19   0.04   0.23   0.46   0.05   1.00   0.00      0.   0.00
FINAL REPORT            Headwater                          Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 15    MRWest-Q                                   COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                  deg C     ppt    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
 74  UPR RCH  26.83299  30.50    0.00    0.00    0.00  6.07   0.35   0.00   0.35   0.00   0.19   0.04   0.23   0.05   1.00    0.00   0.00
EACH  INCR     0.30000  30.00    0.00    0.00    0.00  5.00   0.85   0.00            0.30   0.00   0.20   0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV    TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST      EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km     km      m³/s      m/s    days      m      m      m³      m²      m²      m³     m/s     m²/s     m/s
 74    1.50   1.23   27.13299   0.0   0.04327    0.07   5.70  110.00 169290.00  29700.00  627.001946561.25   0.069    1.000   0.075
 75    1.23   0.96   27.43299   0.0   0.04375    0.07   5.70  110.00 169290.00  29700.00  627.001964381.25   0.070    1.000   0.075
 76    0.96   0.69   27.73299   0.0   0.04423    0.07   5.70  110.00 169290.00  29700.00  627.001982201.25   0.070    1.000   0.076
 77    0.69   0.42   28.03299   0.0   0.04471    0.07   5.70  110.00 169290.00  29700.00  627.002000021.25   0.071    1.000   0.077
 78    0.42   0.15   28.33299   0.0   0.04519    0.07   5.70  110.00 169290.00  29700.00  627.002017841.25   0.072    1.000   0.077
 TOT                                   0.35              846450.00  148500.00
 AVG                          0.0442          5.70  110.00                627.00
 CUM                          13.44
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
 74   1.230  7.49   0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 75   0.960  7.49   0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 76   0.690  7.49   0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 77   0.420  7.49   0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.11  0.11   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 78   0.150  7.49   0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.12  0.12   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.12   0.04  0.02   0.00   0.01  0.00   0.00  0.03            0.05  0.00   0.10  0.00   0.00  0.00            0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
 74   1.230  30.50  0.00    0.00    0.00  6.07   0.36   0.00   0.36   0.00   0.19   0.04   0.23   0.46   0.05   1.00   0.00      0.   0.00
 75   0.960  30.50  0.00    0.00    0.00  6.08   0.36   0.00   0.36   0.00   0.19   0.04   0.23   0.46   0.05   1.00   0.00      0.   0.00
 76   0.690  30.50  0.00    0.00    0.00  6.08   0.36   0.00   0.36   0.00   0.19   0.04   0.23   0.46   0.05   1.00   0.00      0.   0.00
 77   0.420  30.50  0.00    0.00    0.00  6.09   0.37   0.00   0.37   0.00   0.19   0.04   0.23   0.46   0.05   1.00   0.00      0.   0.00
 78   0.150  30.50  0.00    0.00    0.00  6.07   0.45   0.00   0.45   0.00   0.19   0.04   0.22   0.45   0.05   1.00   0.00      0.   0.00
FINAL REPORT            Headwater                          Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 16                                               COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                  deg C     ppt    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
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 79  UPR RCH  28.33299   30.50     0.00     0.00     0.00  6.07   0.45   0.00   0.45   0.00   0.19   0.04   0.22   0.05   1.00     0.00    0.00
EACH  INCR     1.50000  30.00     0.00     0.00     0.00  5.00   0.85   0.00                0.30   0.00   0.20   0.00     0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING      FLOW   PCT   ADVCTV    TRAVEL   DEPTH  WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.    DIST    DIST          EFF     VELO      TIME                          AREA    AREA     PRISM    VELO            VELO
        km      km       m³/s          m/s     days      m       m       m³        m²       m²        m³     m/s     m²/s     m/s
 79    0.15    0.00   29.83299   0.0   0.04758     0.04    5.70  110.00  94050.00   16500.00  627.002027741.25   0.072     1.000   0.078
TOT                                          0.04                 94050.00   16500.00
AVG                                     0.0476            5.70  110.00                627.00
CUM                                          13.48
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.    RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
           mg/L    1/da   1/da   1/da   1/da   1/da   1/da   1/da    *     *     *   1/da   1/da   1/da     *    1/da     *    **    **   1/da   1/da   1/da
 79    0.000  8.08    0.14   0.05  0.02   0.00   0.01  0.00   0.00  0.04  0.18  0.18   0.06  0.00   0.15  0.00   0.00  0.00  0.00  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE     0.12   0.04  0.02   0.00   0.01  0.00   0.00  0.03              0.05  0.00   0.10  0.00   0.00  0.00              0.00   0.00   0.00
*   g/m²/d            **   mg/L/day
*************************************************** WATER QUALITY CONSTITUENT VALUES ***************************************************
ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO     COLI     NCM
NO.    DIST  DEG C   PPT     mg/L     mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L    µg/L    g/m³   #/100mL
 79    0.000  26.25  0.00     0.00     0.00   5.82   1.18   0.00   1.18   0.00   0.15   0.03   0.18   0.36   0.00   0.00   0.00      0.    0.00
STREAM SUMMARY                                    Middle/Middle West Rivers DO Modeling - 090207
        Headwater                                 COEF-1 Run
TRAVEL TIME      =         13.48 DAYS
MAXIMUM EFFLUENT =          0.00 PERCENT
FLOW            =   1.34233 TO   29.83299   m³/s
DISPERSION      =   1.0000  TO    1.0000    m²/s
VELOCITY        =   0.01092 TO    0.05600   m/s
DEPTH           =   1.71    TO    6.65      m
WIDTH           =  45.20    TO  260.20      m
BOD DECAY       =    0.05   TO    0.07      per day
NH3 DECAY       =    0.15   TO    0.22      per day
SOD             =    0.10   TO    2.55      g/m²/d
NH3 SOURCE      =    0.00   TO    0.00      g/m²/d
REAERATION      =    0.13   TO    0.48      per day
BOD SETTLING    =    0.02   TO    0.07      per day
ORG-N DECAY     =    0.06   TO    0.06      per day
ORG-N SETTLING  =    0.00   TO    0.01      per day
TEMPERATURE     =   26.25   TO   31.00      deg C
DISSOLVED OXYGEN =   5.06   TO    6.11      mg/L
Middle/Middle West Rivers DO Modeling - 090207
COEF-1 Run
REACH SUMMARY REPORT FOR          Headwater
RCH REACH NAME                    BEGIN    ENDING    REACH   TRAVEL   FLOW AT    AVERAGE     AVG     AVG   FLOW AT    AVERAGE     AVG     AVG
NO.                                DIST      DIST   LENGTH     TIME      EOR       VELO   DEPTH   WIDTH      EOR       VELO   DEPTH   WIDTH
                                   km        km       km     days     m3/s       m/s       m       m      cfs       fps      ft      ft
 1 Headwaters-MR-A                 22.11     21.30    0.81     0.54   1.80700   0.01725   1.710   52.60   63.805     0.057   5.611  172.58
 2 MR-B before split of MR/MRWest  21.30     20.30    1.00     0.80   4.29400   0.01445   4.920   45.20  151.621     0.047  16.143  148.30
 3 MR-C/MRWest-D                   20.30     18.80    1.50     0.40   8.74900   0.04310   2.480   63.00  308.927     0.141   8.137  206.70
 4 MR-E/MRWest-G                   18.80     15.20    3.60     1.69  11.83300   0.02468   4.050  103.50  417.823     0.081  13.288  339.58
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5	MR-H	15.20	12.80	2.40	1.40	13.33300	0.01987	5.470	116.50	470.788	0.065	17.947	382.24	
6	MRWest-J	12.80	12.00	0.80	0.41	14.83300	0.02237	5.470	116.50	523.753	0.073	17.947	382.24	
7		12.00	10.60	1.40	0.66	16.33300	0.02473	5.470	116.50	576.718	0.081	17.947	382.24	
8	MREast-(L)/MRWest-(M)/MR-(N)	10.60	8.20	2.40	2.42	17.83299	0.01147	6.650	224.75	629.683	0.038	21.819	737.40	
9		8.20	6.40	1.80	1.67	19.33299	0.01251	6.650	224.75	682.648	0.041	21.819	737.40	
10	MRWest-O	6.40	4.50	1.90	1.23	20.83299	0.01795	4.330	260.20	735.613	0.059	14.207	853.72	
11		4.50	4.20	0.30	0.21	22.33299	0.01625	5.700	236.94	788.578	0.053	18.702	777.40	
12		4.20	3.50	0.70	0.47	23.83299	0.01736	5.700	236.94	841.543	0.057	18.702	777.40	
13	MRWest-P	3.50	1.70	1.80	1.14	25.33299	0.01829	5.700	236.94	894.508	0.060	18.702	777.40	
14		1.70	1.50	0.20	0.05	26.83299	0.04219	5.700	110.00	947.473	0.138	18.702	360.91	
15	MRWest-Q	1.50	0.15	1.35	0.35	28.33299	0.04422	5.700	110.00	1000.438	0.145	18.702	360.91	
16		0.15	0.00	0.15	0.04	29.83299	0.04758	5.700	110.00	1053.403	0.156	18.702	360.91	

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	NONP OUT	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N DECA	ORG-N BKGD	NCM BOD1	SOD ALG	SOD NCM	SOD PHOT	SOD RESP	ALG PHOT	ALG OUT	MAC IN	TOT	TOT
1	480.	0.	-587.	-4.	0.	1.	100.	0.	0.	0.	0.	32.	-1.	0.	0.	0.	-23.	-1.	0.	0.	2.	0.	0.	-614.9	614.9	0.00
2	587.	0.	-695.	-1.	0.	1.	100.	0.	0.	0.	0.	31.	0.	0.	0.	0.	-24.	-1.	0.	0.	2.	0.	0.	-720.9	720.9	0.00
3	695.	0.	-801.	-1.	0.	-1.	100.	0.	0.	0.	0.	31.	0.	0.	0.	0.	-24.	0.	0.	0.	2.	0.	0.	-827.7	827.7	0.00
4	801.	0.	-1071.	1.	0.	-1.	269.	0.	0.	0.	0.	24.	-1.	0.	0.	0.	-26.	0.	0.	0.	4.	0.	0.	-1099.3	1099.3	0.00
5	1071.	0.	-1340.	1.	0.	-1.	269.	0.	0.	0.	0.	24.	-1.	0.	0.	0.	-27.	0.	0.	0.	4.	0.	0.	-1369.0	1369.0	0.00
6	1340.	0.	-1609.	1.	0.	0.	269.	0.	0.	0.	0.	24.	-1.	0.	0.	0.	-28.	0.	0.	0.	4.	0.	0.	-1637.9	1637.9	0.00
7	1609.	0.	-1879.	0.	0.	3.	269.	0.	0.	0.	0.	23.	0.	0.	0.	0.	-29.	0.	0.	0.	5.	0.	0.	-1908.7	1908.7	0.00
8	1879.	0.	-2292.	-3.	0.	2.	385.	0.	0.	0.	0.	38.	0.	0.	0.	0.	-12.	0.	0.	0.	4.	0.	0.	-2307.8	2307.8	0.00
9	2292.	0.	-2705.	-2.	0.	1.	385.	0.	0.	0.	0.	38.	0.	0.	0.	0.	-12.	0.	0.	0.	4.	0.	0.	-2719.5	2719.5	0.00
10	2705.	0.	-3118.	-1.	0.	1.	385.	0.	0.	0.	0.	37.	0.	0.	0.	0.	-12.	0.	0.	0.	4.	0.	0.	-3132.0	3132.0	0.00
11	3118.	0.	-3531.	-1.	0.	1.	385.	0.	0.	0.	0.	37.	0.	0.	0.	0.	-12.	0.	0.	0.	4.	0.	0.	-3544.5	3544.5	0.00
12	3531.	0.	-3944.	-1.	0.	1.	385.	0.	0.	0.	0.	37.	0.	0.	0.	0.	-12.	0.	0.	0.	4.	0.	0.	-3957.0	3957.0	0.00
13	3944.	0.	-4065.	-1.	0.	1.	111.	0.	0.	0.	0.	60.	-1.	0.	0.	0.	-59.	0.	0.	0.	10.	0.	0.	-4125.7	4125.7	0.00
14	4065.	0.	-4186.	-1.	0.	1.	111.	0.	0.	0.	0.	60.	-1.	0.	0.	0.	-59.	0.	0.	0.	10.	0.	0.	-4247.0	4247.0	0.00
15	4186.	0.	-4307.	-1.	0.	1.	111.	0.	0.	0.	0.	60.	-1.	0.	0.	0.	-59.	0.	0.	0.	10.	0.	0.	-4367.8	4367.8	0.00
16	4307.	0.	-4428.	-1.	0.	1.	111.	0.	0.	0.	0.	60.	-1.	0.	0.	0.	-59.	0.	0.	0.	10.	0.	0.	-4488.4	4488.4	0.00
17	4428.	0.	-4548.	-1.	0.	0.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	0.	0.	0.	10.	0.	0.	-4608.7	4608.7	0.00
18	4548.	0.	-4668.	0.	0.	0.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	-1.	0.	0.	10.	0.	0.	-4728.9	4728.9	0.00
19	4668.	0.	-4788.	0.	0.	0.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	-1.	0.	0.	10.	0.	0.	-4848.8	4848.8	0.00
20	4788.	0.	-4908.	0.	0.	0.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	-1.	0.	0.	10.	0.	0.	-4968.5	4968.5	0.00
21	4908.	0.	-5027.	0.	0.	0.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	-1.	0.	0.	10.	0.	0.	-5088.1	5088.1	0.00
22	5027.	0.	-5146.	0.	0.	0.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	-1.	0.	0.	10.	0.	0.	-5207.5	5207.5	0.00
23	5146.	0.	-5266.	0.	0.	0.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	-1.	0.	0.	10.	0.	0.	-5326.8	5326.8	0.00
24	5266.	0.	-5386.	0.	0.	1.	111.	0.	0.	0.	0.	59.	-1.	0.	0.	0.	-59.	-1.	0.	0.	10.	0.	0.	-5446.8	5446.8	0.00
25	5386.	0.	-5479.	-1.	0.	1.	81.	0.	0.	0.	0.	66.	-2.	0.	0.	0.	-67.	-1.	0.	0.	16.	0.	0.	-5549.0	5549.0	0.00
26	5479.	0.	-5571.	-1.	0.	1.	81.	0.	0.	0.	0.	65.	-2.	0.	0.	0.	-67.	-1.	0.	0.	16.	0.	0.	-5641.5	5641.5	0.00
27	5571.	0.	-5662.	-1.	0.	1.	81.	0.	0.	0.	0.	65.	-2.	0.	0.	0.	-67.	-1.	0.	0.	16.	0.	0.	-5733.3	5733.3	0.00
28	5662.	0.	-5753.	-1.	0.	1.	81.	0.	0.	0.	0.	65.	-2.	0.	0.	0.	-67.	-1.	0.	0.	16.	0.	0.	-5824.5	5824.5	0.00
29	5753.	0.	-5844.	-1.	0.	1.	81.	0.	0.	0.	0.	64.	-2.	0.	0.	0.	-68.	-1.	0.	0.	16.	0.	0.	-5915.2	5915.2	0.00
30	5844.	0.	-5934.	-1.	0.	1.	81.	0.	0.	0.	0.	64.	-2.	0.	0.	0.	-68.	-1.	0.	0.	16.	0.	0.	-6005.3	6005.3	0.00
31	5934.	0.	-6024.	-1.	0.	1.	81.	0.	0.	0.	0.	64.	-2.	0.	0.	0.	-68.	-1.	0.	0.	16.	0.	0.	-6095.2	6095.2	0.00
32	6024.	0.	-6114.	-1.	0.	2.	81.	0.	0.	0.	0.	64.	-2.	0.	0.	0.	-68.	-1.	0.	0.	16.	0.	0.	-6185.9	6185.9	0.00
33	6114.	0.	-6296.	-2.	0.	2.	162.	0.	0.	0.	0.	42.	-2.	0.	0.	0.	-30.	-1.	0.	0.	11.	0.	0.	-6330.6	6330.6	0.00
34	6296.	0.	-6478.	-2.	0.	2.	162.	0.	0.	0.	0.	42.	-2.	0.	0.	0.	-30.	-1.	0.	0.	11.	0.	0.	-6512.8	6512.8	0.00
35	6478.	0.	-6659.	-2.	0.	2.	162.	0.	0.	0.	0.	42.	-2.	0.	0.	0.	-30.	-1.	0.	0.	11.	0.	0.	-6694.4	6694.4	0.00
36	6659.	0.	-6842.	-2.	0.	3.	162.	0.	0.	0.	0.	42.	-2.	0.	0.	0.	-30.	-1.	0.	0.	11.	0.	0.	-6877.0	6877.0	0.00
37	6842.	0.	-7036.	-3.	0.	3.	162.	0.	0.	0.	0.	73.	-4.	0.	0.	0.	-53.	-1.	0.	0.	18.	0.	0.	-7097.6	7097.6	0.00
38	7036.	0.	-7232.	-3.	0.	2.	162.	0.	0.	0.	0.	73.	-4.	0.	0.	0.	-52.	-1.	0.	0.	18.	0.	0.	-7291.8	7291.8	0.00
39	7232.	0.	-7427.	-2.	0.	3.	162.	0.	0.	0.	0.	73.	-4.	0.	0.	0.	-52.	-2.	0.	0.	18.	0.	0.	-7487.2	7487.2	0.00
40	7427.	0.	-7628.	-3.	0.	9.	162.	0.	0.	0.	0.	72.	-4.	0.	0.	0.	-51.	-2.	0.	0.	18.	0.	0.	-7688.8	7688.8	0.00
41	7628.	0.	-7744.	-9.	0.	14.	65.	0.	0.	0.	0.	94.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-7830.9	7830.9	0.00
42	7744.	0.	-7853.	-14.	0.	14.	65.	0.	0.	0.	0.	93.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-7944.9	7944.9	0.00
43	7853.	0.	-7961.	-14.	0.	13.	65.	0.	0.	0.	0.	92.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8051.9	8051.9	0.00
44	7961.	0.	-8068.	-13.	0.	12.	65.	0.	0.	0.	0.	91.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8158.0	8158.0	0.00
45	8068.	0.	-8173.	-12.	0.	12.	65.	0.	0.	0.	0.	90.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8263.0	8263.0	0.00
46	8173.	0.	-8278.	-12.	0.	11.	65.	0.	0.	0.	0.	89.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8367.1	8367.1	0.00

47	8278.	0.	-8382.	-11.	0.	11.	65.	0.	0.	0.	0.	88.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8470.3	8470.3	0.00
48	8382.	0.	-8484.	-11.	0.	10.	65.	0.	0.	0.	0.	87.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8572.5	8572.5	0.00
49	8484.	0.	-8586.	-10.	0.	10.	65.	0.	0.	0.	0.	86.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8673.9	8673.9	0.00
50	8586.	0.	-8687.	-10.	0.	9.	65.	0.	0.	0.	0.	85.	-7.	0.	0.	0.	-68.	-2.	0.	0.	29.	0.	0.	-8774.3	8774.3	0.00
51	8687.	0.	-8839.	-9.	0.	8.	108.	0.	0.	0.	0.	105.	-9.	0.	0.	0.	-85.	-3.	0.	0.	36.	0.	0.	-8944.5	8944.5	0.00
52	8839.	0.	-8990.	-8.	0.	7.	108.	0.	0.	0.	0.	104.	-9.	0.	0.	0.	-85.	-3.	0.	0.	36.	0.	0.	-9094.5	9094.5	0.00
53	8990.	0.	-9140.	-7.	0.	7.	108.	0.	0.	0.	0.	103.	-9.	0.	0.	0.	-85.	-3.	0.	0.	36.	0.	0.	-9244.1	9244.1	0.00
54	9140.	0.	-9289.	-7.	0.	6.	108.	0.	0.	0.	0.	102.	-9.	0.	0.	0.	-85.	-3.	0.	0.	36.	0.	0.	-9392.8	9392.8	0.00
55	9289.	0.	-9437.	-6.	0.	6.	108.	0.	0.	0.	0.	101.	-9.	0.	0.	0.	-85.	-3.	0.	0.	36.	0.	0.	-9540.4	9540.4	0.00
56	9437.	0.	-9583.	-6.	0.	4.	108.	0.	0.	0.	0.	101.	-9.	0.	0.	0.	-85.	-3.	0.	0.	36.	0.	0.	-9686.2	9686.2	0.00
57	9583.	0.	-9755.	-4.	0.	3.	130.	0.	0.	0.	0.	146.	-9.	0.	0.	0.	-125.	-4.	0.	0.	35.	0.	0.	-9897.1	9897.1	0.00
58	9755.	0.	-9926.	-3.	0.	3.	130.	0.	0.	0.	0.	145.	-9.	0.	0.	0.	-125.	-4.	0.	0.	35.	0.	0.	-10067.5	10067.5	0.00
59	9926.	0.	-10096.	-3.	0.	3.	130.	0.	0.	0.	0.	144.	-9.	0.	0.	0.	-125.	-4.	0.	0.	35.	0.	0.	-10237.6	10237.6	0.00

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

IOR	UPMN ADV	UPTR ADV	LOWR ADV	UPMN DISP	UPTR DISP	LOWR DISP	INCR IN	INCR OUT	NONP IN	NONP OUT	WSLD IN	WITH DECA	REAE DECA	BOD1 DECA	NH3-N DECA	ORG-N BKGD	NCM BOD1	SOD ALG	SOD NCM	SOD PHOT	SOD RESP	ALG PHOT	ALG OUT	MAC IN	TOT OUT	TOT IN
60	10096.	0.	-10266.	-3.	0.	3.	130.	0.	0.	0.	0.	143.	-9.	0.	0.	0.	-125.	-4.	0.	0.	35.	0.	0.	-10406.7	10406.7	0.00
61	10266.	0.	-10434.	-3.	0.	3.	130.	0.	0.	0.	0.	142.	-9.	0.	0.	0.	-125.	-4.	0.	0.	35.	0.	0.	-10575.0	10575.0	0.00
62	10434.	0.	-10822.	-3.	0.	7.	324.	0.	0.	0.	0.	51.	-5.	0.	0.	0.	-2.	-2.	0.	0.	16.	0.	0.	-10832.5	10832.5	0.00
63	10822.	0.	-11215.	-7.	0.	18.	324.	0.	0.	0.	0.	51.	-5.	0.	0.	0.	-2.	-2.	0.	0.	16.	0.	0.	-11230.8	11230.8	0.00
64	11215.	0.	-11668.	-18.	0.	13.	324.	0.	0.	0.	0.	115.	-11.	0.	0.	0.	-5.	-4.	0.	0.	38.	0.	0.	-11705.5	11705.5	0.00
65	11668.	0.	-12126.	-13.	0.	16.	324.	0.	0.	0.	0.	112.	-11.	0.	0.	0.	-5.	-4.	0.	0.	39.	0.	0.	-12158.0	12158.0	0.00
66	12126.	0.	-12343.	-16.	0.	16.	108.	0.	0.	0.	0.	93.	-9.	0.	0.	0.	-4.	-3.	0.	0.	33.	0.	0.	-12375.7	12375.7	0.00
67	12343.	0.	-12558.	-16.	0.	15.	108.	0.	0.	0.	0.	91.	-9.	0.	0.	0.	-4.	-3.	0.	0.	33.	0.	0.	-12590.2	12590.2	0.00
68	12558.	0.	-12770.	-15.	0.	14.	108.	0.	0.	0.	0.	88.	-9.	0.	0.	0.	-4.	-3.	0.	0.	33.	0.	0.	-12801.4	12801.4	0.00
69	12770.	0.	-12979.	-14.	0.	13.	108.	0.	0.	0.	0.	86.	-9.	0.	0.	0.	-4.	-3.	0.	0.	33.	0.	0.	-13010.0	13010.0	0.00
70	12979.	0.	-13184.	-13.	0.	10.	108.	0.	0.	0.	0.	84.	-9.	0.	0.	0.	-4.	-3.	0.	0.	33.	0.	0.	-13213.7	13213.7	0.00
71	13184.	0.	-13369.	-10.	0.	-12.	108.	0.	0.	0.	0.	82.	-9.	0.	0.	0.	-4.	-3.	0.	0.	33.	0.	0.	-13407.5	13407.5	0.00
72	13369.	0.	-13711.	12.	0.	-10.	324.	0.	0.	0.	0.	13.	-1.	0.	0.	0.	-1.	0.	0.	0.	5.	0.	0.	-13723.7	13723.7	0.00
73	13711.	0.	-14063.	10.	0.	2.	324.	0.	0.	0.	0.	13.	-1.	0.	0.	0.	-1.	0.	0.	0.	5.	0.	0.	-14065.4	14065.4	0.00
74	14063.	0.	-14234.	-2.	0.	1.	130.	0.	0.	0.	0.	36.	-4.	0.	0.	0.	-2.	-1.	0.	0.	14.	0.	0.	-14243.2	14243.2	0.00
75	14234.	0.	-14406.	-1.	0.	1.	130.	0.	0.	0.	0.	36.	-4.	0.	0.	0.	-2.	-1.	0.	0.	14.	0.	0.	-14414.6	14414.6	0.00
76	14406.	0.	-14578.	-1.	0.	1.	130.	0.	0.	0.	0.	36.	-4.	0.	0.	0.	-2.	-1.	0.	0.	14.	0.	0.	-14586.0	14586.0	0.00
77	14578.	0.	-14745.	-1.	0.	-4.	130.	0.	0.	0.	0.	35.	-4.	0.	0.	0.	-2.	-1.	0.	0.	14.	0.	0.	-14756.5	14756.5	0.00
78	14745.	0.	-14855.	4.	0.	-65.	130.	0.	0.	0.	0.	36.	-5.	0.	0.	0.	-2.	-2.	0.	0.	14.	0.	0.	-14927.7	14927.7	0.00
79	14855.	0.	-14997.	65.	0.	-591.	648.	0.	0.	0.	0.	29.	-6.	0.	0.	0.	-1.	-2.	0.	0.	0.	0.	0.	-15596.8	15596.8	0.00

Middle/Middle West Rivers DO Modeling - 090207
COEF-1 Run
INPUT/OUTPUT LOADING SUMMARY

	FLOW	DO	BOD#1	BOD#2	ORG-N	NH3-N	NO3-N	PHOS	CHL A	NCM
	m³/s	kg/d	kg/d	kg/d	kg/d	kg/d	kg/d	kg/d		
HEADWATER FLOW	1.110	479.5	40.3	0.0	0.0	9.6	9.6	0.0	0.0	0.0
INCREMENTAL INFLOW	28.723	12408.3	1433.1	0.0	744.5	0.0	496.3	0.0	0.0	0.0
INCREMENTAL OUTFLOW	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTELOADS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WITHDRAWLS	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FLOW THRU LOWER BNDRY	-29.833	-14996.9	-3040.8	0.0	-393.9	-73.7	-457.3	0.0	0.0	0.0
DISPERSION THRU LOWER BNDRY		-591.0	2037.1	0.0	-110.4	-20.6	-128.2	0.0	0.0	0.0
DISPERSION THRU HDWTR BNDRY		-3.6	3.3	0.0	-2.3	0.9	-0.9	0.0	0.0	0.0
NON-POINT INPUT		0.0	0.0	0.0	0.0			0.0		
NATURAL REAERATION		5378.8								
DAM REAERATION		0.0								
BACKGROUND SOD		-3675.5								
BOD#1 DECAY		-348.7	-348.7							
BOD#1 SETTLING		-124.3	-124.3							
ANAEROBIC BOD#1 DECAY			0.0							
BOD#2 DECAY		0.0	0.0							
BOD#2 SETTLING		0.0	0.0							
ANAEROBIC BOD#2 DECAY				0.0						
ORG-N DECAY		0.0		-229.1	229.1					
ORG-N SETTLING				-8.9	8.9					
NH3 DECAY		0.0			-154.4	154.4				
BACKGROUND NH3 SOURCE						0.0				
OTHER DENITRIFICATION						0.0				
PHOSPHORUS SOURCE							0.0			
ALGAE PHOTOSYNTHESIS			1473.4			0.0	-73.7	0.0	0.0	
ALGAE RESPIRATION			0.0		0.0		0.0	0.0		
ALGAE SETTLING			0.0				0.0			
MACRO PHOTOSYNTHESIS				0.0		0.0	0.0	0.0		
NCM DECAY		0.0						0.0		
NCM SETTLING		0.0						0.0		
TOTAL INPUTS	29.833	19740.0	3513.9	0.0	744.5	248.4	660.3	0.0	0.0	0.0
TOTAL OUTPUTS	-29.833	-19740.0	-3513.9	0.0	-744.5	-248.7	-660.0	0.0	0.0	0.0
NET CONVERGENCE ERROR		0.000	0.0	0.0	0.0	0.0	-0.3	0.3	0.0	0.0	0.0

.....EXECUTION COMPLETED

APPENDIX F:
PLOTS OF PREDICTED WATER QUALITY FOR TMDL

Figure F-1. DO TMDL results for subsegment 090105 1
Figure F-2. DO TMDL results for subsegment 090204 1
Figure F-3. DO TMDL results for subsegment 090207 2

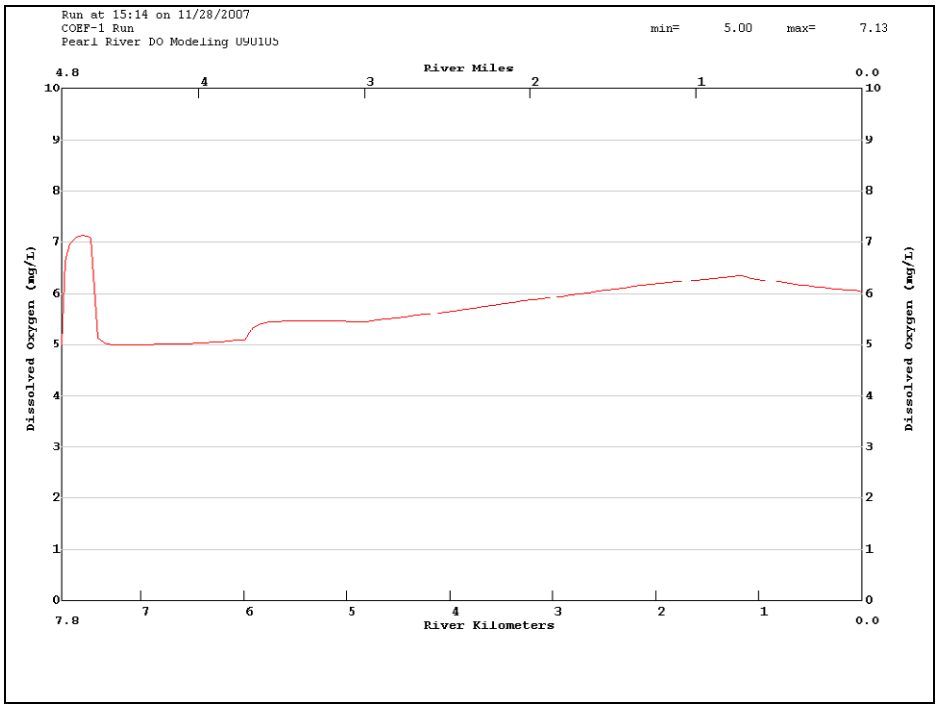

Figure F-1. DO TMDL results for subsegment 090105

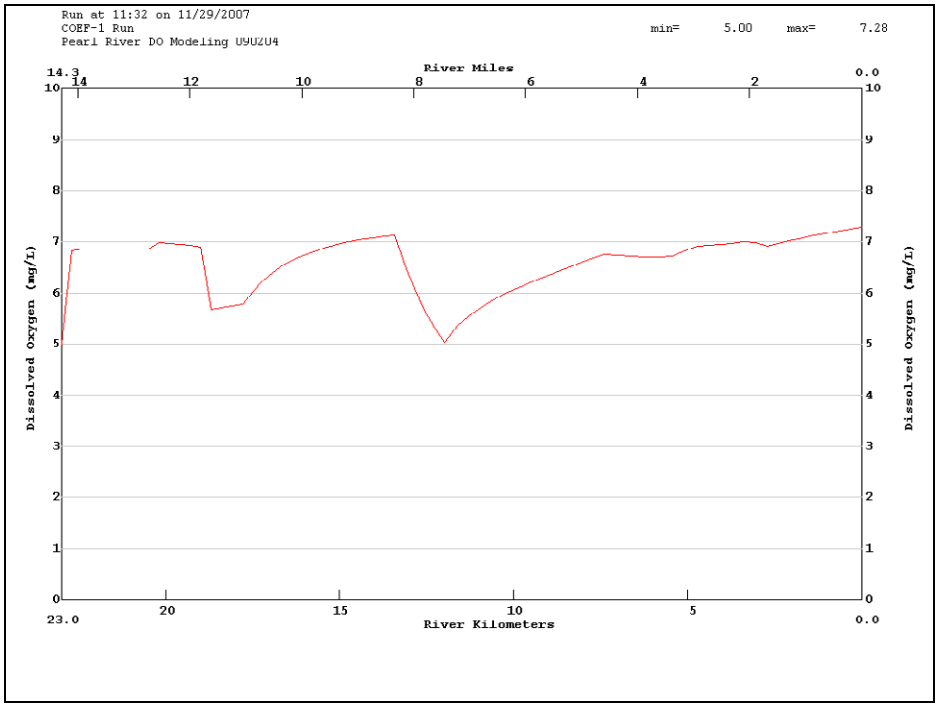

Figure F-2. DO TMDL results for subsegment 090204

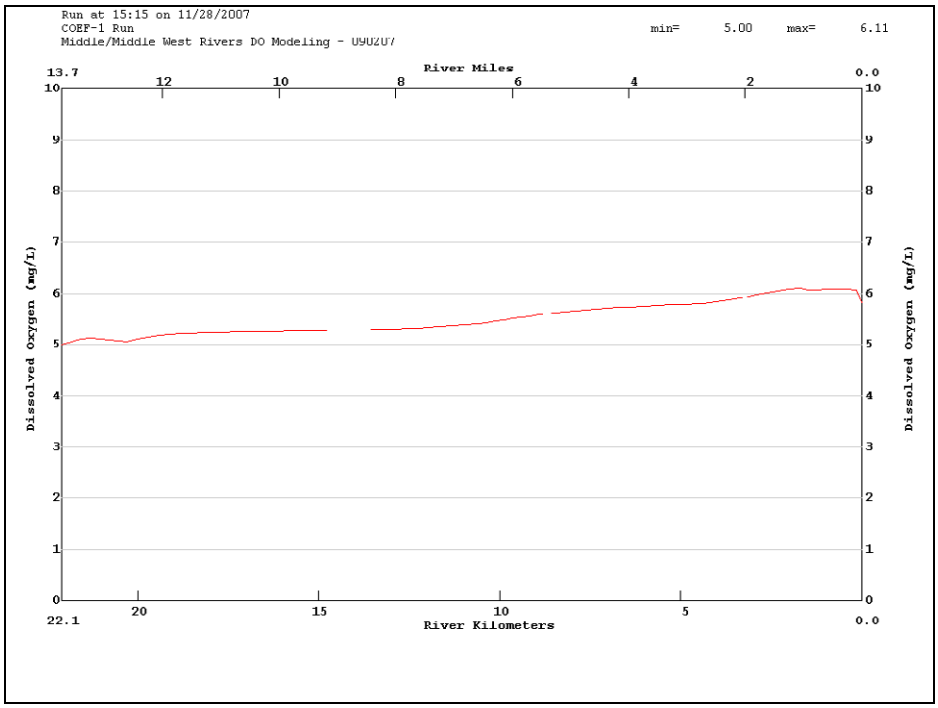

Figure F-3. DO TMDL results for subsegment 090207

APPENDIX G:
TMDL CALCULATIONS

Table G-1. Loadings for oxygen demanding substances in subsegment 090105 2
Table G-2. Oxygen demand in subsegment 090105 2
Table G-3. Loadings for oxygen demanding substances in subsegment 090204 3
Table G-4. Oxygen demand in subsegment 090204 3
Table G-5. Loadings for oxygen demanding substances in subsegment 090207 4
Table G-6. Oxygen demand in subsegment 090207 4

Table G-1. Loadings for oxygen demanding substances in subsegment 090105

Subsegment	Loadings (kg/d)			
090105	SOD	CBOD	Ammonia	Nitrate
WLA	0.00	4.48	3.20	0.00
MOS for WLA	0.00	0.56	0.40	0.00
FG for WLA	0.00	0.56	0.40	0.00
LA	178.00	646.40	11.44	57.44
MOS for LA	22.25	80.80	1.43	7.18
FG for LA	22.25	80.80	1.43	7.18
TMDL	222.50	813.60	18.30	71.80

Notes:
Loadings take from Input/output loading summery from each model output file in Appendix F.
SOD is from “Background SOD’ in the DO column.
Others parameters from “Headwater flow” and “incremental flow” in their respective columns.

Table G-2. Oxygen demand in subsegment 090105

	Oxygen demand (kg/d)				
090105	SOD	CBOD	Ammonia	Nitrate	Total
WLA	0.00	4.48	13.86	0.00	18.34
MOS for WLA	0.00	0.56	1.73	0.00	2.29
FG for WLA	0.00	0.56	1.73	0.00	2.29
LA	178.00	646.40	49.54	248.72	1,122.65
MOS for LA	22.25	80.80	6.19	31.09	140.33
FG for LA	22.25	80.80	6.19	31.09	140.33
TMDL	222.50	813.60	79.24	310.89	1,426.23

Notes:
Nutrient loadings were multiplied by 4.33 to determine their oxygen demand.

Table G-3. Loadings for oxygen demanding substances in subsegment 090204

Subsegment	Loadings (kg/d)			
090105	SOD	CBOD	Ammonia	Nitrate
WLA	0.00	6.92	0.74	0.00
MOS for WLA	0.00	0.86	0.09	0.00
FG for WLA	0.00	0.86	0.09	0.00
LA	984.80	561.20	90.96	14.08
MOS for LA	123.10	70.15	11.37	1.76
FG for LA	123.10	70.15	11.37	1.76
TMDL	1,231.00	710.14	114.63	17.60

Notes:
Loadings take from Input/output loading summery from each model output file in Appendix F.
SOD is from “Background SOD’ in the DO column.
Others parameters from “Headwater flow” and “incremental flow” in their respective columns.

Table G-4. Oxygen demand in subsegment 090204

	Oxygen demand (kg/d)				
090105	SOD	CBOD	Ammonia	Nitrate	Total
WLA	0.00	6.92	3.21	0.00	10.13
MOS for WLA	0.00	0.86	0.40	0.00	1.27
FG for WLA	0.00	0.86	0.40	0.00	1.27
LA	984.80	561.20	393.86	60.97	2,000.82
MOS for LA	123.10	70.15	49.23	7.62	250.10
FG for LA	123.10	70.15	49.23	7.62	250.10
TMDL	1,231.00	710.14	496.33	76.21	2,513.69

Notes:
Nutrient loadings were multiplied by 4.33 to determine their oxygen demand.

Table G-5. Loadings for oxygen demanding substances in subsegment 090207

Subsegment	Loadings (kg/d)			
090105	SOD	CBOD	Ammonia	Nitrate
WLA	0.00	0.00	0.00	0.00
MOS for WLA	0.00	0.00	0.00	0.00
FG for WLA	0.00	0.00	0.00	0.00
LA	2,940.40	2,811.04	7.68	404.72
MOS for LA	367.55	351.38	0.96	50.59
FG for LA	367.55	351.38	0.96	50.59
TMDL	3,675.50	3,513.80	9.60	505.90

Notes:
Loadings take from Input/output loading summery from each model output file in Appendix F.
SOD is from “Background SOD’ in the DO column.
Others parameters from “Headwater flow” and “incremental flow” in their respective columns.

Table G-6. Oxygen demand in subsegment 090207

	Oxygen demand (kg/d)				
090105	SOD	CBOD	Ammonia	Nitrate	Total
WLA	0.00	0.00	0.00	0.00	0.00
MOS for WLA	0.00	0.00	0.00	0.00	0.00
FG for WLA	0.00	0.00	0.00	0.00	0.00
LA	2,940.40	2,811.04	33.25	1,752.44	7,537.13
MOS for LA	367.55	351.38	4.16	219.05	942.14
FG for LA	367.55	351.38	4.16	219.05	942.14
TMDL	3,675.50	3,513.80	41.57	2,190.55	9,421.42

Notes:
Nutrient loadings were multiplied by 4.33 to determine their oxygen demand.

APPENDIX H:
SENSITIVITY ANALYSIS PLOTS

Figure H-1. BOD sensitivity results (BOD settling rate) for subsegment 090105 1
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Figure H-8. DO sensitivity results (BOD aerobic decay rate) for subsegment 090105 4
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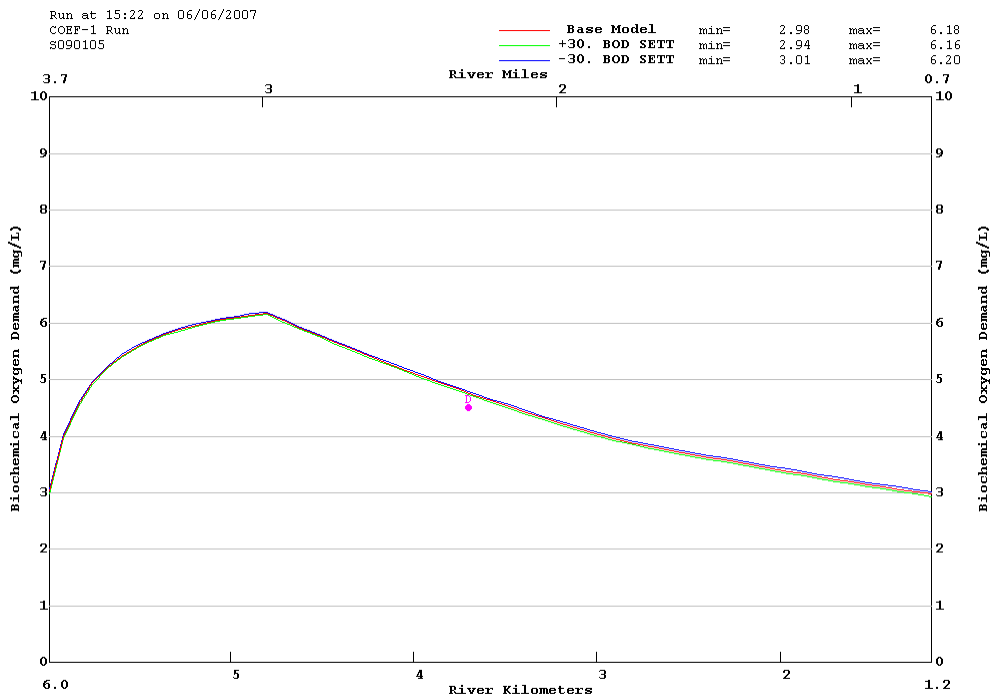

Figure H-1. BOD sensitivity results (BOD settling rate) for subsegment 090105.

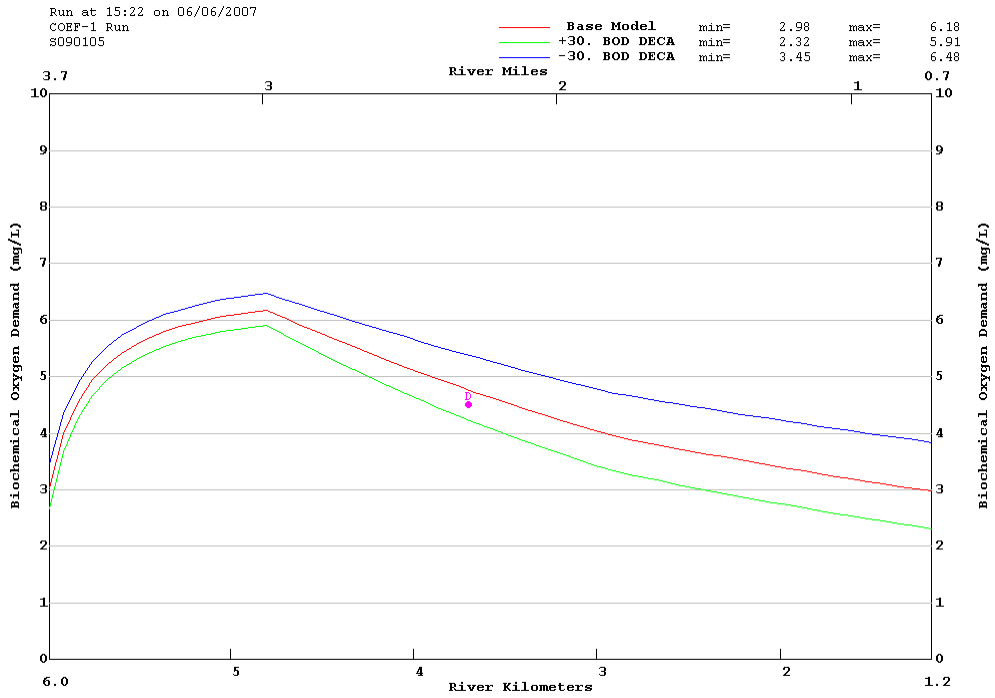

Figure H-2. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090105.

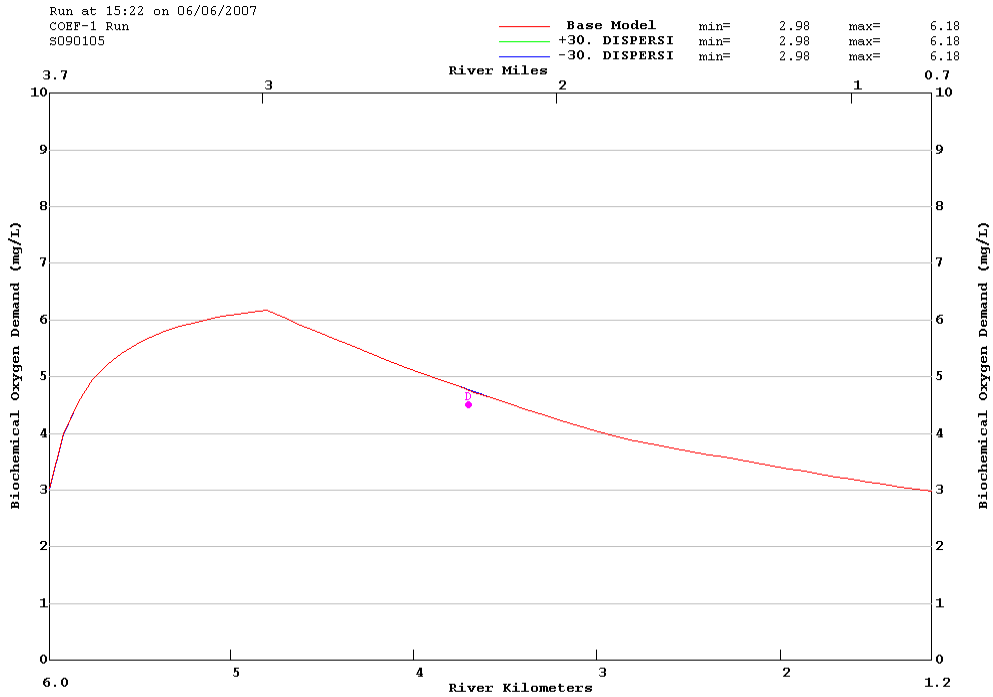

Figure H-3. BOD sensitivity results (dispersion) for subsegment 090105.

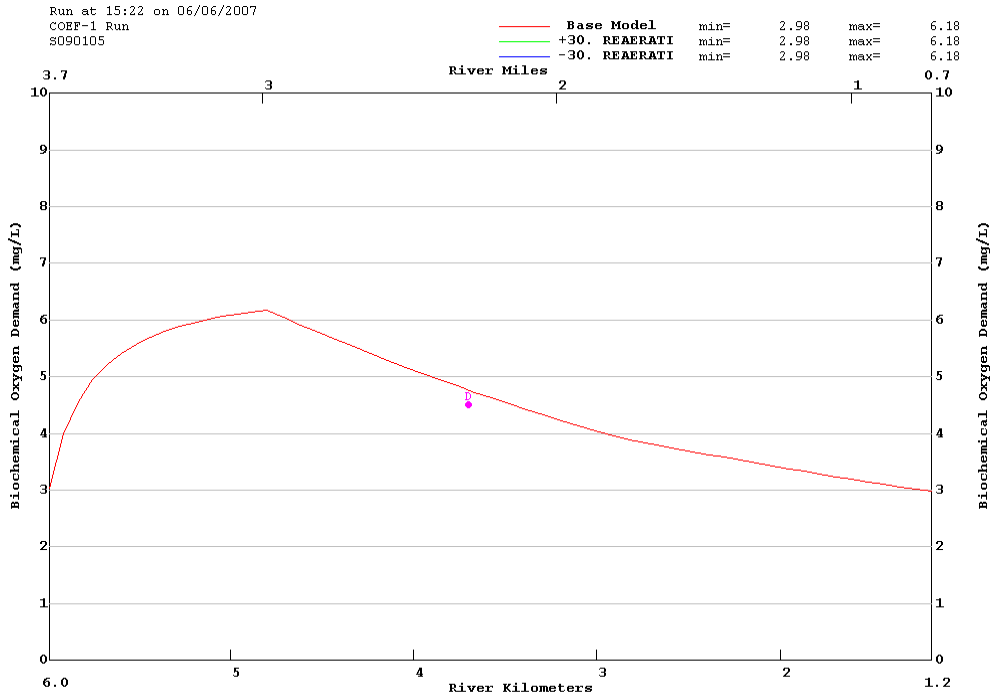

Figure H-4. BOD sensitivity results (reaeration) for subsegment 090105.

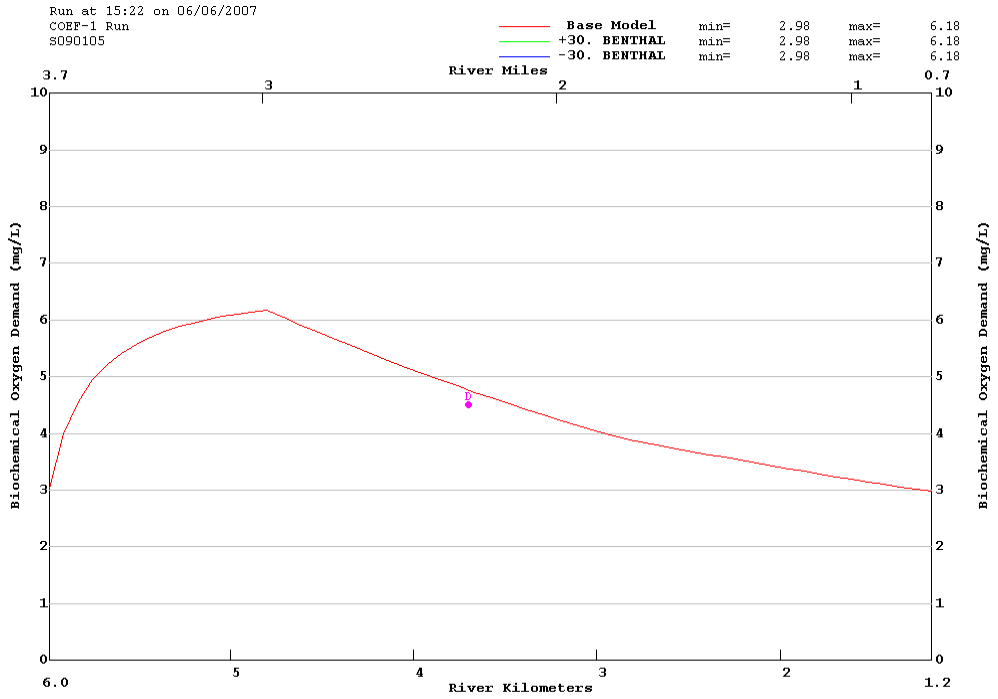

Figure H-5. BOD sensitivity results (background SOD) for subsegment 090105.

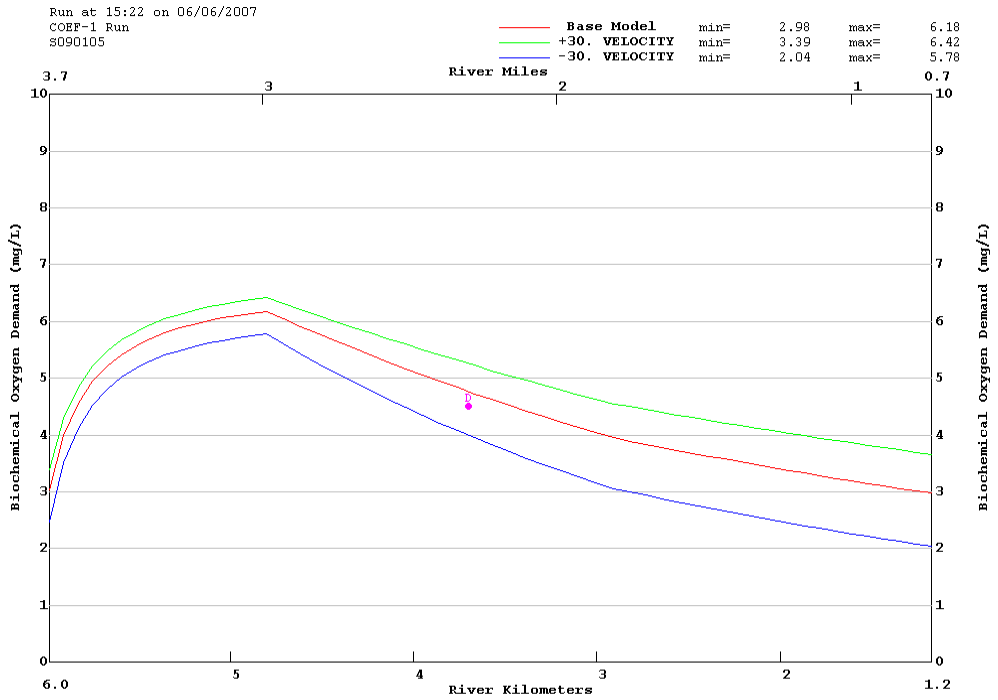

Figure H-6. BOD sensitivity results (stream velocity) for subsegment 090105.

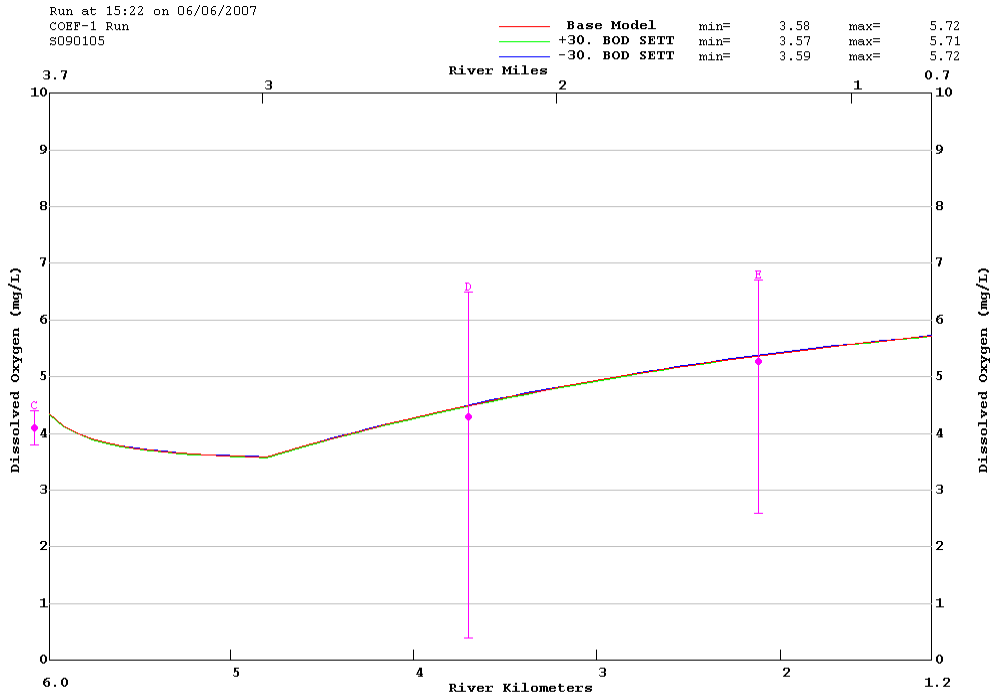

Figure H-7. DO sensitivity results (BOD settling rate) for subsegment 090105.

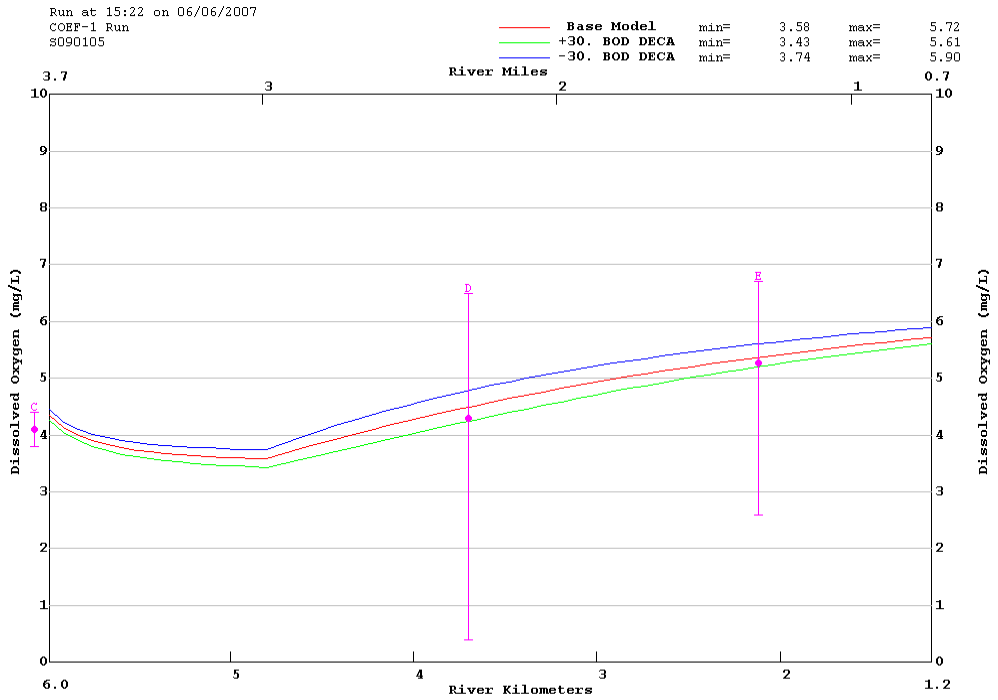

Figure H-8. DO sensitivity results (BOD aerobic decay rate) for subsegment 090105.

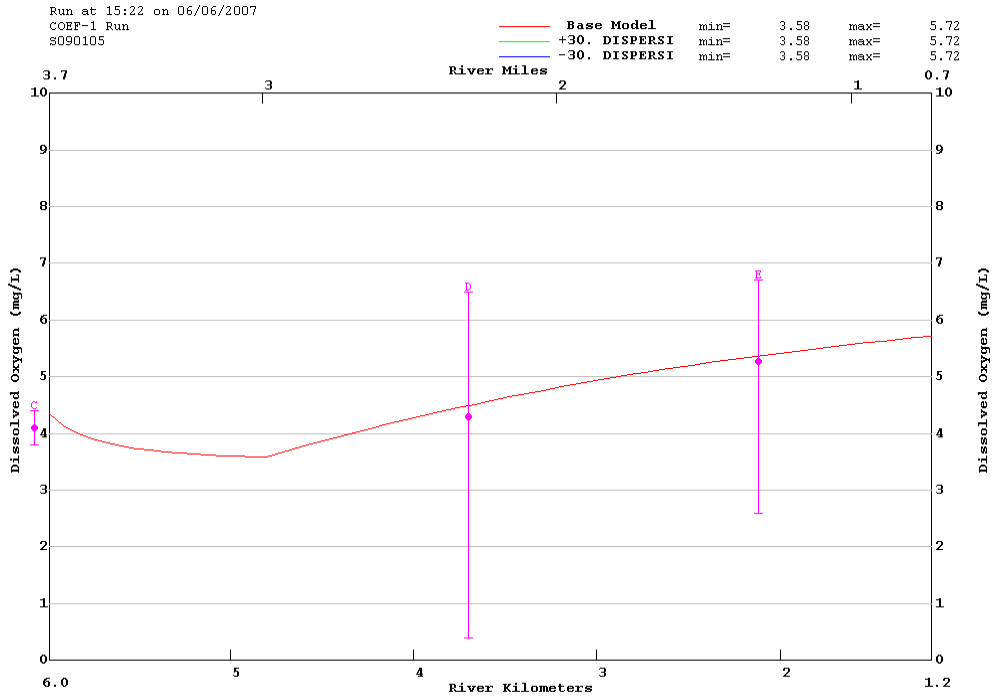

Figure H-9. DO sensitivity results (dispersion) for subsegment 090105.

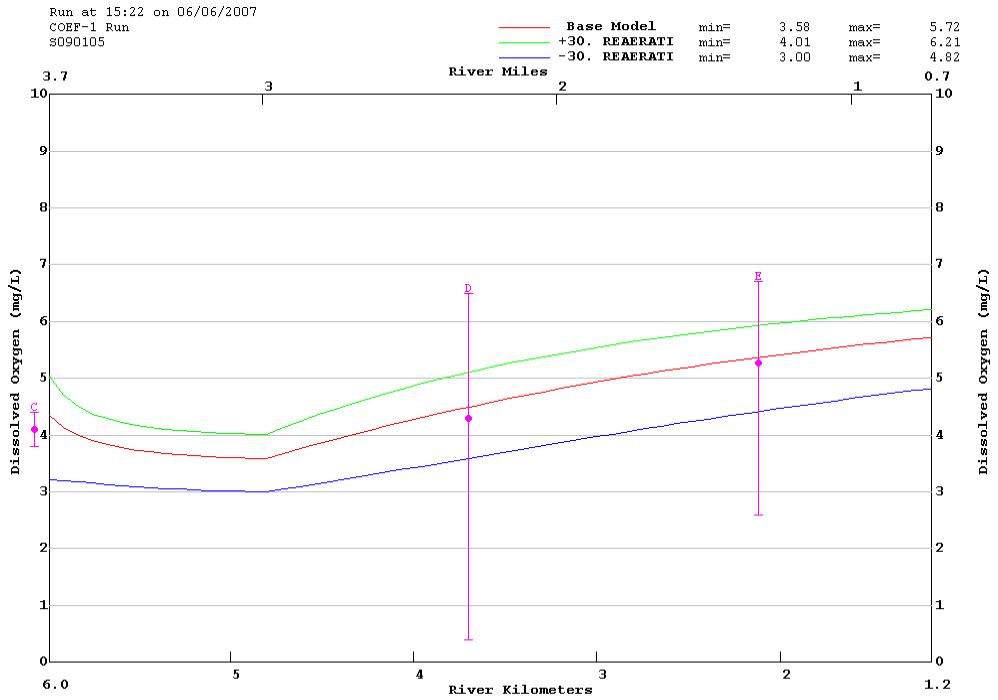

Figure H-10. DO sensitivity results (reaeration) for subsegment 090105.

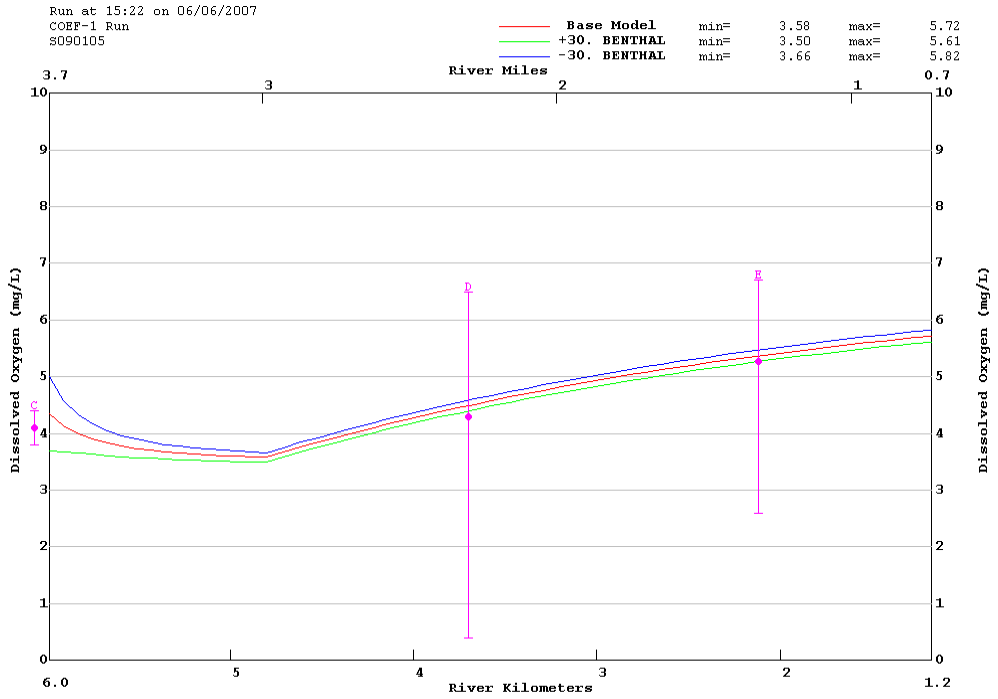

Figure H-11. DO sensitivity results (background SOD) for subsegment 090105.

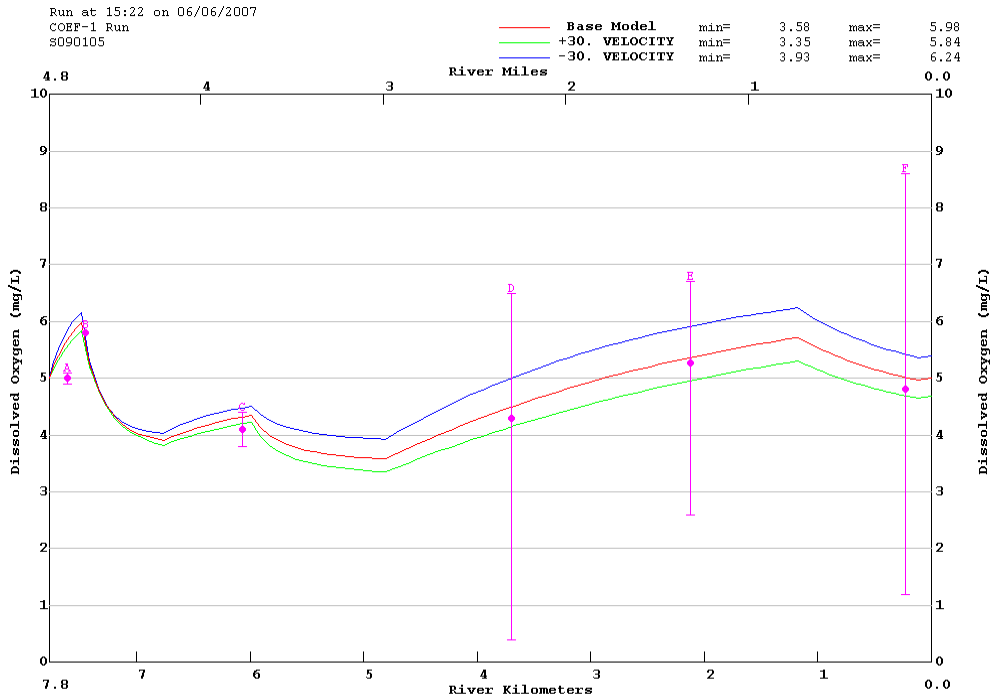

Figure H-12. DO sensitivity results (stream velocity) for subsegment 090105.

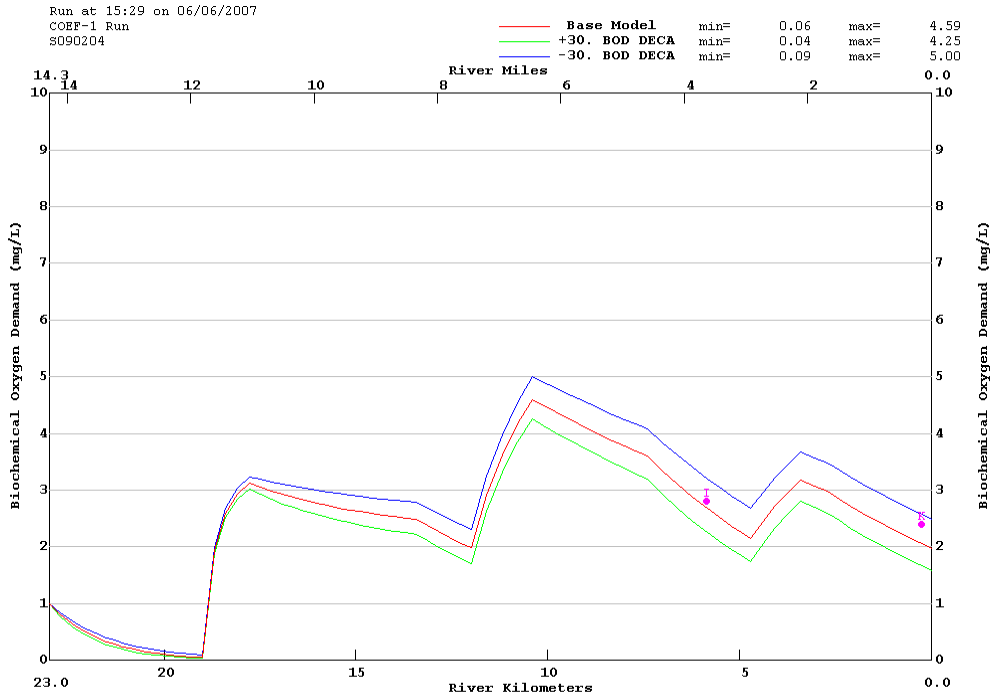

Figure H-13. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090204.

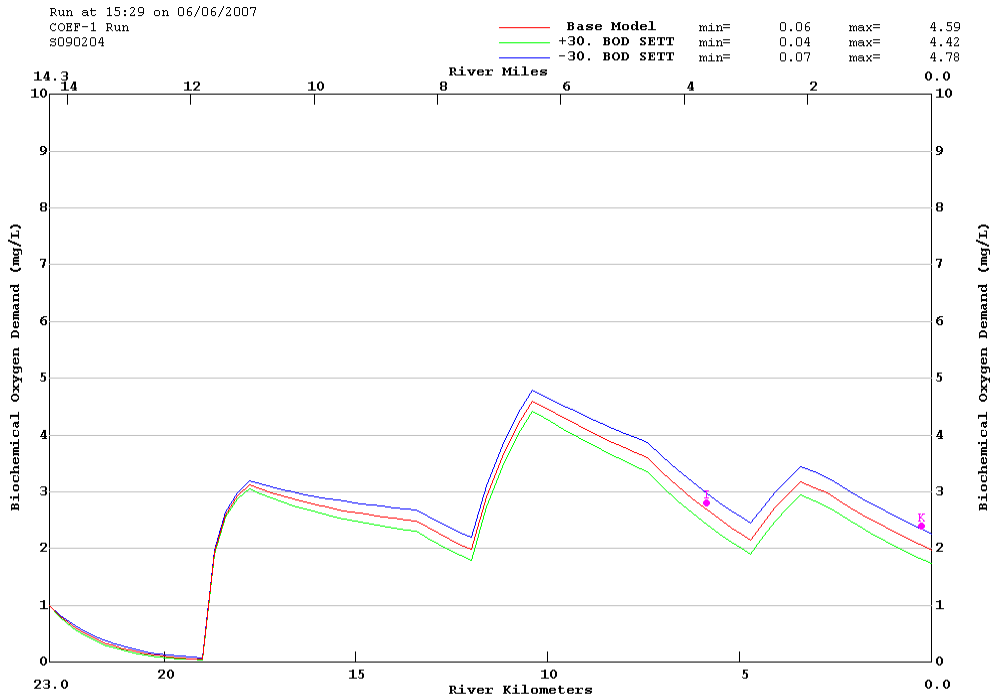

Figure H-14. BOD sensitivity results (BOD settling rate) for subsegment 090204.

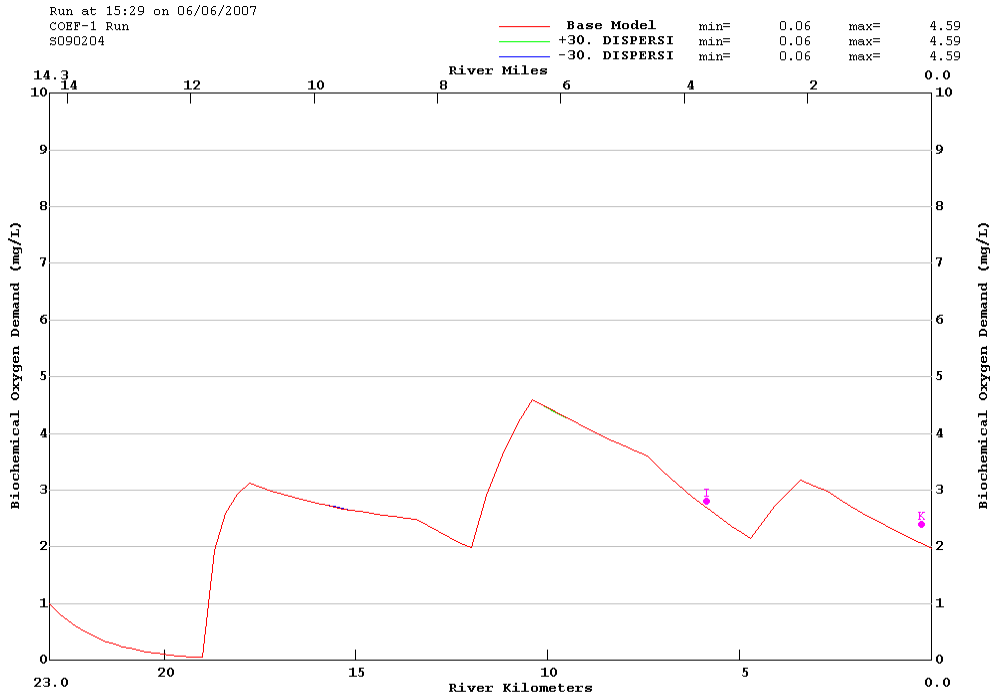

Figure H-15. BOD sensitivity results (dispersion) for subsegment 090204.

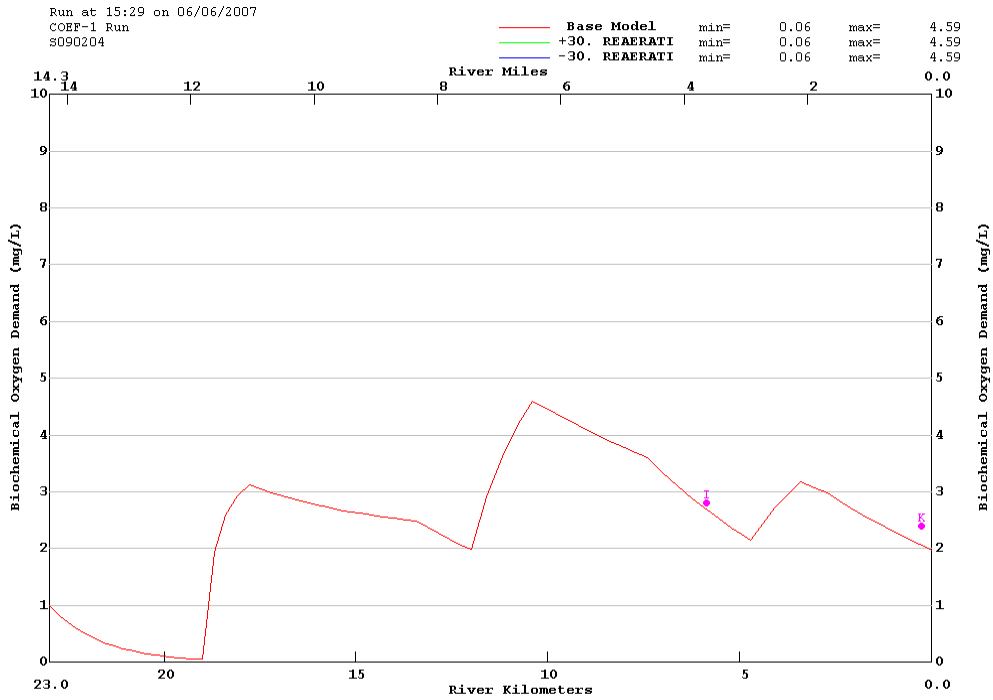

Figure H-16. BOD sensitivity results (reareation) for subsegment 090204.

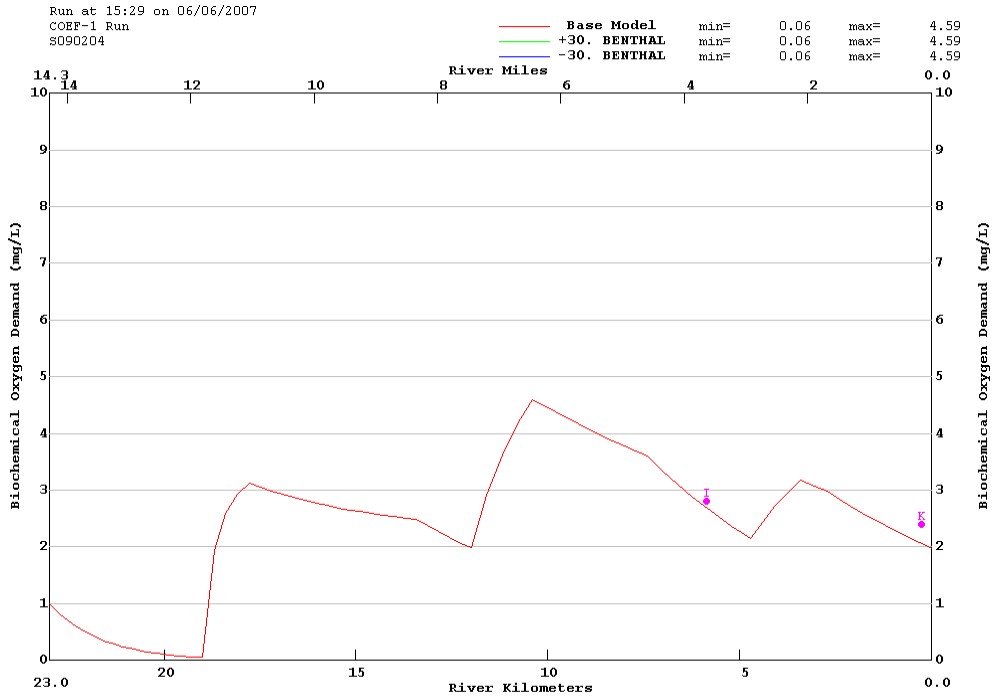

Figure H-17. BOD sensitivity results (background SOD) for subsegment 090204.

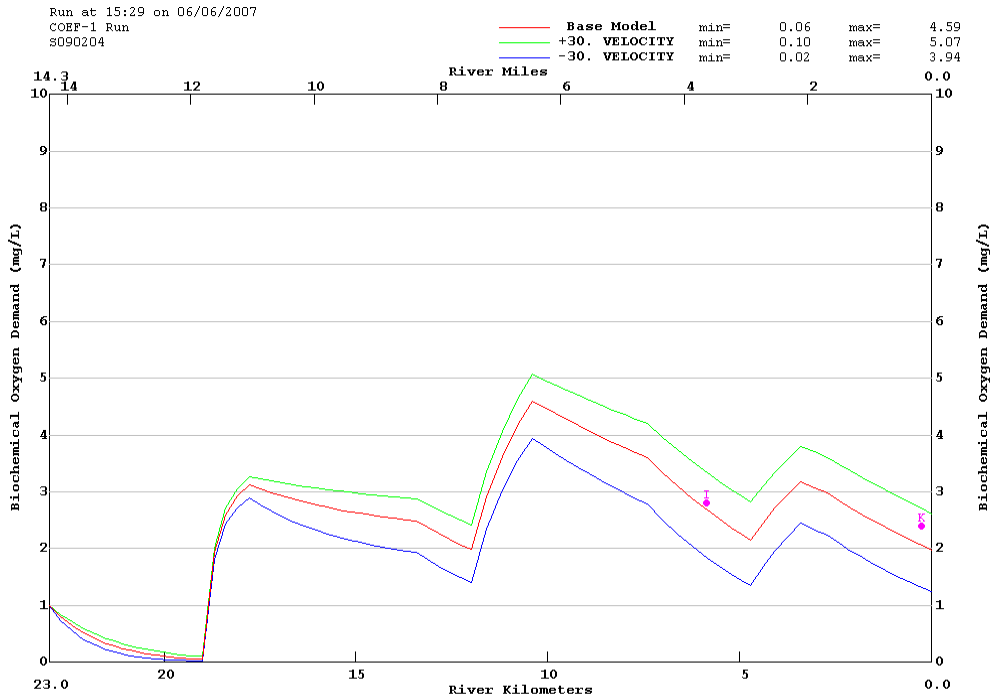

Figure H-18. BOD sensitivity results (stream velocity) for subsegment 090204.

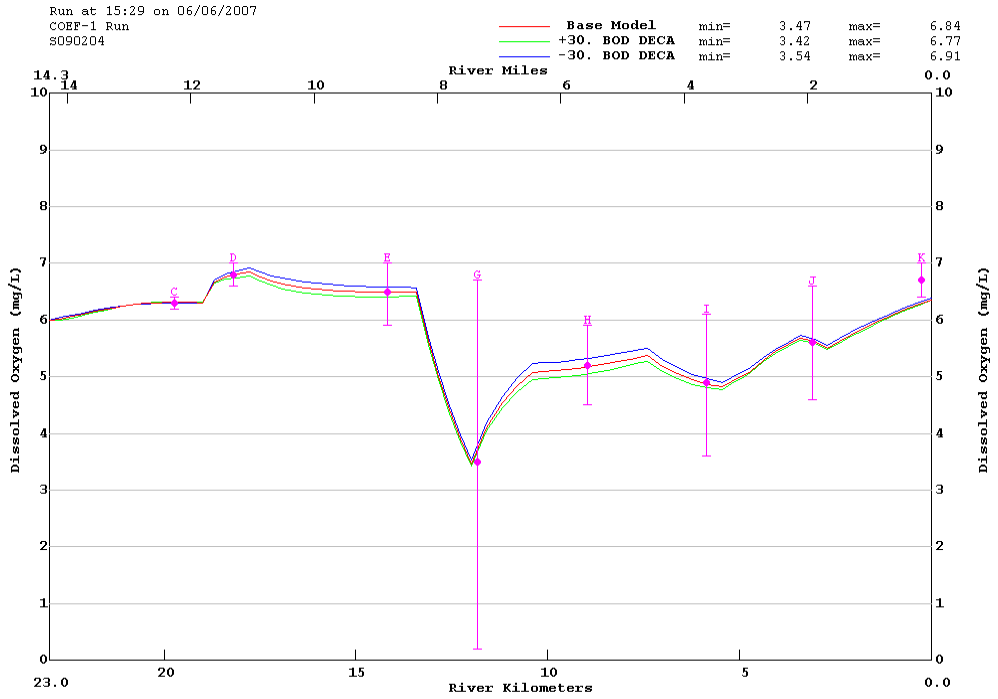

Figure H-19. DO sensitivity results (BOD decay rate) for subsegment 090204.

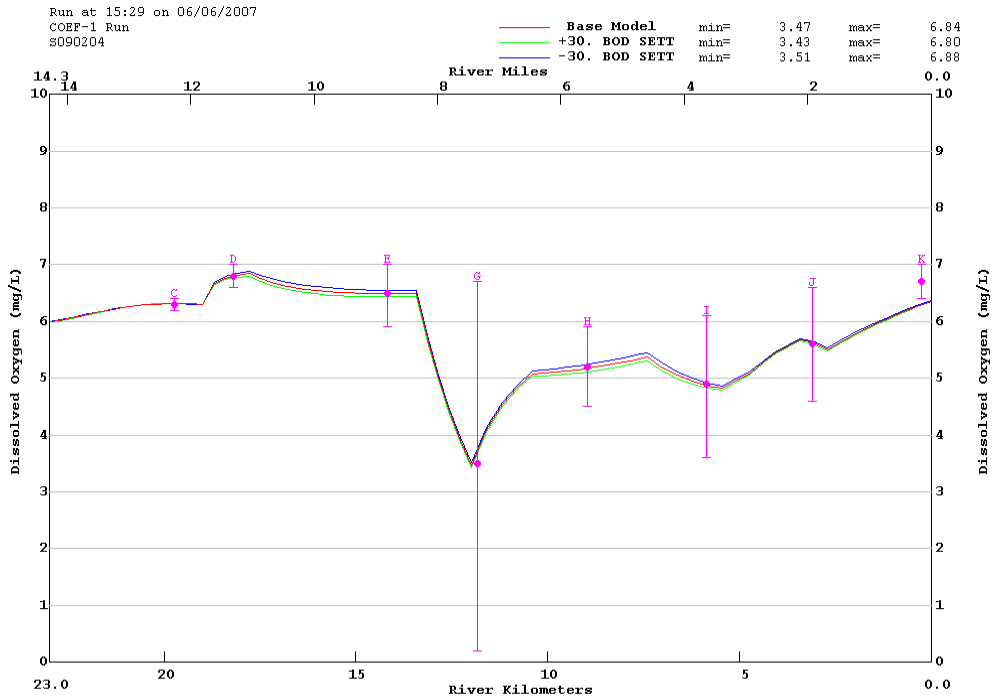

Figure H-20. DO sensitivity results (BOD settling rate) for subsegment 090204.

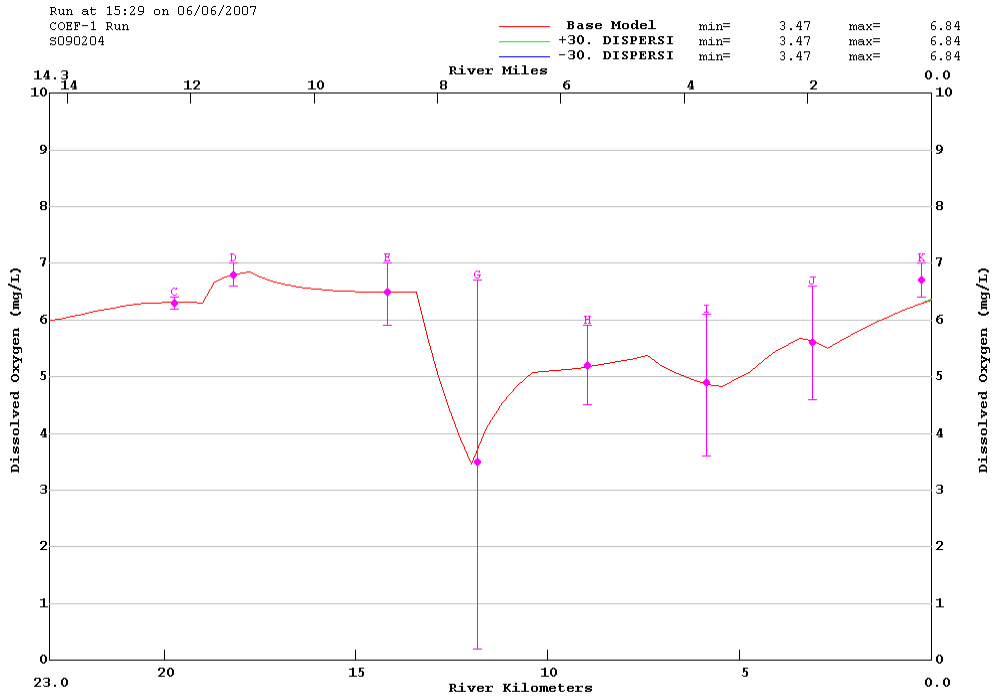

Figure H-21. DO sensitivity results (dispersion) for subsegment 090204.

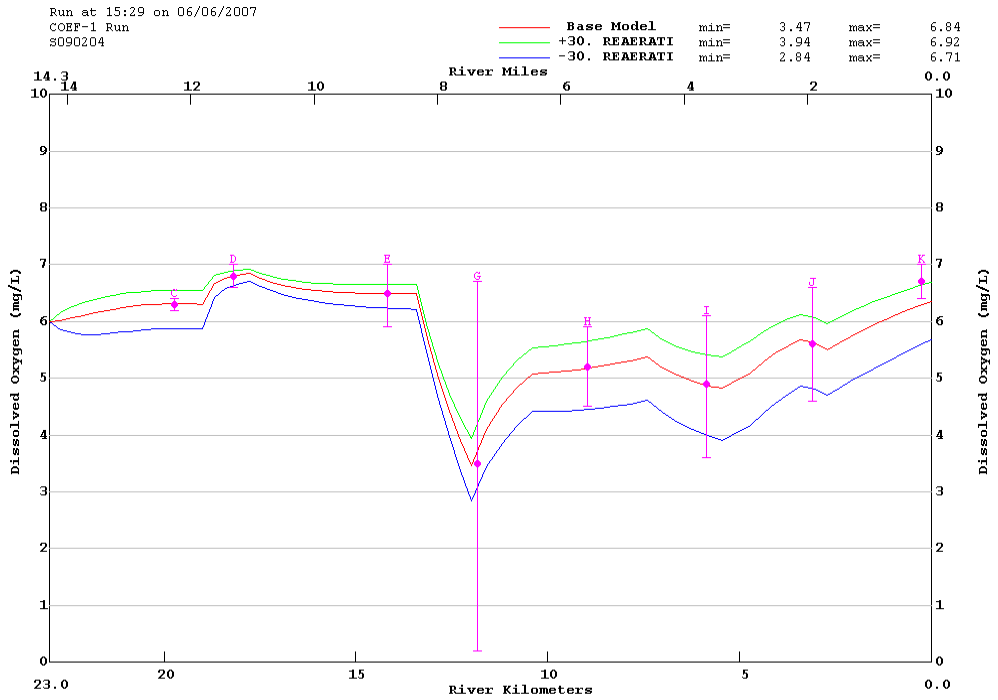

Figure H-22. DO sensitivity results (reaeration) for subsegment 090204.

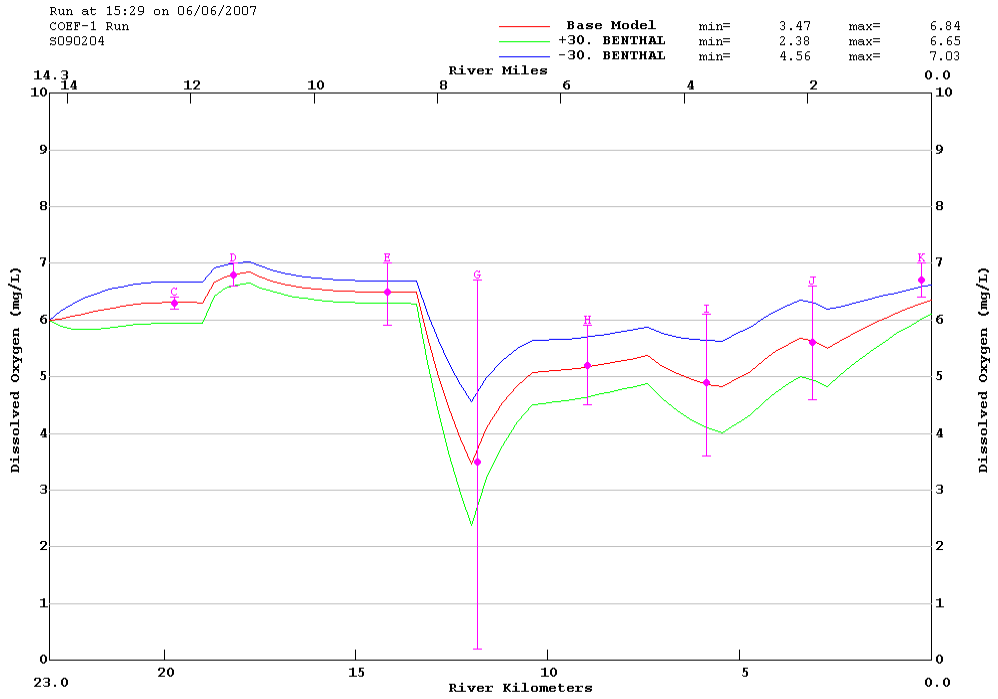

Figure H-23. DO sensitivity results (background SOD) for subsegment 090204.

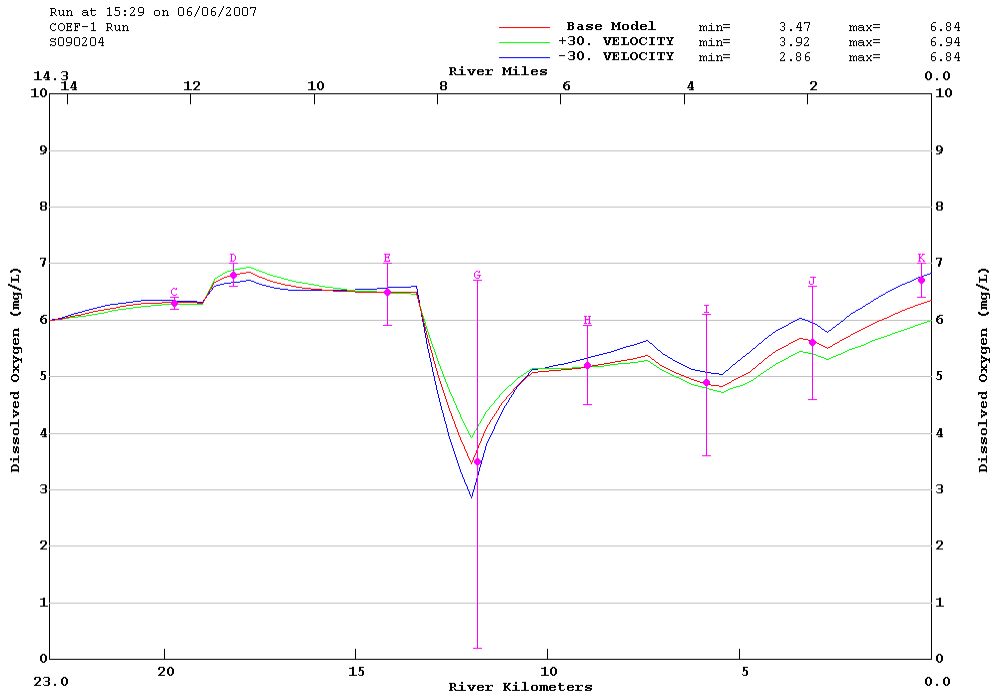

Figure H-24. DO sensitivity results (stream velocity) for subsegment 090204.

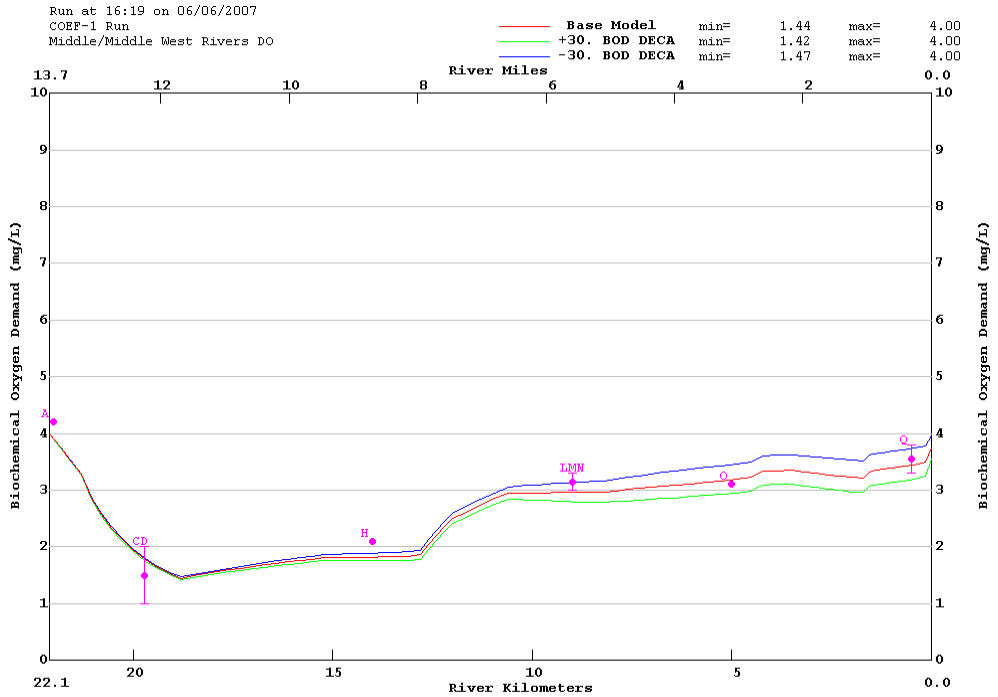

Figure H-25. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090207.

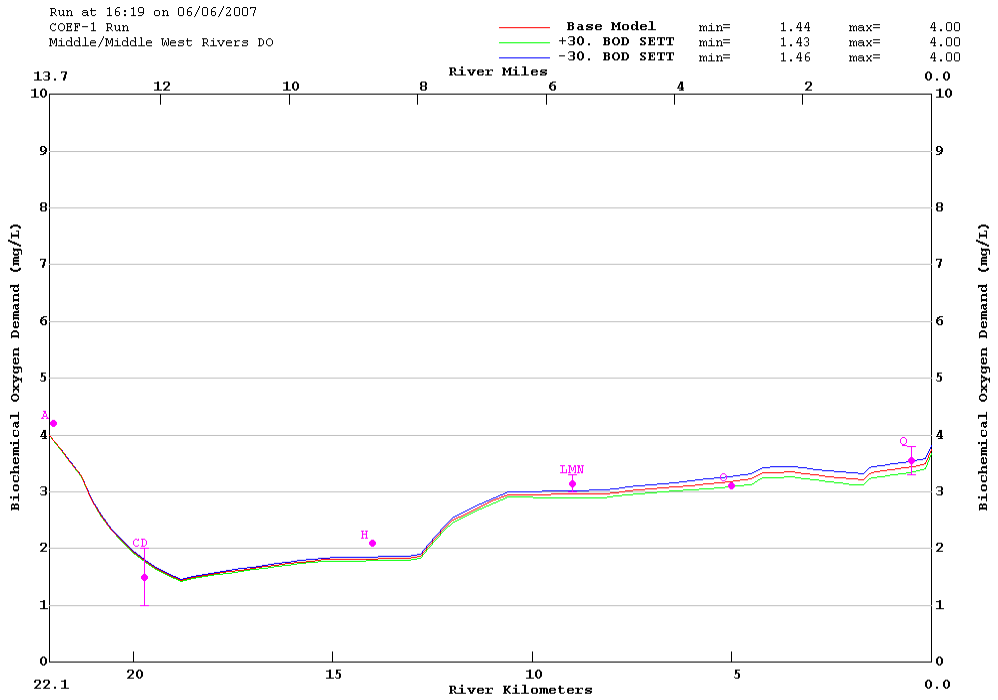

Figure H-26. BOD sensitivity results (BOD settling rate) for subsegment 090207.

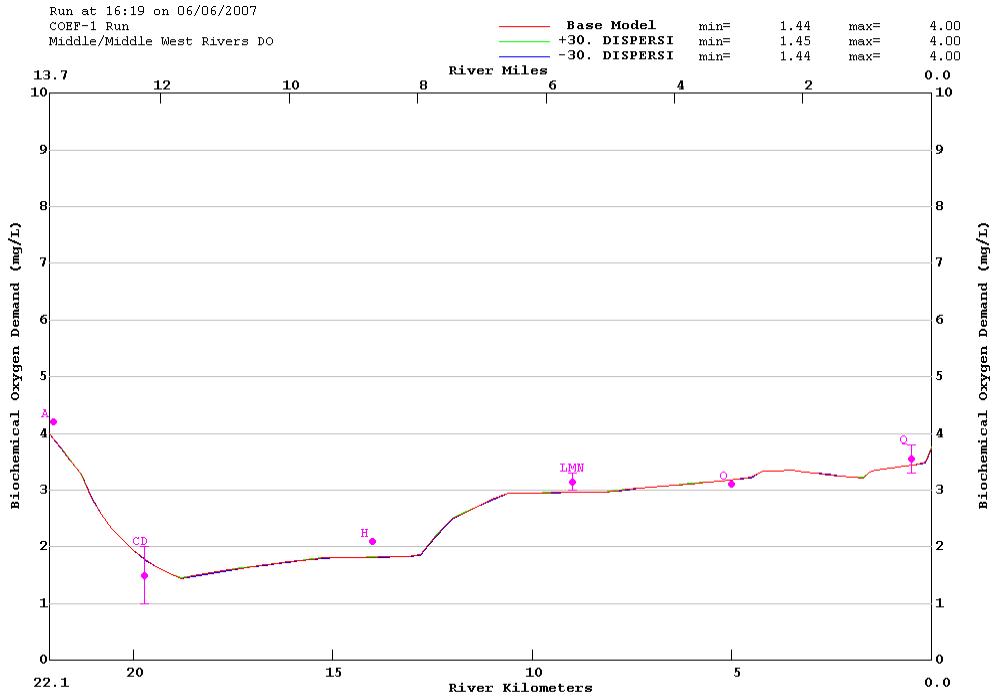

Figure H-27. BOD sensitivity results (dispersion) for subsegment 090207.

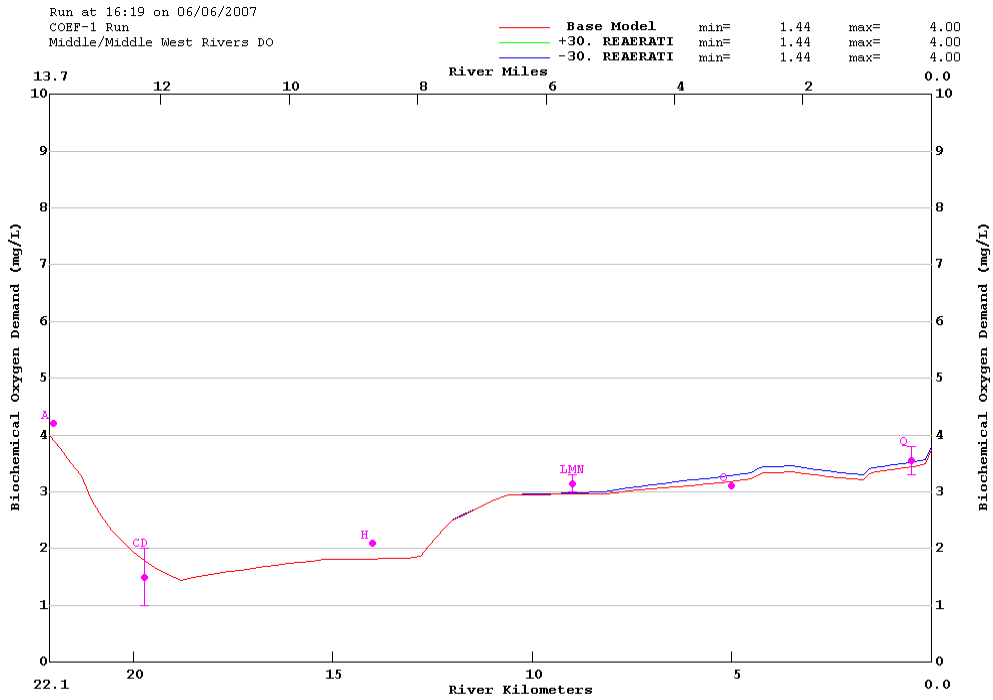

Figure H-28. BOD sensitivity results (reaeration) for subsegment 090207.

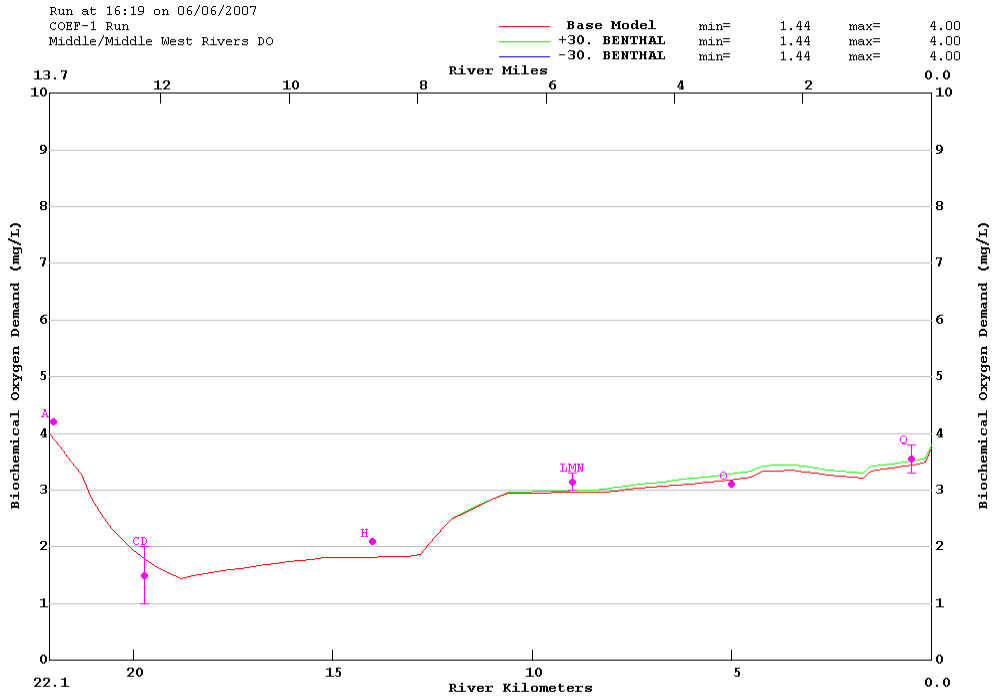

Figure H-29. BOD sensitivity results (background SOD) for subsegment 090207.

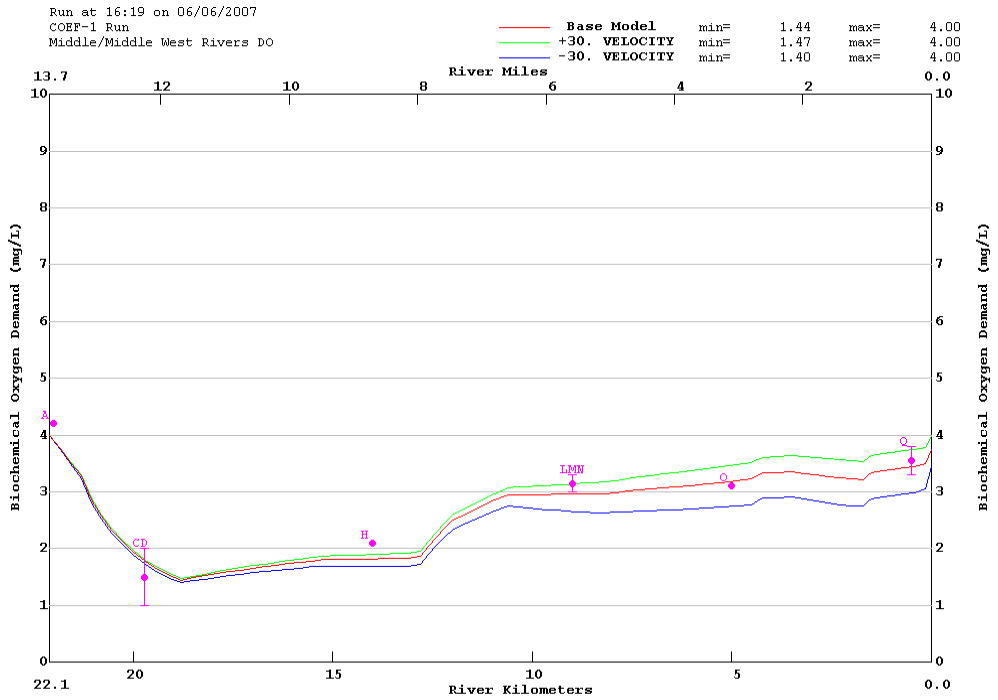

Figure H-30. BOD sensitivity results (stream velocity) for subsegment 090207.

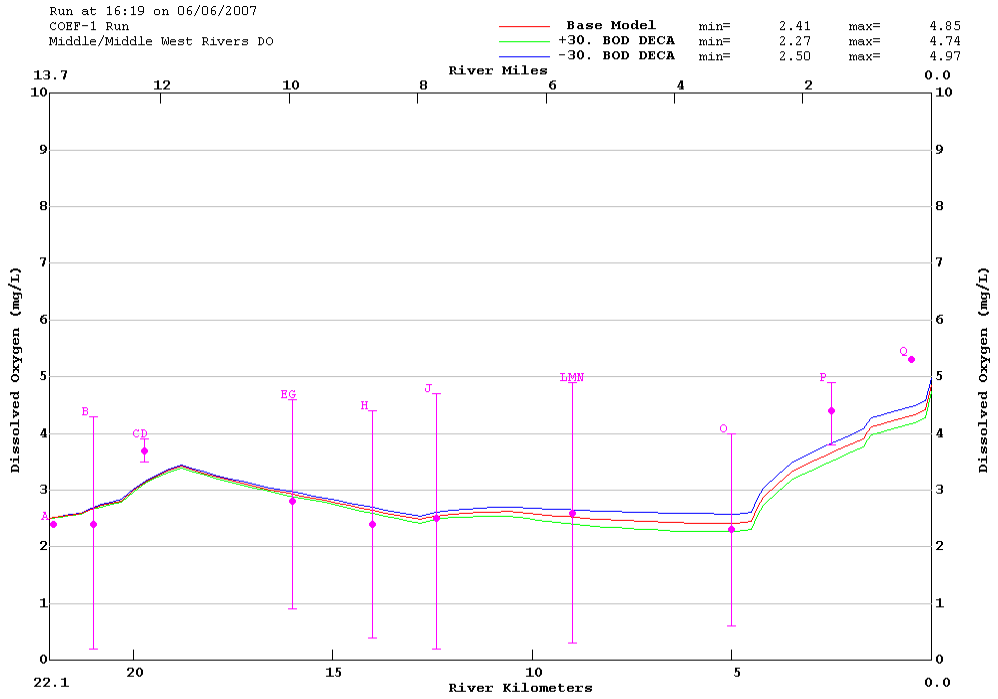

Figure H-31. DO sensitivity results (BOD aerobic decay rate) for subsegment 090207.

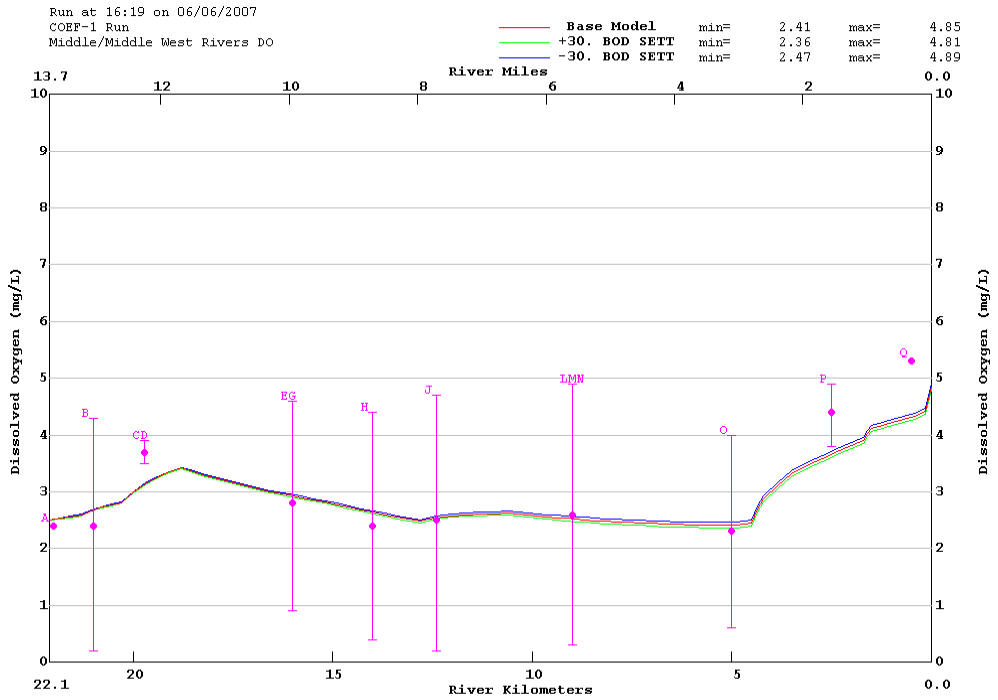

Figure H-32. DO sensitivity results (BOD settling rate) for subsegment 090207.

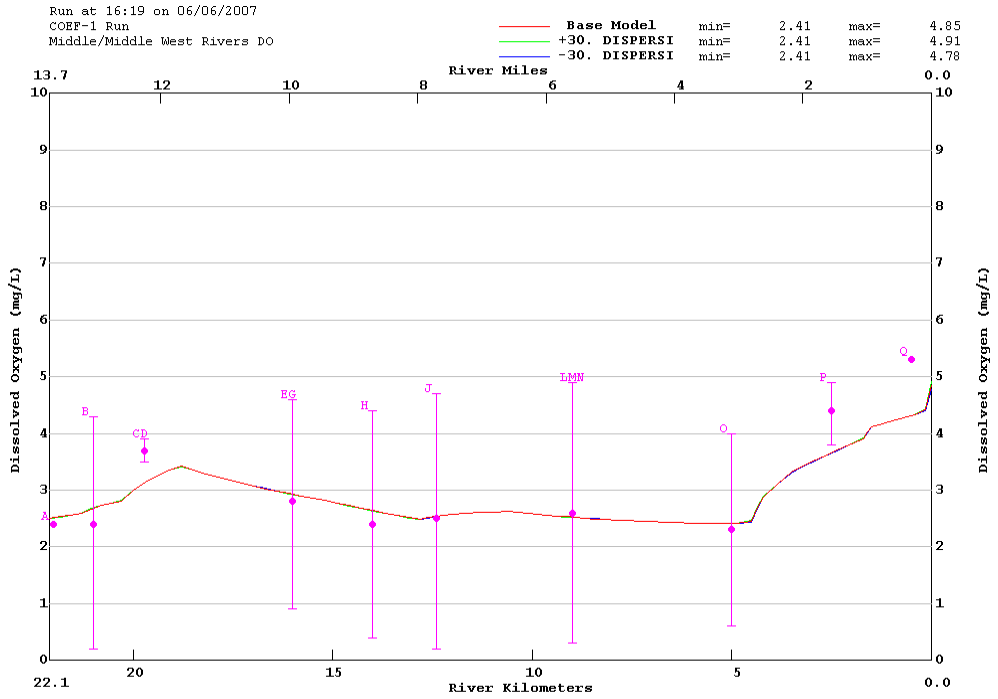

Figure H-33. DO sensitivity results (dispersion) for subsegment 090207.

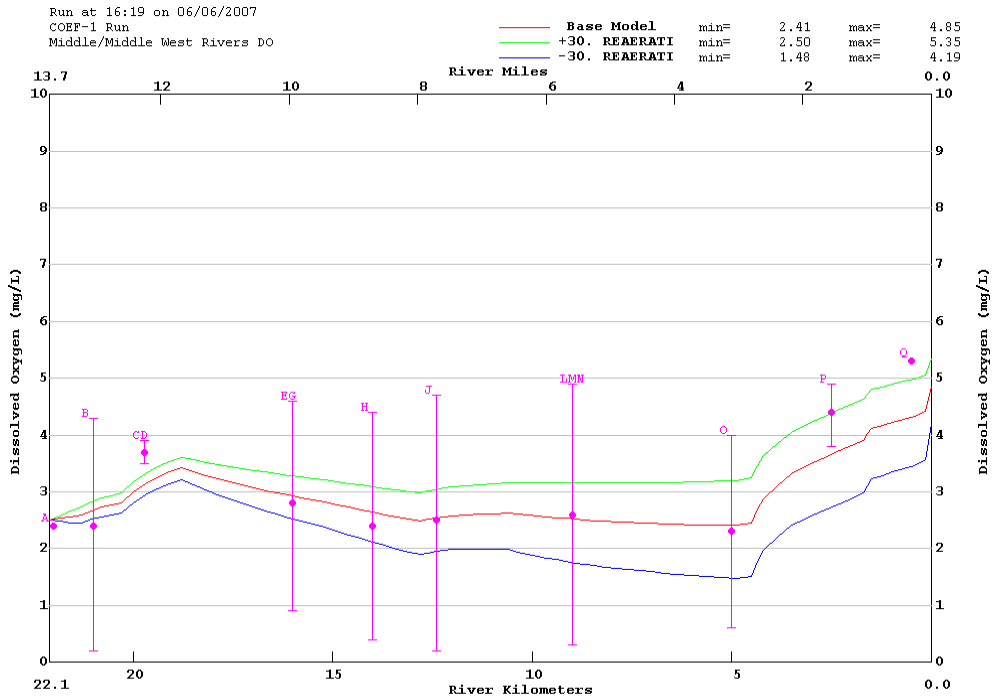

Figure H-34. DO sensitivity results (reaeration) for subsegment 090207.

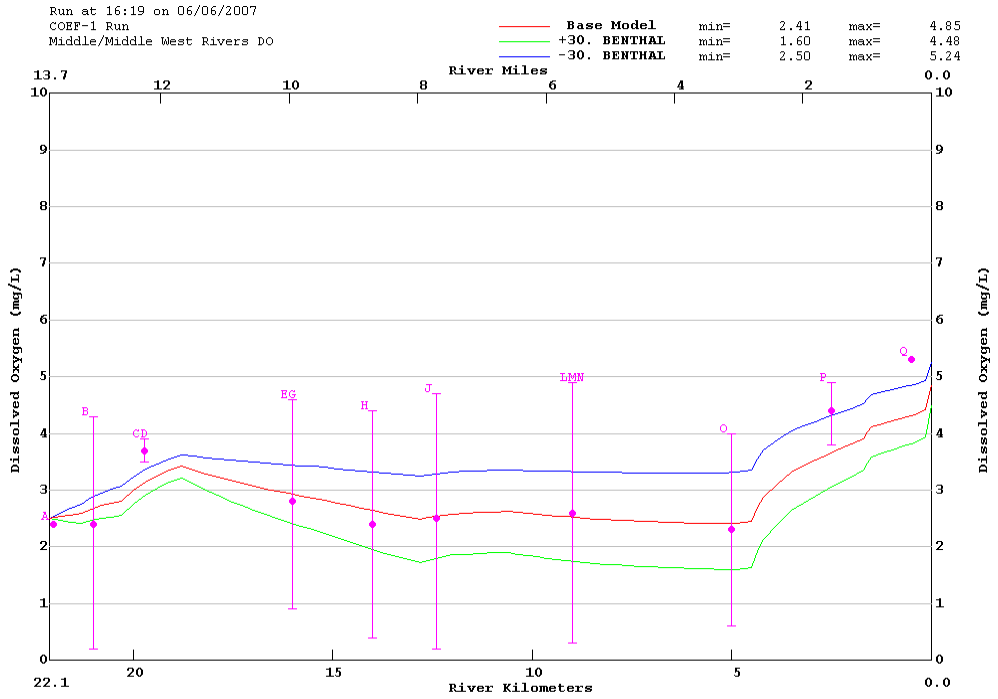

Figure H-35. DO sensitivity results (background SOD) for subsegment 090207.

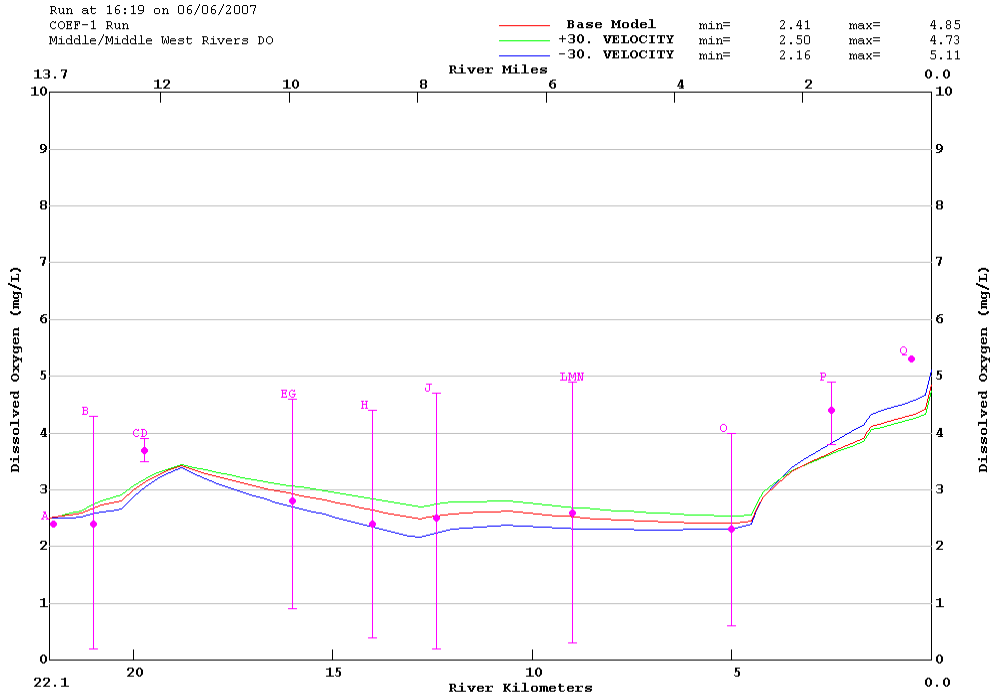

Figure H-36. DO sensitivity results (stream velocity) for subsegment 090207.

APPENDIX I:
AMMONIA TOXICITY CALCULATIONS

Table I-1. Ammonia toxicity results for subsegment 090105..... 1
Table I-2. Ammonia toxicity results for subsegment 090204..... 3
Table I-3. Ammonia toxicity results for subsegment 090207..... 5

Table I-1. Ammonia toxicity results for subsegment 090105

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
1	6.90	31.60	0.04	2.03	No
2	6.90	31.60	0.01	2.03	No
3	6.90	31.60	0.00	2.03	No
4	6.90	31.60	0.00	2.03	No
5	6.90	31.85	0.00	2.00	No
6	6.90	32.10	0.00	1.97	No
7	6.90	32.06	0.05	1.97	No
8	6.90	32.02	0.06	1.98	No
9	6.90	31.98	0.06	1.98	No
10	6.90	31.94	0.06	1.99	No
11	6.90	31.90	0.06	1.99	No
12	6.90	31.86	0.06	2.00	No
13	6.90	31.82	0.06	2.01	No
14	6.90	31.78	0.06	2.01	No
15	6.90	31.74	0.06	2.02	No
16	6.90	31.70	0.06	2.02	No
17	6.70	31.70	0.06	2.13	No
18	6.70	31.70	0.05	2.13	No
19	6.70	31.70	0.05	2.13	No
20	6.70	31.70	0.04	2.13	No
21	6.70	31.70	0.04	2.13	No
22	6.70	31.70	0.04	2.13	No
23	6.70	31.70	0.03	2.13	No
24	6.70	31.70	0.03	2.13	No
25	6.70	31.70	0.03	2.13	No
26	6.70	31.70	0.03	2.13	No
27	6.70	31.65	0.05	2.13	No
28	6.70	31.61	0.05	2.14	No
29	6.70	31.56	0.06	2.15	No
30	6.70	31.51	0.06	2.15	No
31	6.70	31.47	0.06	2.16	No
32	6.70	31.42	0.06	2.17	No
33	6.70	31.37	0.07	2.17	No
34	6.70	31.33	0.07	2.18	No
35	6.70	31.28	0.07	2.19	No
36	6.70	31.23	0.07	2.19	No
37	6.70	31.19	0.07	2.20	No
38	6.70	31.14	0.07	2.21	No
39	6.70	31.09	0.07	2.21	No
40	6.70	31.05	0.07	2.22	No
41	6.70	31.00	0.07	2.23	No
42	6.90	31.02	0.07	2.11	No
43	6.90	31.04	0.06	2.11	No
44	6.90	31.06	0.06	2.11	No

Table I-1. (continued)

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
45	6.90	31.08	0.06	2.10	No
46	6.90	31.10	0.05	2.10	No
47	6.90	31.12	0.05	2.10	No
48	6.90	31.14	0.05	2.10	No
49	6.90	31.16	0.05	2.09	No
50	6.90	31.18	0.05	2.09	No
51	6.90	31.20	0.04	2.09	No
52	6.90	31.22	0.04	2.08	No
53	6.90	31.24	0.04	2.08	No
54	6.90	31.26	0.04	2.08	No
55	6.90	31.28	0.04	2.08	No
56	6.90	31.30	0.03	2.07	No
57	6.90	31.32	0.03	2.07	No
58	6.90	31.34	0.03	2.07	No
59	6.90	31.36	0.03	2.07	No
60	6.90	31.38	0.03	2.06	No
61	6.90	31.40	0.03	2.06	No
62	7.10	31.40	0.03	1.91	No
63	7.10	31.41	0.02	1.91	No
64	7.10	31.41	0.02	1.91	No
65	7.10	31.42	0.02	1.91	No
66	7.10	31.42	0.02	1.91	No
67	7.10	31.43	0.02	1.90	No
68	7.10	31.43	0.02	1.90	No
69	7.10	31.44	0.02	1.90	No
70	7.10	31.44	0.02	1.90	No
71	7.10	31.45	0.02	1.90	No
72	7.10	31.45	0.02	1.90	No
73	7.10	31.46	0.02	1.90	No
74	7.10	31.47	0.02	1.90	No
75	7.10	31.47	0.02	1.90	No
76	7.10	31.48	0.02	1.90	No
77	7.10	31.48	0.02	1.90	No
78	7.10	31.49	0.02	1.90	No
79	7.10	31.49	0.02	1.90	No
80	7.10	31.50	0.01	1.90	No
81	7.10	31.50	0.01	1.90	No
82	8.00	31.50	0.02	0.81	No
83	8.00	31.50	0.02	0.81	No
84	8.00	31.50	0.02	0.81	No
85	8.00	31.50	0.02	0.81	No
86	8.00	31.50	0.02	0.81	No
87	8.00	31.50	0.02	0.81	No
88	8.00	31.50	0.02	0.81	No
89	8.00	31.50	0.02	0.81	No

Table I-1. (continued)

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
90	8.00	31.50	0.03	0.81	No
91	8.00	31.50	0.03	0.81	No
92	8.00	31.50	0.03	0.81	No
93	8.00	31.50	0.03	0.81	No
94	8.00	31.50	0.03	0.81	No
95	8.00	31.50	0.03	0.81	No
96	8.00	31.50	0.03	0.81	No
97	8.00	31.50	0.03	0.81	No
98	8.00	31.50	0.03	0.81	No
99	8.00	31.50	0.03	0.81	No
100	8.00	31.50	0.03	0.81	No
101	8.00	31.50	0.03	0.81	No
102	8.00	31.50	0.03	0.81	No
103	8.00	31.50	0.04	0.81	No

Table I-2. Ammonia toxicity results for subsegment 090204

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
1	6.75	32.10	0.01	2.05	No
2	6.75	32.10	0.00	2.05	No
3	6.75	32.10	0.00	2.05	No
4	6.75	32.10	0.00	2.05	No
5	6.75	32.10	0.00	2.05	No
6	6.75	32.10	0.00	2.05	No
7	6.75	32.10	0.00	2.05	No
8	6.75	32.10	0.00	2.05	No
9	6.75	32.10	0.00	2.05	No
10	6.75	32.10	0.00	2.05	No
11	6.75	32.02	0.00	2.06	No
12	6.75	31.94	0.00	2.07	No
13	6.75	31.86	0.00	2.08	No
14	6.75	31.78	0.00	2.09	No
15	6.75	31.70	0.00	2.10	No
16	6.70	31.73	0.33	2.12	No
17	6.70	31.75	0.34	2.12	No
18	6.70	31.77	0.34	2.12	No
19	6.70	31.80	0.34	2.11	No
20	6.45	31.80	0.31	2.20	No
21	6.45	31.80	0.28	2.20	No
22	6.45	31.80	0.26	2.20	No
23	6.45	31.80	0.24	2.20	No
24	6.45	31.80	0.22	2.20	No
25	6.45	31.80	0.20	2.20	No
26	6.45	31.80	0.19	2.20	No

Table I-2. (continued)

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
27	6.45	31.80	0.18	2.20	No
28	6.45	31.80	0.17	2.20	No
29	6.45	31.80	0.16	2.20	No
30	6.45	31.80	0.15	2.20	No
31	6.45	31.80	0.14	2.20	No
32	6.45	31.80	0.14	2.20	No
33	6.45	31.80	0.13	2.20	No
34	6.45	31.80	0.13	2.20	No
35	6.45	31.40	0.12	2.26	No
36	6.45	31.00	0.11	2.32	No
37	6.45	30.60	0.10	2.38	No
38	6.45	30.20	0.09	2.44	No
39	6.45	29.80	0.09	2.51	No
40	6.00	30.07	0.16	2.55	No
41	6.00	30.35	0.21	2.50	No
42	6.00	30.62	0.24	2.46	No
43	6.00	30.90	0.27	2.42	No
44	6.35	30.89	0.26	2.36	No
45	6.35	30.88	0.25	2.36	No
46	6.35	30.87	0.24	2.36	No
47	6.35	30.86	0.23	2.37	No
48	6.35	30.85	0.22	2.37	No
49	6.35	30.84	0.21	2.37	No
50	6.35	30.83	0.21	2.37	No
51	6.35	30.82	0.20	2.37	No
52	6.35	30.81	0.19	2.37	No
53	6.35	30.80	0.19	2.37	No
54	6.25	30.80	0.16	2.40	No
55	6.25	30.80	0.15	2.40	No
56	6.25	30.80	0.13	2.40	No
57	6.25	30.80	0.11	2.40	No
58	6.25	30.80	0.10	2.40	No
59	6.25	30.80	0.09	2.40	No
60	6.25	30.80	0.09	2.40	No
61	6.25	30.80	0.08	2.40	No
62	6.25	30.88	0.09	2.38	No
63	6.25	30.95	0.09	2.37	No
64	6.25	31.02	0.10	2.36	No
65	6.25	31.10	0.10	2.35	No
66	6.45	31.35	0.10	2.27	No
67	6.45	31.60	0.09	2.23	No
68	6.75	31.60	0.09	2.12	No
69	6.75	31.60	0.08	2.12	No
70	6.75	31.60	0.08	2.12	No

Table I-2. (continued)

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
71	6.75	31.60	0.07	2.12	No
72	6.75	31.60	0.06	2.12	No
73	6.75	31.60	0.06	2.12	No
74	6.75	31.60	0.06	2.12	No
75	6.75	31.60	0.05	2.12	No
76	6.75	31.60	0.05	2.12	No

Table I-3. Ammonia toxicity results for subsegment 090207

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
1	6.40	28.07	0.08	2.82	No
2	6.40	28.33	0.07	2.77	No
3	6.40	28.60	0.06	2.72	No
4	6.23	29.10	0.04	2.68	No
5	6.23	29.60	0.04	2.59	No
6	6.23	30.10	0.03	2.51	No
7	6.23	30.60	0.03	2.43	No
8	6.43	30.56	0.03	2.39	No
9	6.43	30.52	0.02	2.40	No
10	6.43	30.48	0.02	2.40	No
11	6.43	30.44	0.02	2.41	No
12	6.43	30.40	0.02	2.42	No
13	6.22	30.41	0.02	2.46	No
14	6.22	30.42	0.02	2.46	No
15	6.22	30.42	0.02	2.46	No
16	6.22	30.43	0.02	2.46	No
17	6.22	30.44	0.02	2.46	No
18	6.22	30.45	0.02	2.46	No
19	6.22	30.46	0.03	2.45	No
20	6.22	30.47	0.03	2.45	No
21	6.22	30.48	0.03	2.45	No
22	6.22	30.48	0.03	2.45	No
23	6.22	30.49	0.03	2.45	No
24	6.22	30.50	0.03	2.45	No
25	6.50	30.56	0.03	2.37	No
26	6.50	30.62	0.03	2.36	No
27	6.50	30.69	0.03	2.35	No
28	6.50	30.75	0.03	2.34	No
29	6.50	30.81	0.03	2.33	No
30	6.50	30.88	0.03	2.32	No
31	6.50	30.94	0.04	2.31	No
32	6.50	31.00	0.04	2.30	No
33	6.50	31.00	0.04	2.30	No
34	6.50	31.00	0.04	2.30	No
35	6.50	31.00	0.04	2.30	No

Table I-3. (continued)

Model Element	Average observed pH	Model Temperature (°C)	Predicted NH3-N (mg N/L)	Calculated CCC (mg N/L)	Above CCC?
36	6.50	31.00	0.03	2.30	No
37	6.50	30.88	0.04	2.32	No
38	6.50	30.75	0.04	2.34	No
39	6.50	30.62	0.04	2.36	No
40	6.50	30.50	0.04	2.38	No
41	6.65	30.50	0.04	2.32	No
42	6.65	30.50	0.04	2.32	No
43	6.65	30.50	0.04	2.32	No
44	6.65	30.50	0.04	2.32	No
45	6.65	30.50	0.04	2.32	No
46	6.65	30.50	0.04	2.32	No
47	6.65	30.50	0.04	2.32	No
48	6.65	30.50	0.04	2.32	No
49	6.65	30.50	0.04	2.32	No
50	6.65	30.50	0.04	2.32	No
51	6.65	30.50	0.04	2.32	No
52	6.65	30.50	0.04	2.32	No
53	6.65	30.50	0.04	2.32	No
54	6.65	30.50	0.04	2.32	No
55	6.65	30.50	0.04	2.32	No
56	6.65	30.50	0.04	2.32	No
57	6.65	30.50	0.04	2.32	No
58	6.65	30.50	0.04	2.32	No
59	6.65	30.50	0.04	2.32	No
60	6.65	30.50	0.04	2.32	No
61	6.65	30.50	0.04	2.32	No
62	6.65	30.50	0.04	2.32	No
63	6.65	30.50	0.04	2.32	No
64	6.65	30.60	0.04	2.31	No
65	6.65	30.70	0.04	2.29	No
66	7.00	30.70	0.04	2.08	No
67	7.00	30.70	0.04	2.08	No
68	7.00	30.70	0.04	2.08	No
69	7.00	30.70	0.04	2.08	No
70	7.00	30.70	0.04	2.08	No
71	7.00	30.70	0.04	2.08	No
72	7.00	30.60	0.04	2.10	No
73	7.00	30.50	0.04	2.11	No
74	7.35	30.50	0.04	1.75	No
75	7.35	30.50	0.04	1.75	No
76	7.35	30.50	0.04	1.75	No
77	7.35	30.50	0.04	1.75	No
78	7.35	30.50	0.04	1.75	No
79	7.35	26.25	0.03	2.30	No