CASTOR CREEK WATERSHED TMDL
FOR BIOLOGICAL OXYGEN-DEMAND SUBSTANCES

SUBSEGMENT 081501

TMDL Report

Engineering Section 2
Environmental Technology Division
Office of Environmental Assessment
Louisiana Department of Environmental Quality

Originated: April 16, 2001

Revised: February 21, 2002

EXECUTIVE SUMMARY

A TMDL for oxygen-demand pollutants has been developed for the Castor Creek Watershed based on hydrologic and water quality data available as of March 2001. This TMDL has been developed in accordance with the State's anti-degradation policy (LAC 33:IX.1109). Castor Creek was listed on the court ordered 303(d) list. It is listed as not supporting fish and wildlife propagation. It is, however, meeting its designated uses of Primary and Secondary Contact Recreation. The suspected causes of impairment are organic enrichment/low DO, cadmium, copper, lead, mercury, metals, and salinity/TDS/chlorides. Resource extraction and unknown sources are the suspected sources of impairment.

The ambient monitoring samples for Castor Creek were obtained in 1995-1999 during a period of extreme drought conditions with many dissolved oxygen samples falling below the dissolved oxygen criteria for this waterbody. Also, the water quality survey conducted in July 2000, again during a period of extreme drought conditions revealed dissolved oxygen levels well below criteria. Castor Creek was ranked as high priority (priority 1) on the list for development of a total maximum daily load (TMDL).

Castor Creek was modeled from its headwaters to the spillway near Hwy 4. The Castor Creek watershed is subsegment 081501 of the Ouachita River Basin (Basin 8). Subsegment 081501 is comprised of Castor Creek and more than 36 tributaries.

Castor Creek land use is 57.5% forestry. Castor Creek also has 21% rangeland. Less than 1% of the land is urban with little population growth in the last 10 years.

One of the projection scenarios resulted in a required reduction of more than 100% when the required reduction was differentiated between man-made and natural nonpoint pollution. Therefore, the percentage reductions necessary to meet the DO standards were presented as total nonpoint pollution since a reduction of more than 100% is not possible. A UAA has been proposed for Castor Creek to make the DO standard for Castor Creek 3.0 mg/L June through October and 5.0 mg/L November through May. Therefore, model projections were also performed at those particular seasons and DO criteria. The results of the projection modeling show that the current water quality standard for dissolved oxygen of 5.0 mg/l can be maintained during the current summer critical season with an 75% reduction of total non-point loading. The minimum DO is 5.33 mg/l. The No Load Scenario for summer without a reduction in natural background pollution yields a minimum DO of 3.60 mg/l. This suggests that a more appropriate DO criteria is needed for Castor Creek. The results of an additional summer projection model show that a DO of 3.0 mg/l DO can be maintained with the imposition of a 55% reduction of total nonpoint loading.

Several point sources fall within the subsegment. These facilities were deemed either intermittent stormwater or minor discharges on unnamed tributaries and were not

included in this model. Limits for these small facilities are generally set by state policy or guidelines and can continue as such.

A survey was conducted (July 2000) during a period of severe drought conditions. The Castor Creek watershed was in a condition of low flow. There were no tributaries that had a velocity that could be measured with typical survey equipment. The nonpoint source loads included nonpoint loading not associated with flow.

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

Land use in the Castor Creek watershed is fairly homogeneous. It is primarily forestry and rangeland. TMDLs have been calculated for Castor Creek and are presented in the following tables. Due to the many assumptions made while developing the model, the inherent error within the model algorithms, and the scale of a watershed-based model, the results of the model should be used only as an aid in making water quality based decisions.

Current Standard:	Summer season (May - Oct)		Winter season (Nov - Apr)	
	BOD Loading (lbs/day)	% of TMDL	BOD Loading (lbs/day)	% of TMDL
Total point source allocations (WLA)	0	0	0	0
Point source margin of safety (MOS)	0	0	0	0
Headwater/Tributary Loads	2	0.03	25	0.01
Benthic Loads	4,807	79.77	2,442	98.52
Incremental Loads	12	0.20	12	0.47
Nonpoint source margin of safety (MOS)	1,205	20.00	619	20.00
Total maximum daily load (TMDL)	6,026	100	3,098	100

Proposed Standard:	Summer season (Jun - Oct)		Winter season (Nov - May)	
	BOD Loading (lbs/day)	% of TMDL	BOD Loading (lbs/day)	% of TMDL
Total point source allocations (WLA)	0	0	0	0
Point source margin of safety (MOS)	0	0	0	0
Headwater/Tributary Loads	6	0.05	30	0.52
Benthic Loads	8,965	79.78	4,583	79.15
Incremental Loads	19	0.17	19	0.33
Nonpoint source margin of safety (MOS)	2,247	20.00	1,158	20.00
Total maximum daily load (TMDL)	11,237	100	5,790	100

LDEQ will work with other agencies such as local Soil Conservation Districts to implement agricultural best management practices in the watershed through the 319 programs.

Louisiana's Nonpoint Source Pollution Management Plan outlines Louisiana's approach to nonpoint source pollutions control. It describes the types of projects that have been and will be implemented, and it presents information on BMPs that have been determined to be technically feasible and effective in reduction of pollutant loadings and runoff. LDEQ will also continue to monitor the waters to determine whether standards are being attained. In accordance with Section 106 of the federal Clean Water Act and under the authority of the Louisiana Environmental Quality Act, the LDEQ has established a comprehensive program for monitoring the quality of the state's surface waters. The LDEQ Surveillance Section collects surface water samples at various locations, utilizing appropriate sampling methods and procedures for ensuring the quality of the data collected. The objectives of the surface water monitoring program are to determine the quality of the state's surface waters, to develop a long-term data base for water quality trend analysis, and to monitor the effectiveness of pollution controls. The data obtained through the surface water monitoring program is used to develop the state's biennial 305(b) report (*Water Quality Inventory*) and the 303(d) list of impaired waters. This information is also utilized in establishing priorities for the LDEQ nonpoint source program.

The LDEQ has implemented a watershed approach to surface water quality monitoring. Through this approach, the entire state is sampled over a five-year cycle with two targeted basins sampled each year. Long-term trend monitoring sites at various locations on the larger rivers and Lake Pontchartrain are sampled throughout the five-year cycle. Sampling is conducted on a monthly basis or more frequently if necessary to yield at least 12 samples per site each year. Sampling sites are located where they are considered to be representative of the waterbody. Under the current monitoring schedule, targeted basins follow the TMDL priorities. In this manner, the first TMDLs will have been implemented by the time the first priority basins will be monitored again in the second five-year cycle. This will allow the LDEQ to determine whether there has been any improvement in water quality following implementation of the TMDLs. As the monitoring results are evaluated at the end of each year, waterbodies may be added to or removed from the 303(d) list. The sampling schedule for the next five years is shown below.

2002 - Red and Sabine River Basins
2003 - Mermentau and Vermilion-Teche River Basins
2004 - Calcasieu and Ouachita River Basins
2005 - Barataria and Terrebonne Basins
2006 - Lake Pontchartrain Basin and Pearl River Basin
(Atchafalaya and Mississippi Rivers will be sampled continuously.)

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1.0 Introduction

Castor Creek, subsegment 081501, of the Ouachita Basin was listed on the court-ordered 303(d) list. It is listed as not supporting fish and wildlife propagation. It is, however, meeting its designated uses of Primary and Secondary Contact Recreation. The suspected causes of impairment are organic enrichment/low DO, cadmium, copper, lead, mercury, metals, and salinity/TDS/chlorides. Resource extraction and unknown sources are the suspected sources of impairment. Because of the impairment it requires the development of a total maximum daily load (TMDL) for dissolved oxygen. The 1999 ambient water quality sampling of Castor Creek was done during a period of extreme drought conditions that significantly contributed to the low-flow, low-dissolved oxygen conditions found. A calibrated water quality model for the Castor Creek watershed was developed and projections for both current and proposed dissolved oxygen standards were run to quantify the nonpoint source load allocations (LAs) required to meet established dissolved oxygen criteria. This report presents the model development and results.

2.0 Study Area Description

2.1 Ouachita Basin

The Ouachita River's source is found in the Ouachita Mountains of west central Arkansas near the Oklahoma border. The Ouachita River flows south through northeastern Louisiana and joins with the Tensas River to form the Black river, which empties into the Red River. The Ouachita Basin covers over 10,000 square miles of drainage area. Most of the basin consists of rich, alluvial plains cultivated in cotton and soybeans. The northwest corner of the basin is forested in pine, which is commercially harvested. (LA DEQ, 1996).

2.2 Castor Creek Watershed, Subsegment 081501

This area is typical of the northwest corner of the basin and is primarily used for forestry as documented in Table 1 (LADEQ, 2000). Segment 081501 is comprised of Castor Creek as the main stem to its confluence with the Dugdemona River and Little River. The modeled portion of Castor Creek receives intermittent flow from Flat Creek.

Average annual precipitation in the segment, based on the nearest Louisiana Climatic Station, is 54 inches based on a 30-year record (LSU, 2001). Land use along Castor Creek is largely forestry. Land uses in Segment 081501 are shown in Table 1 (LA DEQ, 2000). These landuse figures are taken from USGS GAP database, 1999.

Table 1. Land uses in Subsegment 081501 of the Ouachita Basin

Land Type	Acres	Percent Land Use
Agricultural	17,230	4.21
Forest Land	235,045	57.46
Rangeland	86,592	21.17
Wetland	58,358	14.27
Urban	2,332	0.57
Water	9,496	2.32

2.3 Water Quality Standards

Water quality standards for the State of Louisiana have been defined (LA DEQ, 2000). The standards are defined according to designated uses of the waterbodies. Both general narrative standards and numerical criteria have been defined. General standards include prevention of objectionable color, taste and odor, solids, toxics, oil and grease, foam, and nutrient conditions as well as aesthetic degradation. The numerical criteria are shown in Table 2.

Table 2. Current Numerical Criteria for Castor Creek (LA DEQ, 2000)

Parameter	Criteria
Cl, mg/L	25
SO_4, mg/L	25
pH	6.0-8.5
BAC	1
Temperature, deg Celsius	32
TDS, mg/L	100

Designated uses for Castor Creek from its headwaters to the Calcasieu River (waterbody subsegment 081501) include primary contact recreation, secondary contact recreation, and propagation of fish and wildlife.

Castor Creek was assessed in 2000 as a waterbody not meeting the dissolved oxygen criteria. Section 303(d) of the Clean Water Act requires the identification, listing, ranking and development of TMDLs for waters that do not meet applicable water quality standards after implementation of technology-based controls. Current dissolved oxygen criteria are shown in Table 3. Waterbodies are placed on the 303(d) list based on the comparison of data from ambient monthly samples and the criteria. The recent ambient water quality sampling period was during a drought, contributing or exacerbating low-flow, low-dissolved oxygen conditions.

Table 3. Seasonal Dissolved Oxygen Criteria for Castor Creek, (mg/L)

Current:	
May – October	5.0
November - April	5.0
Proposed:	
June – October	3.0
November - May	5.0

2.4 Discharger Inventory

All of the dischargers located in this watershed are small and discharge into tributaries of Castor Creek and need not be included in a model of this scale. It is unlikely that they will have an impact on the targeted waterbody due to the small load and/or the distance from the waterbody named in the 303(d) lists. They fall within one of several state or regional policies that govern permit limitations. These dischargers will be given effluent limitations according to the state policy. Current permit information and discharge monitoring reports were reviewed for all of these facilities. A listing of the facilities located in this basin is found in table 4.

Table 4. Facilities located in subsegment 081501.

Name	File Number	Waterbody	Expected Flow	Limits (BOD5 /TSS) (units mg/L)
Louisiana Pacific	LA0007668	Unnamed Creek to Chickasaw Creek	40,000 gpd	20/30
Town of Olla	LA0032379	Bear Branch to Chickasaw Creek	48,000 gpd	20/20
Town of Urania	LA0040991	Chickasaw Creek	28,000 gpd	45/45
Hunt Plywood	LA0098884	Unnamed Creek to Chickasaw Creek	500 gpd	45/45
Town of Chatham	LA0049905	Unnamed Ditch to Edwards Creek	80,000 gpd	30/90
Kelly Elementary	LAG530949	Local drainage to Black Bayou	3,125 gpd	45/45
Columbia Heights Sewer District	LA0060712	Hurricane Creek to Black Bayou	25,500 gpd	10/15

2.5 Previous Studies and Other Data

The majority of the data used for this project was obtained during a watershed survey conducted in July 2000. Discharge data, cross-section data, field data, and lab water quality data from the watershed survey are presented in Appendix C. The Ultimate BOD plots are also in Appendix C.

3.0 Documentation of Calibration Model

3.1 Model Description and Input Data Documentation

3.1.1 Program Description

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

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

Over the next three years, several versions of the model evolved in response to specific client needs. In March, 1976, the Southeast Michigan Council of Governments (SEMCOG) contracted with Water Resources Engineers, Inc. to make further

modifications and to combine the best features of the existing versions of QUAL-II into a single model. That became known as the QUAL-II/SEMCOG version.

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

In 1999, the Louisiana Department of Environmental Quality and Wiland Consulting, Inc. developed LA-QUAL based on QUAL-TX Version 3.4. The program was converted from a DOS-based program to a Windows-based program with a graphical interface and enhanced graphic output. Other program modifications specific to the needs of Louisiana and the Louisiana DEQ were also made in 2000 and 2001. LA-QUAL is a user-oriented model and is intended to provide the basis for evaluating total maximum daily loads in the State of Louisiana.

3.1.2 Model Schematic or Vector Diagram

A diagram of the modeled area is presented in Appendix A. The vector diagram shows the reach/element design and the locations of major tributaries. The modeled segment consists of 36 reaches numbered in ascending order from headwater to just above the spillway near Hwy 4. The modeled area is characterized by the 8 sample sites starting from the spillway and working up to the headwater of Castor Creek. A digitized map of the stream showing river kilometers, locations of cross-sections and July 2000 survey sampling sites is included in Appendix F.

3.1.3 Hydrology and Stream Geometry and Sources

LADEQ had a bi-monthly water quality sampling station on Castor Creek from Jan 1995 to May 1998 and a monthly sampling site during 1999. Data collected during an Eularian survey conducted July 2000, was used to establish the input for the model calibration and is presented in Appendix C.

The stream geometry at the headwater is shallow and narrow with no flow at site 8. The stream in general remains similar geometrically throughout the modeled area. There was inflow noted at site 3.

The reach and element design for the Castor Creek model was made using a 0.20 km element length. The total number of reaches and elements was within the limitations of the model. “The current version is dimensioned for a maximum of 200 reaches, 100 headwaters, 300 wasteloads and 3000 elements” (LA-QUAL User’s Manual). The final

design incorporated 36 reaches, 1 headwater, and 1295 elements. A simple spreadsheet was used to calculate the reach length, element length, and cumulative number of elements at the bottom of each reach. This spreadsheet is presented in Appendix A.

Rather than directly inputting the widths and depths of the stream, the model requires that the advective hydraulic characteristics (a modification of the Leopold Coefficients and Exponents) be entered. Since the measured widths and depths from the hydrologic survey were taken during zero flow conditions, they were input as the modified Leopold equation constants. The exponent and coefficient values were obtained from calibration.

3.1.4 Headwater

Since the survey was conducted during drought conditions, no measureable headwater flow was obtainable with the current instrumentation. Therefore, a minimum flow of 0.0001 cms or 0.00353 cfs was used for headwater.

3.1.5 Water Quality Input Data and Their Sources

Water quality data collected during the July 2000 survey on Castor Creek and its tributaries was entered in a spreadsheet for ease of analysis. Overall, water quality was good with all the current numerical criteria being met for this modeled area except DO.

Diurnal DO variation was noted and attributed to two causes: temperature induced and possible algal production and respiration. Nutrients and suspended solids were low. Dissolved solids were relatively high.

The ultimate BOD, CBOD, NBOD, and corresponding decay rates were computed for each sample taken. A complete listing is presented in Appendix C. This data was the primary source for the model calibration input data for initial conditions, decay rates, headwater temperature, and headwater DO.

3.1.5.1 Temperature Correction of Kinetics, Data Type 4

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

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

Where:

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

(QUAL2E Documentation and User Model, 1987)

In absence of specified values for data type 4, the model uses default values. A complete listing of these values can be found in the LA-QUAL for Windows User's Manual (LDEQ, 2000).

3.1.5.2 Initial Conditions, Data Type 11

The initial conditions are used to reduce the number of iterations required by the model. The values required for this model were temperature and DO by reach. The initial condition input values were determined from the July 2000 survey stations located on Castor Creek. See Appendix C for a composite of the survey water quality data.

3.1.5.3 Reaeration Rates, Data Type 12

The 0.7/ Depth was used as the reaeration equation for all reaches due to the extremely small velocity. 0.7/Depth is the metric equivalent to 2.3/Depth in English units.

3.1.5.4 Sediment Oxygen Demand, Data Type 12

Values of SOD from the Louisiana Technical Procedures Manual (LTP), were used in several preliminary calibration runs. These values have been established for wasteload allocation modeling of short stream reaches directly below treatment plant outfalls and were not suitable for a watershed level model. SOD values were therefore achieved through calibration.

3.1.5.5 Carbonaceous BOD Decay and Settling Rates, Data Type 12

These rates are labeled Aerobic BOD Decay and BOD Settling in LA-Qual. The CBOD bottle rates were used for decay rates in the model. The settling rates were achieved through calibration. The decay and settling rates used for each reach are shown in Appendix A.

3.1.5.6 Nitrogenous Decay and Settling Rates, Data Type 13

These rates are labeled NCM decay and NCM Settling in LA-QUAL. The Org-N decay and settling rates were used to simulate NBOD rates because the Org-N decay rate is the limiting rate in the nitrogen cycle and is the part of NBOD that is settleable. The NBOD bottle rates were used for decay rates in the model. The settling rates were achieved through calibration. The decay and settling rates used for each reach are shown in Appendix A.

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

The incremental conditions are used in the calibration to represent nonpoint source loads associated with flows. Incremental inflow was determined to be present.

General indicators of groundwater inflow are low DO, an increase in conductivity and a decrease in temperature. All of these indicators are present at site 3.

3.1.5.8 Nonpoint Sources, Data Type 19

Nonpoint source loads, which are not associated with a flow, are input into this part of the model. These loads are used to simulate loads from the stream bed benthic load that have been resuspended into the water column. The values used in the model were determined by calibration. The data and sources are presented in Appendix A.

3.1.5.9 Headwaters, Data Types 20, 21, and 22

A minimal flow of 0.0001 cms or 0.00353 cfs was used for the headwater flow. The survey was conducted during severe drought conditions, and the survey crew could not determine any measureable headwater flow.

3.1.5.10 Wasteloads, Data Types 24, 25, and 26

The model uses wasteloads to represent treatment plant effluent or unmodeled tributaries. None of the tributaries were found to have measurable flow and therefore, were not modeled. There are no treatment plant discharges directly into Castor Creek.

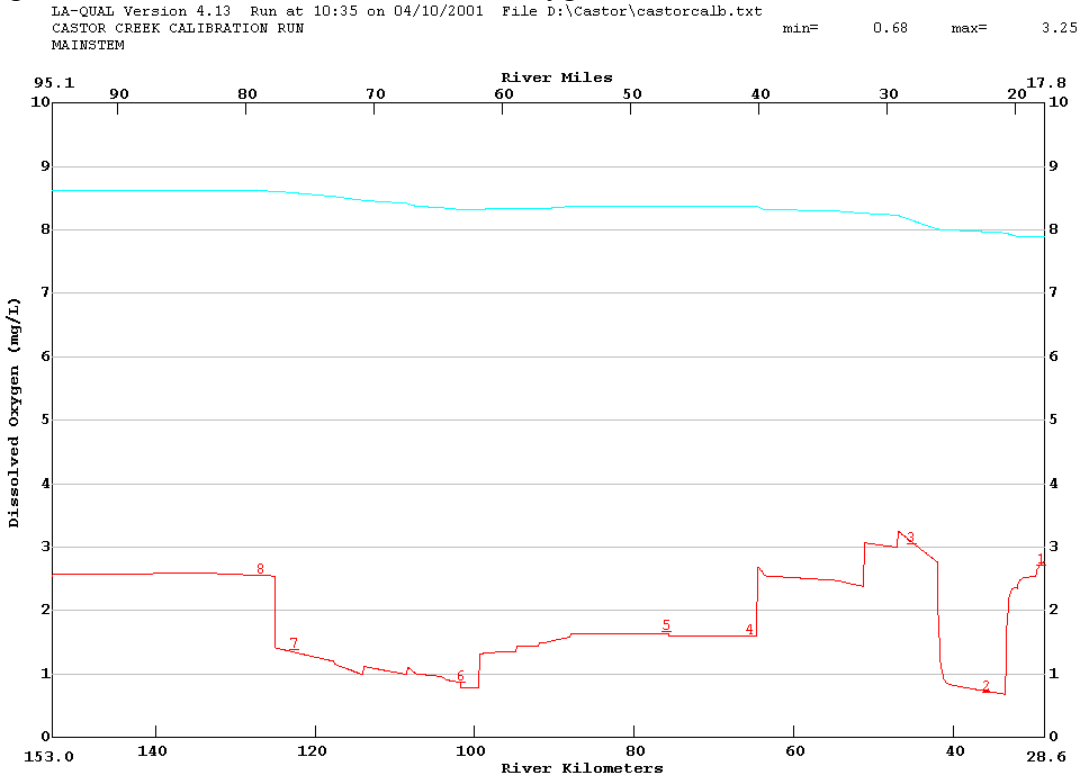
3.1.5.11 Boundary Conditions, Data Type 27

This waterbody was not tidally influenced. Reach 36 is the bottom of the modeled segment and characterized by site 1.

3.2 Model Discussion and Results

The calibration model input and output is presented in Appendix A. The overlay plotting option was used to determine if calibration had been achieved. A plot of the dissolved oxygen concentration versus river kilometer is presented in Figure 1.

Figure 1. Calibration Model--Dissolved Oxygen versus River Kilometer



Castor Creek main stem extends from its headwaters to the spillway near Hwy 4 and is represented by Reaches 1 - 36. The model simulates the measured values of DO adequately at the one meter depth. The survey data shows that in July 2000, the current DO standard of 5.0 mg/L was not being met on the modeled portion of Castor Creek. The calibration model went through the measured survey data values using reasonable model input values and was determined to be a reasonable calibration.

4.0 Water Quality Projections

The traditional summer and winter projections loading scenarios were performed for both the current and proposed DO standards. These scenarios were:

a. Summer Projection Scenario – Reduced man-made nonpoint loads at current summer season critical conditions.
b. Winter Projection Scenario – Reduced man-made nonpoint loads at current winter season critical conditions.

c. Summer Projection Scenario – Reduced man-made nonpoint loads at proposed summer season critical conditions.
d. Winter Projection Scenario – Reduced man-made nonpoint loads at proposed winter season critical conditions.

4.1 Critical Conditions

4.1.1 Seasonality and Margin of Safety

The Clean Water Act requires the consideration of seasonal variation of conditions affecting the constituent of concern, and the inclusion of a margin of safety (MOS) in the development of a TMDL. For the Castor Creek TMDL, an analysis of LDEQ ambient data has been employed to determine critical seasonal conditions and an appropriate margin of safety has been used.

Critical conditions for dissolved oxygen were determined for Castor Creek using water quality data from the station on the LDEQ Ambient Monitoring Network. The critical conditions for dissolved oxygen concentrations were those of negligible nonpoint run-off and low stream flow combined with high temperature.

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

This phenomenon was interpreted in TMDL modeling by assuming that the annual nonpoint loading, rather than loading for any particular day, is responsible for the accumulated benthic blanket of the bayou, which is, in turn, expressed as SOD and/or resuspended BOD in the model. This accumulated loading has its greatest impact on the bayou during periods of higher temperature and lower flow. The manmade portion of the NPS loading is the difference between the calibration load and the reference stream load where the calibration load is higher.

Critical summer conditions were simulated in the Castor Creek oxygen demand TMDL projection modeling by a seasonal 7Q10 for all headwaters as stated in the Louisiana Technical Procedures Manual and a 90th percentile temperature for the summer season. Incremental flow was not present. Critical winter conditions were simulated by using a seasonal 7Q10 as stated in the Louisiana Technical Procedures Manual and a 90th percentile temperature. The table below contains the parameters used for the various current and proposed seasons.

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

4.1.2 Hydrology and Stream Geometry and Sources

The headwater flows used in all the projection scenarios were based on the summer and winter defaults listed in the Louisiana Technical Procedures Manual (LTP). All incremental flows were assumed to be present during critical flow periods since they were present during drought conditions. This assumption was based on the survey data taken at drought conditions.

Rather than directly inputting the widths and depths of the stream, the model requires that the advective hydraulic characteristics (a modification of the Leopold Coefficients and Exponents) be entered. Since the velocity was zero for the 2000 survey, the measured widths and depths from the hydrologic survey were input as the modified Leopold equation constants. The coefficients and exponents used were the same as calibration.

4.1.3 Water Quality Input Data and Their Sources

The initial condition temperatures were set to the 90th percentile critical season temperature in accordance with the LTP. Critical temperatures for each season were determined from the temperature data collected by LADEQ as part of its current ambient monitoring strategy. The 90th percentile temperature for each season was computed for LADEQ water quality ambient station #0332 on Castor Creek from January 1995 to May 1998. This represents 3.5 years of record. The temperature analysis spreadsheet is shown in Appendix B. The dissolved oxygen values for the initial conditions were set at 90% of the DO saturation at the 90th percentile temperature for the season.

The CBOD decay and settling rates as well as the NBOD decay and settling rates, were held constant at the calibration rates. The reaeration rates determined from calibration were used in the projections. The data and calculations are shown in Appendix B.

The incremental conditions are normally used in the calibration to represent nonpoint source loads associated with flows. For the projection and scenario runs, the incremental flows were also assumed to be present because of their presence during the severe drought conditions. Any small flows, such as individual sewage package plants are assumed to be susceptible to evaporation or groundwater recharge.

The headwater UCBOD and UNBOD used in all the projection scenarios were taken from the July 2000 survey data. The temperature used was the 90th percentile critical season temperature determined from the LADEQ ambient monitoring station on Castor Creek (Site # 0332). The DO was 90% of the DO saturation at the 90th percentile temperature for the season determined from the same site. The period of record used was January 1995 to May 1998.

4.1.3.1 Sediment Oxygen Demand, Data Type 12

In the summer and winter projections, the man-made SOD was reduced based on the dissolved oxygen criteria set for the projection. These reductions were determined using the calibrated values for SOD and the total benthic natural loading of 2.0 gm O2/m2/day. A percentage of each loading component was calculated by comparison to the total calibration benthic value. The natural benthic value was subtracted from the total calibration benthic load to determine the man-made benthic loading value. These percentages were then applied to the percentage of man-made loading value, and the SOD loading portion of the reduced man-made benthic loading were determined by adding the SOD portion of the man-made benthic loading to the SOD portion of the background benthic loading.

4.1.3.2 Nonpoint Sources, Data Type 19

The resuspended man-made CBOD and NBOD loading was reduced by 75% in the current summer projection scenario to meet the summer water quality criterion for dissolved oxygen. The resuspended man-made CBOD and NBOD loading was reduced by 55% in the proposed summer projection scenario to meet the summer water quality criterion for dissolved oxygen. The stream is projected to meet criteria during both the current and proposed winter seasons with the same reductions used for the respective summer projections. These reductions were determined using the calibrated values for Nonpoint CBOD & NBOD and the total benthic natural loading of 2.0 gm O2/m2/day. A percentage of each loading component was calculated by comparison to the total calibration benthic value. The natural benthic value was subtracted from the total calibration benthic load to determine the man-made benthic loading value. These percentages were then applied to the percentage of man-made loading value, and the CBOD and NBOD loading portions of the reduced man-made benthic loading were determined by adding the CBOD and NBOD portions of the man-made benthic loading to the CBOD and NBOD portions, respectfully, of the background benthic loading. These calculations are shown in Appendix B. The value and sources of CBOD and NBOD for each projection run are presented in Appendix B.

4.1.3.3 Wasteloads, Data Types 24, 25, and 26

There were no significant dischargers to the mainstem. Flat Creek was added as a wasteload to the mainstem.

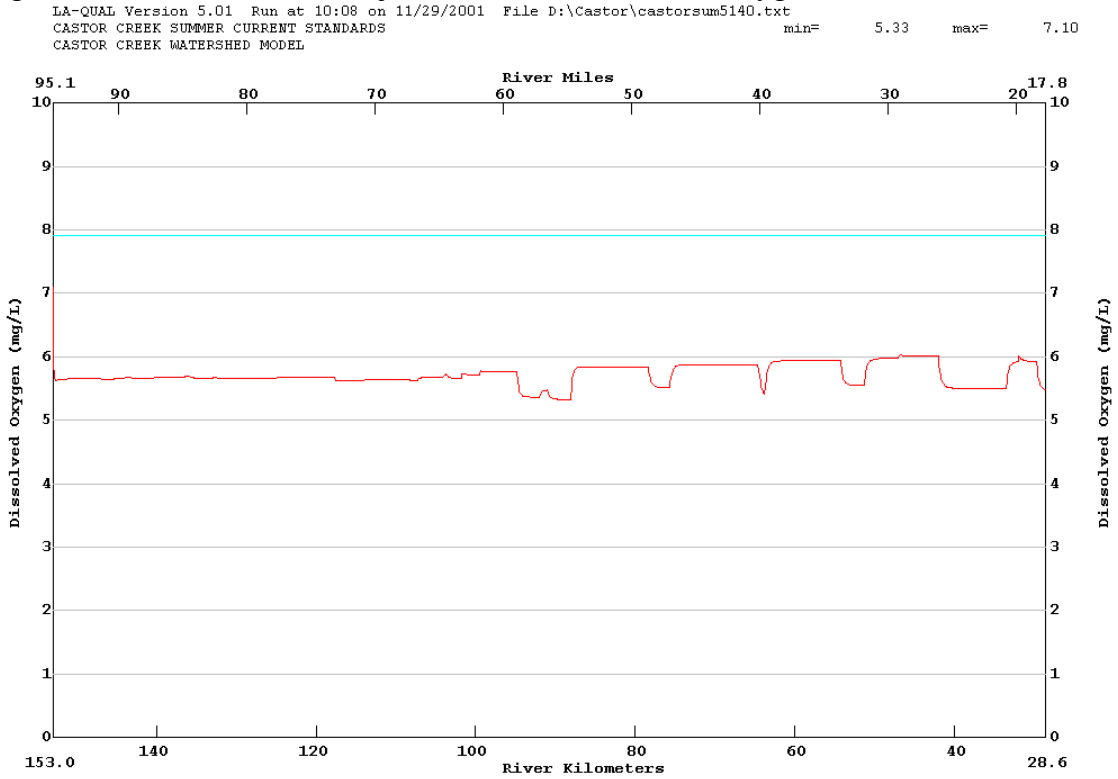
4.2 Projection Model Discussion and Results

The projection model inputs and output data sets are presented in Appendix B.

4.2.1 Summer Projections

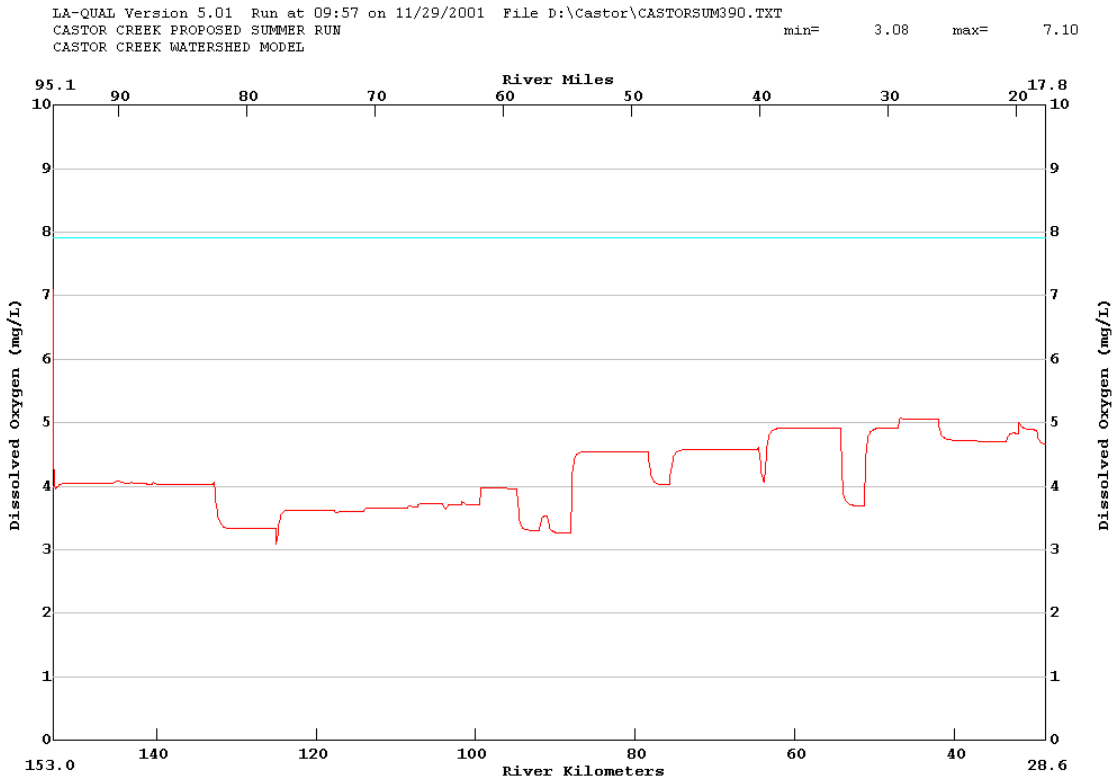
Summer projections were run for the current standard of 5.0 mg/L May – October. In order to meet the 5.0 mg/L standard, a 75% reduction of total nonpoint loading is necessary. As shown in the output graph, the bayou meets the dissolved oxygen criterion. The minimum DO on the main stem is 5.33 mg/L. A graph of the dissolved oxygen concentration versus river kilometer for the summer projection is presented in Figure 2.

Figure 2. Current Summer Projection Model--Dissolved Oxygen versus River Kilometer



Summer projections were run for the proposed standard of 3.0 mg/L June – October. In order to meet the 3.0 mg/L standard, a 55% reduction of total nonpoint sources is necessary. As shown in the output graph, the bayou meets the dissolved oxygen criterion. The minimum DO on the main stem is 3.08 mg/L. A graph of the dissolved oxygen concentration versus river kilometer for the summer projection is presented in Figure 3.

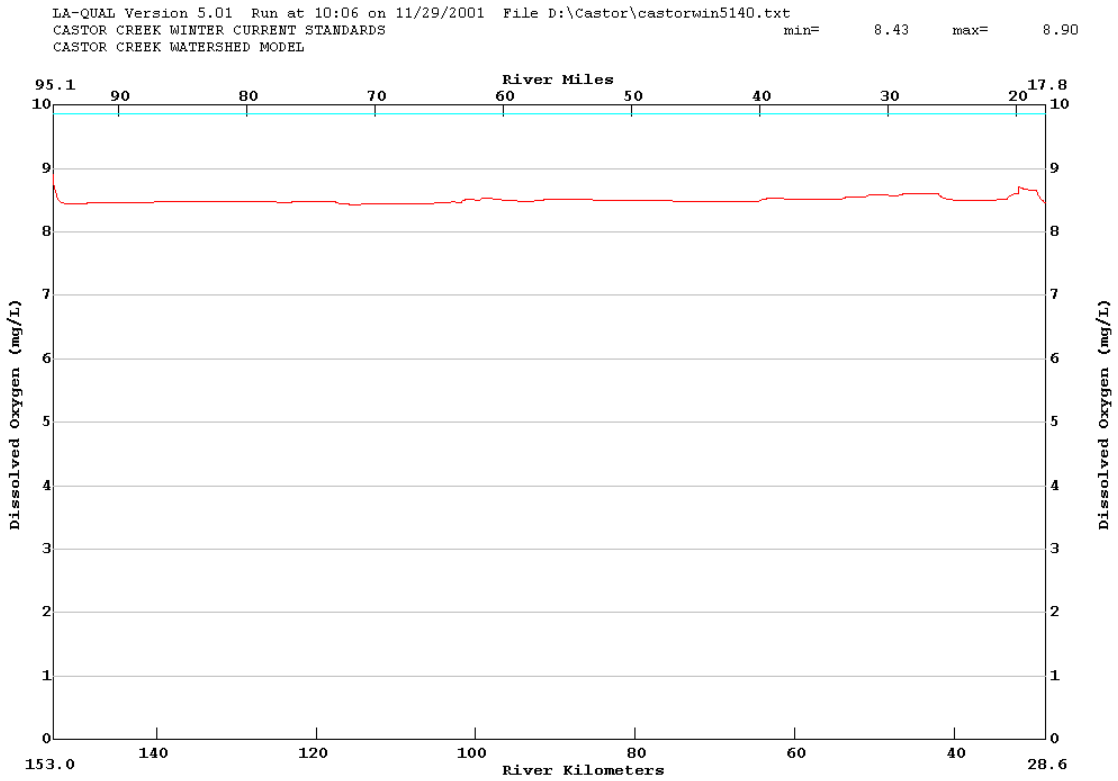
Figure 3. Proposed Summer Projection Model--Dissolved Oxygen versus River Kilometer



4.2.2 Winter Projection

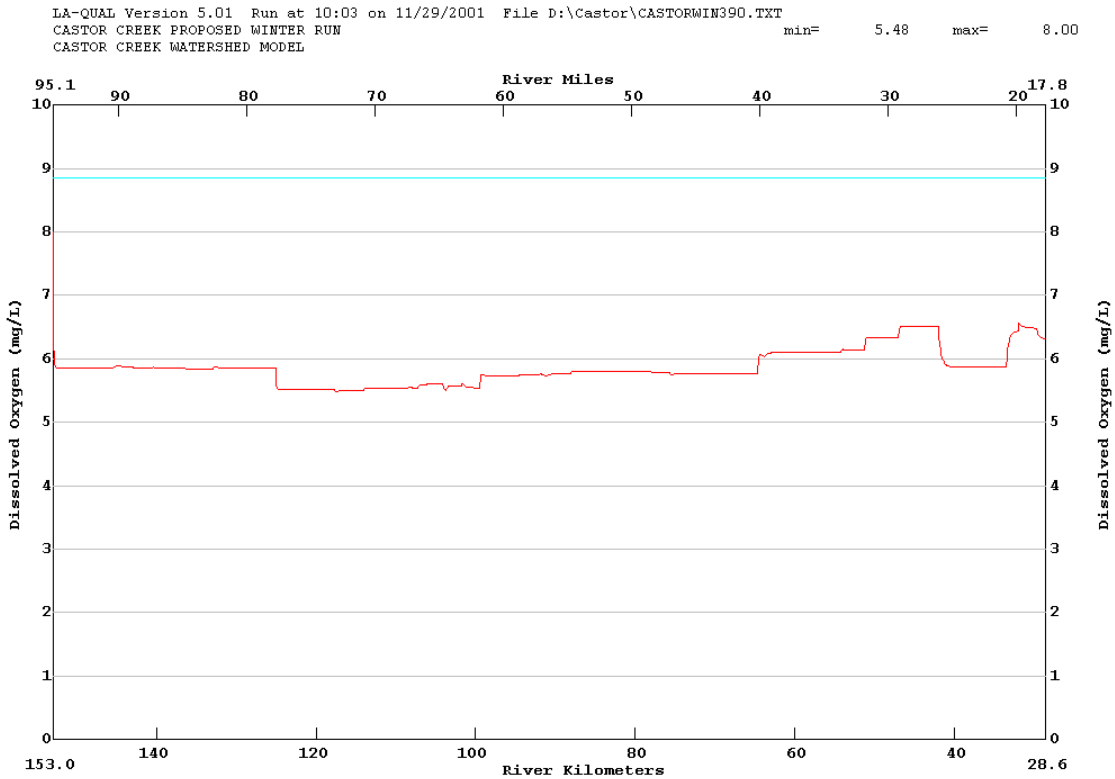
Winter projections were run at both the current and proposed standard. The current standard is 5.0 mg/L November - April. As shown in the output graph, the bayou meets the DO criterion with a 75% reduction in total loading. The minimum DO on the main stem is 8.43 mg/L. A graph of the projected winter dissolved oxygen concentration versus river kilometer is presented in Figure 4.

Figure 4. Current Winter Projection Model--Dissolved Oxygen versus River Kilometer



The proposed standard is 5.0 mg/L November - May. As shown in the output graph, the bayou meets the DO criterion with a 55% reduction in total non-point loading. The minimum DO on the main stem is 5.48 mg/L. A graph of the projected winter dissolved oxygen concentration versus river kilometer is presented in Figure 5.

Figure 5. Proposed Winter Projection Model--Dissolved Oxygen versus River Kilometer



4.3 Calculated TMDLs, WLAs and LAs

TMDLs have been calculated for the current and proposed summer and winter projection runs. They are presented in Appendix E. A summary of the loads for the current summer and winter projections is presented in Table 5. A summary of the loads for the proposed summer and winter projections is presented in Table 6.

Table 5. Seasonal Total Maximum Daily Load Summaries—Current Criteria

ALLOCATION	SUMMER (MAY-OCT) DO criterion=5.0 mg/L BOD (lbs/day)	WINTER (NOV-APR) DO criterion=5.0 mg/L BOD (lbs/day)
Point Source WLA	0	0
Headwater/Tributary Loads	2	25
Benthic Loads	4,807	2,442
Incremental Loads	12	12
Margin of Safety	1,205	619
TMDL = WLA + LA + MOS	6,026	3,098

Table 6. Seasonal Total Maximum Daily Load Summaries—Proposed Criteria

ALLOCATION	SUMMER (JUN-OCT) DO criterion=3.0 mg/L BOD (lbs/day)	WINTER (NOV-MAY) DO criterion=5.0 mg/L BOD (lbs/day)
Point Source WLA	0	0
Headwater/Tributary Loads	6	30
Benthic Loads	8,965	4,583
Incremental Loads	19	19
Margin of Safety	2,247	1,158
TMDL = WLA + LA + MOS	11,237	5,790

4.3.1 Outline of TMDL calculations

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

- The natural background benthic loading was estimated from reference stream NBOD, CBOD, and SOD data.
- The calibration anthropogenic (man-made) benthic loading was determined as follows:
  - Calibration nonpoint CBOD and NBOD (resuspension), and SOD were summed for each reach as gm O_2/m^2-day to get the total calibration benthic loading.
  - The natural background benthic loading was subtracted from the total calibration benthic loading to get the total anthropogenic (man-made) calibration benthic loading.
- Projection runs were made with:
  - Headwater flows at seasonal 7Q10 or 0.1(summer)/1.0(winter) cfs, whichever was greater.
  - Headwater concentrations of CBOD, NBOD, and DO at calibration levels.
- For each reach, the nonpoint CBOD and NBOD (resuspension) were adjusted to bring the projected in-stream dissolved oxygen into compliance with criteria. No additional explicit margin of safety was employed for nonpoint loading. The loading capacity and percent reduction of nonpoint were calculated as follows:
  - The total projection benthic loading at 20°C was calculated as the sum of projection NBOD, CBOD, and SOD expressed as gm O_2/m^2-day.
  - The natural background benthic loading was subtracted from the total projection benthic loading to get the total anthropogenic (man-made) projection benthic loading.
  - The total anthropogenic projection benthic loading was subtracted from the total calibration anthropogenic benthic loading and that number divided by the total calibration anthropogenic benthic loading to obtain the

percent reduction of nonpoint loading needed to achieve the in-stream dissolved oxygen criteria.

- The total projection benthic loading for each reach was calculated as follows:
  - The projection SOD at 20°C was adjusted to stream critical temperature.
  - The projection CBOD, NBOD, and SOD were summed to get the total benthic loading at critical stream temperature in lb/d for each reach.
- The total stream loading capacity at critical stream temperature was calculated as the sum of:
  - Headwater CBOD and NBOD loading in lb/d.
  - Projection benthic loading for all reaches of the stream in lb/d.
  - Total point source CBOD and NBOD loading in lb/d.
  - The facility margin of safety.

The TMDL for the Castor Creek watershed was set equal to the total stream loading capacity.

5.0 Sensitivity Analyses

All modeling studies necessarily involve uncertainty and some degree of approximation. It is therefore of value to consider the sensitivity of the model output to changes in model coefficients, and in the hypothesized relationships among the parameters of the model. The LA-QUAL model allows multiple parameters to be varied with a single run. The model adjusts each parameter up or down by the percentage given in the input set. The rest of the parameters listed in the sensitivity section are held at their original value. Thus the sensitivity of each parameter is reviewed separately. A sensitivity analysis was performed on the calibration. The sensitivity of the model's minimum DO to these parameters is presented in Table 7. Parameters were varied by +/- 30%, except temperature, which was adjusted +/- 2 degrees Centigrade. The calibration minimum DO was 0.68 mg/L.

Table 7. Summary of Calibration Model Sensitivity Analysis

	Positive Changes in parameter			**Negative Changes in parameter**		
Parameter	% change	Minimum DO (mg/l)	Percentage Difference	% change	Minimum DO (mg/l)	Percentage Difference
Stream Reaeration	-30.0	0.00	-100.0	30.0	2.24	**227.8**
Benthal Demand	-30.0	2.55	272.6	30.0	0.00	-100.0
Initial Temperature	-2 deg C	1.49	117.2	2 deg C	0.00	-100.0
BOD Decay Rate	-30.0	0.71	**3.6**	30.0	0.66	-3.1
BOD Settling Rate	-30.0	0.66	-3.4	30.0	0.70	**2.5**
Nonconservative Settling	-30.0	0.68	-0.7	30.0	0.69	**0.5**
Nonconservative Decay	-30.0	0.69	0.6	30.0	0.68	-0.5

As shown in the summary table reaeration, benthal demand, and initial temperature are the parameters to which DO is most sensitive (272.6% to –100.0%). BOD Decay, BOD Settling, NBOD Settling, and NBOD Decay are slightly sensitive with variations ranging from –3.4% to 3.6%.

6.0 Conclusions

This TMDL has been developed in accordance with the State's anti-degradation policy (LAC 33:IX.1109).

The results of the model summer projections show that the current water quality standard for dissolved oxygen for Castor Creek (WQ Subsegment 081501) of 5.0 mg/L can be maintained during the summer critical season, (May – October) with a 75% reduction in total loading.

The results of the current winter projection model show that the water quality criterion for dissolved oxygen for Castor Creek of 5.0 mg/L can be maintained during the winter critical season, (November – April). To achieve the current summer standard, a 75% reduction in total non-point loading is required. This is indicative that the current standard of 5.0 mg/l year-round is not appropriate for Castor Creek.

The results of the proposed summer projections show that the proposed water quality standard for dissolved oxygen for Castor Creek (WQ Subsegment 081501) of 3.0 mg/L can be maintained during the summer critical season, (June – October) with a 55% reduction in total loading.

The results of the proposed winter projection model show that the water quality criterion for dissolved oxygen for Castor Creek of 5.0 mg/L can be maintained during the winter critical season, (November – May). To achieve the proposed summer standard, a 55% reduction in total loading is required.

Continued monitoring is recommended to see how well the nonpoint reductions improve the dissolved oxygen values. Additional modeling may be required if the improvements do not meet expectations.

LDEQ will work with other agencies such as local Soil and Water Conservation Districts to implement agricultural best management practices in the watershed through the 319 programs. Louisiana's Nonpoint Source Pollution Management Plan outlines Louisiana's approach to nonpoint source pollution control. It describes the types of projects that have been and will be implemented, and it presents information on BMPs that have been determined to be technically feasible and effective in reduction of pollutant loadings and runoff.

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

The LDEQ has implemented a watershed approach to surface water quality monitoring. Through this approach, the entire state is sampled over a five-year cycle with two targeted basins sampled each year. Long-term trend monitoring sites at various locations on the larger rivers and Lake Pontchartrain are sampled throughout the five-year cycle. Sampling is conducted on a monthly basis or more frequently if necessary to yield at least 12 samples per site each year. Sampling sites are located where they are considered to be representative of the waterbody. Under the current monitoring schedule, targeted basins follow the TMDL priorities. In this manner, the first TMDLs will have been implemented by the time the first priority basins will be monitored again in the second five-year cycle. This will allow the LDEQ to determine whether there has been any improvement in water quality following implementation of the TMDLs. As the monitoring results are evaluated at the end of each year, waterbodies may be added to or removed from the 303(d) list. The sampling schedule for the next five years is shown below.

2002 - Red and Sabine River Basins
2003 - Mermentau and Vermilion-Teche River Basins
2004 - Calcasieu and Ouachita River Basins
2005 - Barataria and Terrebonne Basins
2006 - Lake Pontchartrain Basin and Pearl River Basin

(Atchafalaya and Mississippi Rivers will be sampled continuously.)

As part of the monitoring program, compliance inspections are also being conducted in the targeted basins each year as part of the watershed approach to monitoring and to identify enforcement needs.

Compliance Inspections conducted during 1999:

Calcasieu Basin - 33 major NPDES facilities, 260 minor facilities

Ouachita Basin - 348 facilities (total) inspected

7.0 List of References

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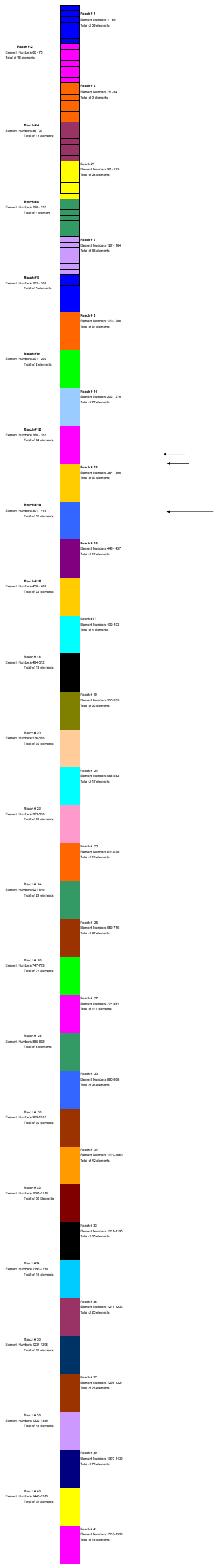
APPENDIX A – Calibration Model Development

APPENDIX A1 - Vector Diagram

Castor Creek Model Layout



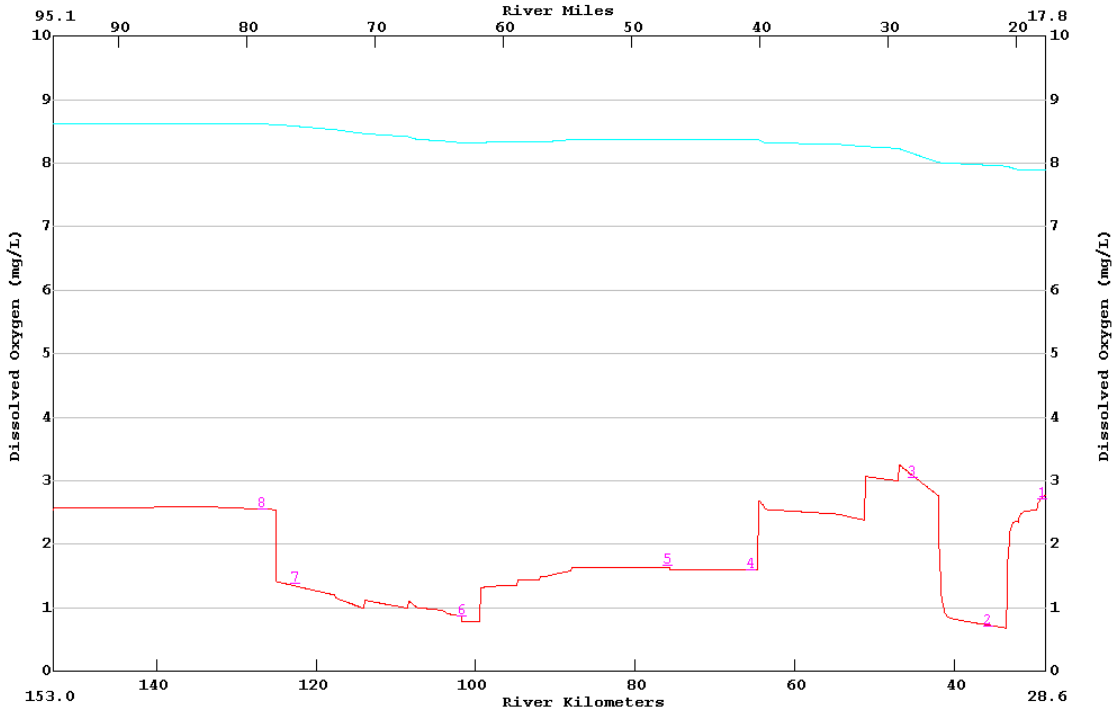
APPENDIX A2 - Reach parameter calculations

Castor Creek

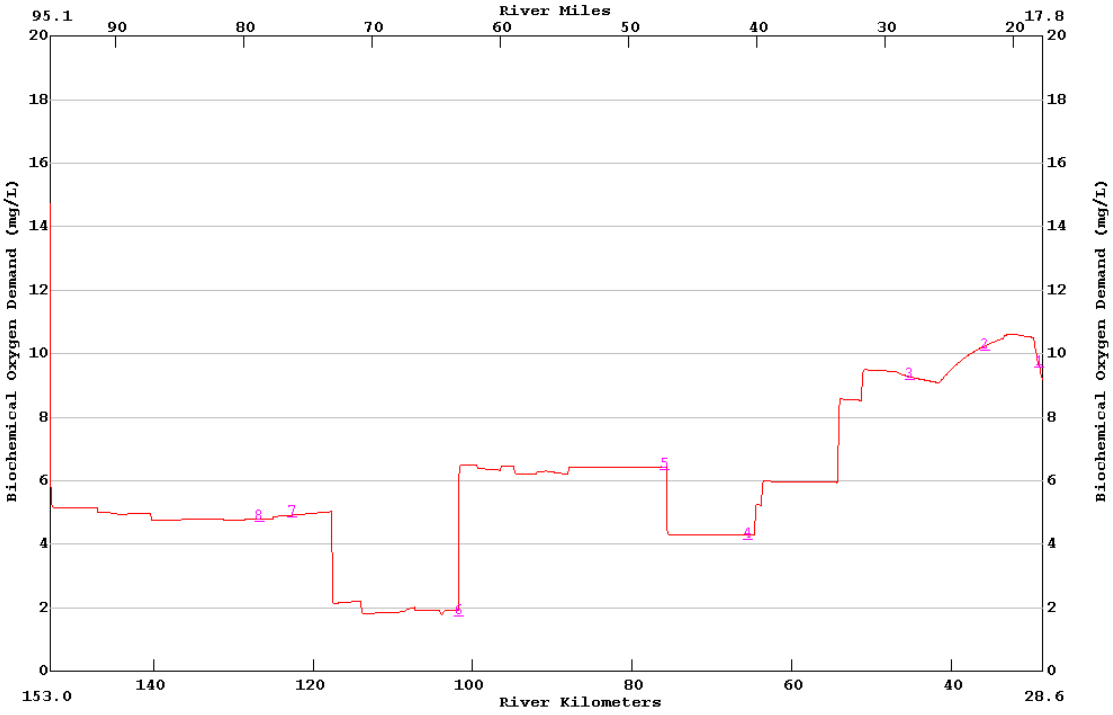
Reach #	Description	Headwater Yes/No	Starting modeled Kilometer	Ending modeled Kilometer	Modeled Length kilometers	Element Length kilometers	Element Count	Cumulative Elements	Begin Element #	End Element #
1	Headwater to McDowell Branch	Yes	153	147.1	5.90	0.100	59	59	1	59
2	McDowell Branch to Horse Creek	No	147.1	145.5	1.60	0.100	16	75	60	75
3	Horse Creek to Guice Branch	No	145.5	144.6	0.90	0.100	9	84	76	84
4	Guice Branch to Curr Creek	No	144.6	143.3	1.30	0.100	13	97	85	97
5	Curr Creek to Poplar Branch	No	143.3	140.5	2.80	0.100	28	125	98	125
6	Poplar Branch to White Branch	No	140.5	140.4	0.10	0.100	1	126	126	126
7	White Branch to Colston Creek	No	140.4	136.6	3.80	0.100	38	164	127	164
8	Colston Creek to Fourmile Creek	No	136.6	136.1	0.50	0.100	5	169	165	169
9	Fourmile Creek to Pool Branch	No	136.1	133	3.10	0.100	31	200	170	200
10	Pool Branch to Ginney Branch	No	133	132.8	0.20	0.100	2	202	201	202
11	Ginney Branch to Edwards Branch	No	132.8	125.1	7.70	0.100	77	279	203	279
12	Edwards Branch to Little Flat Creek	No	125.1	117.7	7.40	0.100	74	353	280	353
13	Little Flat Creek to Glade Creek	No	117.7	114	3.70	0.100	37	390	354	390
14	Glade Creek to Cub Creek	No	114	108.5	5.50	0.100	55	445	391	445
15	Cub Creek to Cow Creek	No	108.5	107.3	1.20	0.100	12	457	446	457
16	Cow Creek to Bear Creek Branch	No	107.3	104.1	3.20	0.100	32	489	458	489
17	Bear Creek Branch to Biles Branch	No	104.1	103.7	0.40	0.100	4	493	490	493
18	Biles Branch to Hurricane Creek	No	103.7	101.8	1.90	0.100	19	512	494	512

APPENDIX A3 - Calibration model input/output and graphs

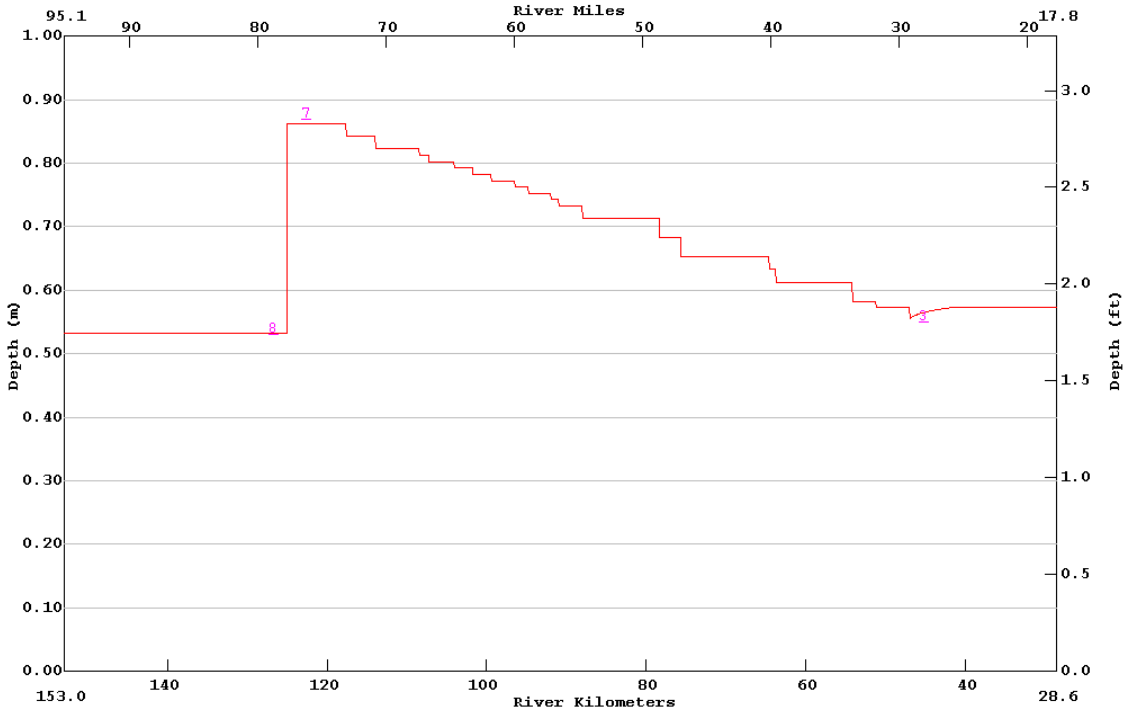
LA-QUAL Version 5.02 Run at 11:16 on 02/22/2002 File D:\Castor\Input Files\castorcalb.txt
CASTOR CREEK CALIBRATION RUN min= 0.68 max= 3.25
MAINSTEM



LA-QUAL Version 5.02 Run at 11:17 on 02/22/2002 File D:\Castor\Input Files\castorcalb.txt
CASTOR CREEK CALIBRATION RUN min= 1.80 max= 14.74
MAINSTEM



LA-QUAL Version 5.02 Run at 11:17 on 02/22/2002 File D:\Castor\Input Files\castorcalb.txt
CASTOR CREEK CALIBRATION RUN min= 0.53 max= 0.86
MAINSTEM



LA-QUAL Version 5.02 Run at 11:17 on 02/22/2002 File D:\Castor\Input Files\castorcalb.txt
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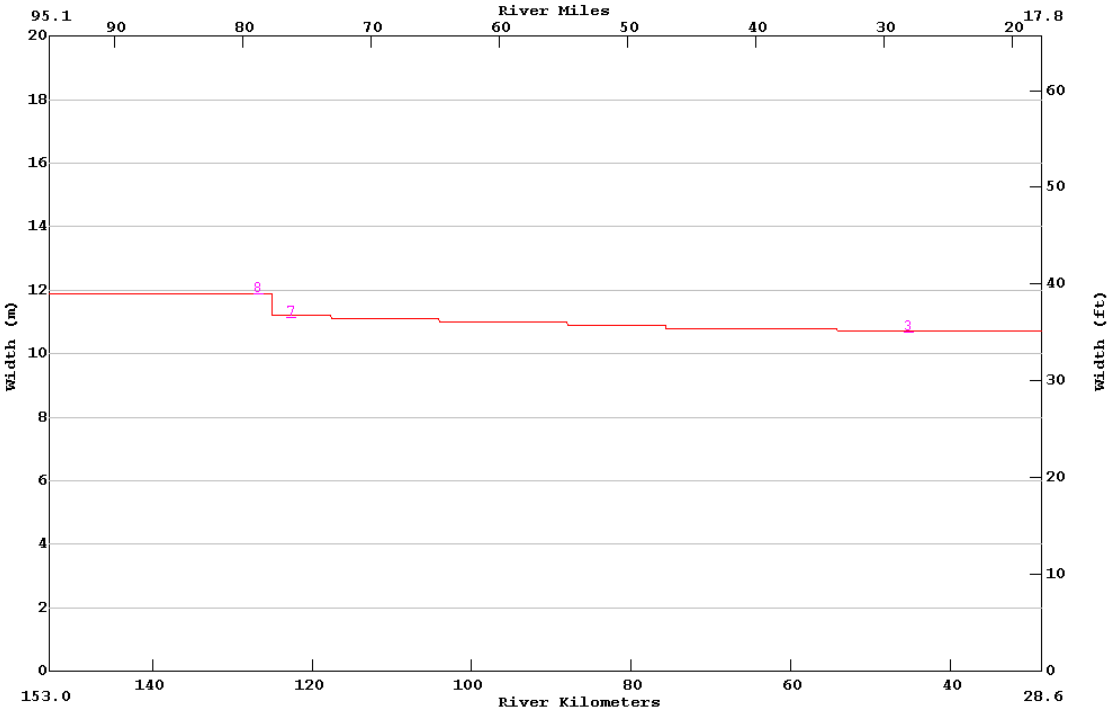

LA-QUAL Version 5.02 Run at 11:17 on 02/22/2002 File D:\Castor\Input Files\castorcalb.txt
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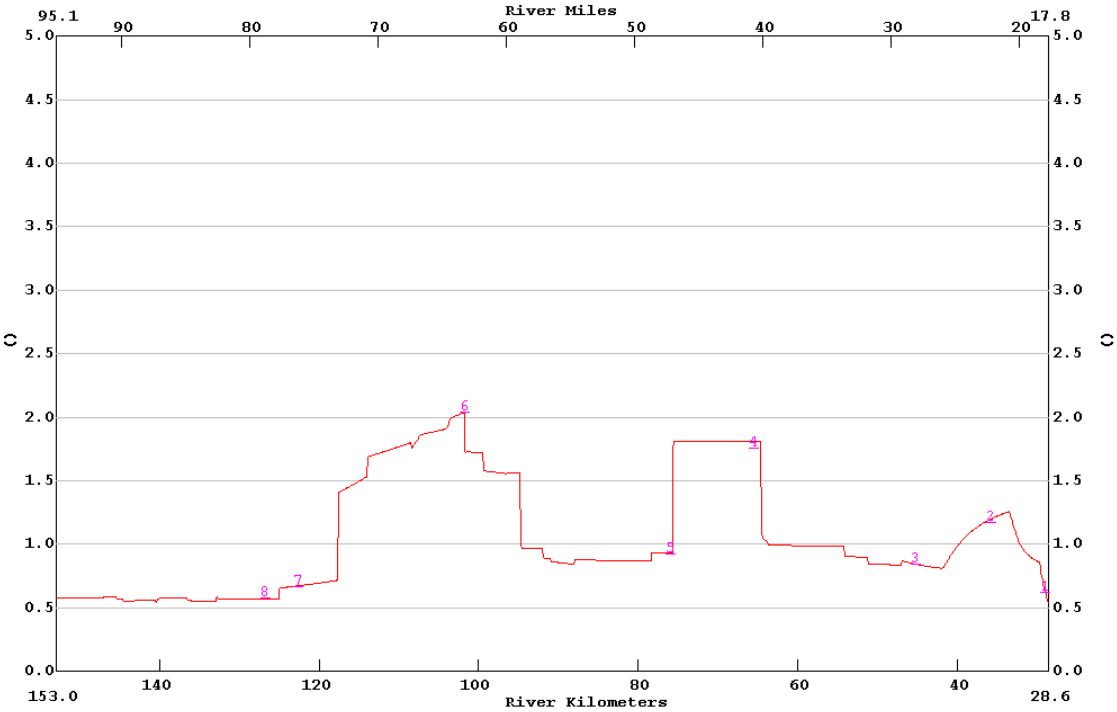
MAINSTEM



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LA-QUAL Version 5.02
Louisiana Department of Environmental Quality

Input file is D:\Castor\Input Files\castorcalb.txt
Output produced at 11:17 on 02/22/2002

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

CARD TYPE       CONTROL TITLES

TITLE01         CASTOR CREEK WATERSHED MODEL
TITLE02         CASTOR CREEK CALIBRATION RUN
CNTROL04  YES   METRIC UNITS
CNTROL05  YES   OXYGEN DEPENDENT RATES
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = SULFATES                   IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   NITROGEN
MODOPT08   NO   PHOSPHORUS
MODOPT09   NO   CHLOROPHYLL A
MODOPT10   NO   MACROPHYTES
MODOPT11   NO   COLIFORM
MODOPT12  YES   NONCONSERVATIVE MATERIAL
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         MAXIMUM ITERATION LIMIT            =      1000.00000
PROGRAM         PLOT TYPE                          =         4.00000
PROGRAM         FINAL REPORT TYPE                  =         1.00000
PROGRAM         SPECIAL REPORT TYPE                =         3.00000
PROGRAM         KL MINIMUM                         =         0.70000 meters/day
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
PROGRAM         INHIBITION CONTROL VALUE           =         3.00000
PROGRAM         NH3 OXYGEN UPTAKE RATE             =         4.30000 mg O/mg N
PROGRAM         K2 MAXIMUM                         =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS                =         2.00000 (per day)
PROGRAM         OCEAN EXCHANGE RATIO               =         0.00000
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ENDATA03

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

CARD TYPE RATE CODE THETA VALUE

ENDATA04

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA05

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA06

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA07

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	CC	HEADWATER CC - MCDOWELL BRANCH	153.00	TO	147.10	0.1000	5.90	59	1	59
REACH ID	2	CC	MCDOWELL BRANCH - HORSE CREEK	147.10	TO	145.50	0.1000	1.60	16	60	75
REACH ID	3	CC	HORSE CREEK - GUICE BRANCH	145.50	TO	144.60	0.1000	0.90	9	76	84
REACH ID	4	CC	GUICE BRANCH - CURR CREEK	144.60	TO	143.30	0.1000	1.30	13	85	97
REACH ID	5	CC	CURR CREEK - POPLAR BRANCH	143.30	TO	140.50	0.1000	2.80	28	98	125
REACH ID	6	CC	POPLAR BRANCH - WHITE BRANCH	140.50	TO	140.40	0.1000	0.10	1	126	126
REACH ID	7	CC	WHITE BRANCH - COLSTON CREEK	140.40	TO	136.60	0.1000	3.80	38	127	164
REACH ID	8	CC	COLSTON CREEK - FOURMILE CREEK	136.60	TO	136.10	0.1000	0.50	5	165	169
REACH ID	9	CC	FOURMILE CREEK - POOL BRANCH	136.10	TO	133.00	0.1000	3.10	31	170	200
REACH ID	10	CC	POOL BRANCH - GINNEY BRANCH	133.00	TO	132.80	0.1000	0.20	2	201	202
REACH ID	11	CC	GINNEY BRANCH - EDWARDS BRANCH	132.80	TO	125.10	0.1000	7.70	77	203	279
REACH ID	12	CC	EDWARDS BRANCH - LITTLE FLAT	125.10	TO	117.70	0.1000	7.40	74	280	353
REACH ID	13	CC	LITTLE FLAT - GLADE CREEK	117.70	TO	114.00	0.1000	3.70	37	354	390
REACH ID	14	CC	GLADE CREEK - CUB CREEK	114.00	TO	108.50	0.1000	5.50	55	391	445
REACH ID	15	CC	CUB CREEK - COW CREEK	108.50	TO	107.30	0.1000	1.20	12	446	457
REACH ID	16	CC	COW CREEK - BEAR CREEK BRANCH	107.30	TO	104.10	0.1000	3.20	32	458	489
REACH ID	17	CC	BEAR CREEK BRANCH - BILES BR	104.10	TO	103.70	0.1000	0.40	4	490	493
REACH ID	18	CC	BILES BRANCH - HURRICANE CR	103.70	TO	101.80	0.1000	1.90	19	494	512
REACH ID	19	CC	HURRICANE CR - INDIAN BRANCH	101.80	TO	99.50	0.1000	2.30	23	513	535

REACH ID	20	CC	INDIAN BRANCH - MOODY CREEK	99.50	TO	96.50	0.1000	3.00	30	536	565
REACH ID	21	CC	MOODY CREEK - BULL CREEK	96.50	TO	94.80	0.1000	1.70	17	566	582
REACH ID	22	CC	BULL CREEK - SWEETWATER CREEK	94.80	TO	92.00	0.1000	2.80	28	583	610
REACH ID	23	CC	SWEETWATER CREEK - BRUSHY CREEK	92.00	TO	91.00	0.1000	1.00	10	611	620
REACH ID	24	CC	BRUSHY CREEK - WHITE OAK CREEK	91.00	TO	88.10	0.1000	2.90	29	621	649
REACH ID	25	CC	WHITE OAK CREEK - BILLS CREEK	88.10	TO	78.40	0.1000	9.70	97	650	746
REACH ID	26	CC	BILLS CREEK - LOST CREEK	78.40	TO	75.70	0.1000	2.70	27	747	773
REACH ID	27	CC	LOST CREEK - MESSER CREEK	75.70	TO	64.60	0.1000	11.10	111	774	884
REACH ID	28	CC	MESSER CREEK - RICHLAND CREEK	64.60	TO	63.80	0.1000	0.80	8	885	892
REACH ID	29	CC	RICHLAND CREEK - PINEY CREEK	63.80	TO	54.20	0.1000	9.60	96	893	988
REACH ID	30	CC	PINEY CREEK - BEAUCOUP CREEK	54.20	TO	51.20	0.1000	3.00	30	989	1018
REACH ID	31	CC	BEAUCOUP CREEK - BANISTER CREEK	51.20	TO	47.00	0.1000	4.20	42	1019	1060
REACH ID	32	CC	BANISTER CREEK - BRUSHY CREEK2	47.00	TO	42.00	0.1000	5.00	50	1061	1110
REACH ID	33	CC	BRUSHY CREEK2 - MCCLELLEN BR	42.00	TO	33.50	0.1000	8.50	85	1111	1195
REACH ID	34	CC	MCCLELLEN BR - FLAT CREEK	33.50	TO	32.00	0.1000	1.50	15	1196	1210
REACH ID	35	CC	FLAT CREEK - SANDY CREEK	32.00	TO	29.70	0.1000	2.30	23	1211	1233
REACH ID	36	CC	SANDY CREEK - HWY 124	29.70	TO	28.60	0.1000	1.10	11	1234	1244

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	2	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	3	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	4	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	5	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	6	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	7	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	8	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	9	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	10	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	11	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	12	CC	0.100	0.400	11.200	0.100	0.400	0.860	0.00000	0.027
HYDR-1	13	CC	0.100	0.400	11.100	0.100	0.400	0.840	0.00000	0.027
HYDR-1	14	CC	0.100	0.400	11.100	0.100	0.400	0.820	0.00000	0.027
HYDR-1	15	CC	0.100	0.400	11.100	0.100	0.400	0.810	0.00000	0.027
HYDR-1	16	CC	0.100	0.400	11.100	0.100	0.400	0.800	0.00000	0.027
HYDR-1	17	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	18	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	19	CC	0.100	0.400	11.000	0.100	0.400	0.780	0.00000	0.027
HYDR-1	20	CC	0.100	0.400	11.000	0.100	0.400	0.770	0.00000	0.027
HYDR-1	21	CC	0.100	0.400	11.000	0.100	0.400	0.760	0.00000	0.027
HYDR-1	22	CC	0.100	0.400	11.000	0.100	0.400	0.750	0.00000	0.027
HYDR-1	23	CC	0.100	0.400	11.000	0.100	0.400	0.740	0.00000	0.027
HYDR-1	24	CC	0.100	0.400	11.000	0.100	0.400	0.730	0.00000	0.027
HYDR-1	25	CC	0.100	0.400	10.900	0.100	0.400	0.710	0.00000	0.027
HYDR-1	26	CC	0.100	0.400	10.900	0.100	0.400	0.680	0.00000	0.027

HYDR-1	27	CC	0.100	0.400	10.800	0.100	0.400	0.650	0.00000	0.027
HYDR-1	28	CC	0.100	0.400	10.800	0.100	0.400	0.630	0.00000	0.027
HYDR-1	29	CC	0.100	0.400	10.800	0.100	0.400	0.610	0.00000	0.027
HYDR-1	30	CC	0.100	0.400	10.700	0.100	0.400	0.580	0.00000	0.027
HYDR-1	31	CC	0.100	0.400	10.700	0.100	0.400	0.570	0.00000	0.027
HYDR-1	32	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	33	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	34	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	35	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	36	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	2	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	3	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	4	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	5	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	6	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	7	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	8	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	9	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	10	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	11	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	12	CC	22.80	0.00	1.36	0.00	0.00	0.00	0.00	0.00
INITIAL	13	CC	23.30	0.00	1.22	0.00	0.00	0.00	0.00	0.00
INITIAL	14	CC	23.70	0.00	1.11	0.00	0.00	0.00	0.00	0.00
INITIAL	15	CC	24.00	0.00	1.03	0.00	0.00	0.00	0.00	0.00
INITIAL	16	CC	24.30	0.00	0.98	0.00	0.00	0.00	0.00	0.00
INITIAL	17	CC	24.40	0.00	0.93	0.00	0.00	0.00	0.00	0.00
INITIAL	18	CC	24.50	0.00	0.90	0.00	0.00	0.00	0.00	0.00
INITIAL	19	CC	24.60	0.00	0.92	0.00	0.00	0.00	0.00	0.00
INITIAL	20	CC	24.60	0.00	1.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	CC	24.50	0.00	1.07	0.00	0.00	0.00	0.00	0.00
INITIAL	22	CC	24.50	0.00	1.14	0.00	0.00	0.00	0.00	0.00
INITIAL	23	CC	24.50	0.00	1.19	0.00	0.00	0.00	0.00	0.00
INITIAL	24	CC	24.50	0.00	1.25	0.00	0.00	0.00	0.00	0.00
INITIAL	25	CC	24.30	0.00	1.45	0.00	0.00	0.00	0.00	0.00
INITIAL	26	CC	24.30	0.00	1.63	0.00	0.00	0.00	0.00	0.00
INITIAL	27	CC	24.30	0.00	1.63	0.00	0.00	0.00	0.00	0.00

INITIAL	28	CC	24.30	0.00	1.69	0.00	0.00	0.00	0.00	0.00
INITIAL	29	CC	24.60	0.00	2.07	0.00	0.00	0.00	0.00	0.00
INITIAL	30	CC	24.80	0.00	2.52	0.00	0.00	0.00	0.00	0.00
INITIAL	31	CC	25.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00
INITIAL	32	CC	25.20	0.00	2.89	0.00	0.00	0.00	0.00	0.00
INITIAL	33	CC	26.70	0.00	1.22	0.00	0.00	0.00	0.00	0.00
INITIAL	34	CC	27.10	0.00	1.60	0.00	0.00	0.00	0.00	0.00
INITIAL	35	CC	27.50	0.00	2.17	0.00	0.00	0.00	0.00	0.00
INITIAL	36	CC	27.50	0.00	2.72	0.00	0.00	0.00	0.00	0.00

ENDATA11

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

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	AEROB BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD DECAY
COEF-1	1	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	2	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	3	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	4	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	5	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	6	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	7	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	8	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	9	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	10	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	11	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.040	0.050	0.000	0.000
COEF-1	12	CC	20 K2=a/D	0.700	0.000	0.000	4.300	0.030	0.050	0.000	0.000
COEF-1	13	CC	20 K2=a/D	0.700	0.000	0.000	4.300	0.040	0.050	0.000	0.000
COEF-1	14	CC	20 K2=a/D	0.700	0.000	0.000	4.200	0.050	0.050	0.000	0.000
COEF-1	15	CC	20 K2=a/D	0.700	0.000	0.000	4.100	0.060	0.050	0.000	0.000
COEF-1	16	CC	20 K2=a/D	0.700	0.000	0.000	4.100	0.060	0.050	0.000	0.000
COEF-1	17	CC	20 K2=a/D	0.700	0.000	0.000	4.100	0.070	0.050	0.000	0.000
COEF-1	18	CC	20 K2=a/D	0.700	0.000	0.000	4.100	0.070	0.050	0.000	0.000
COEF-1	19	CC	20 K2=a/D	0.700	0.000	0.000	4.100	0.070	0.050	0.000	0.000
COEF-1	20	CC	20 K2=a/D	0.700	0.000	0.000	3.700	0.060	0.050	0.000	0.000
COEF-1	21	CC	20 K2=a/D	0.700	0.000	0.000	3.700	0.060	0.050	0.000	0.000
COEF-1	22	CC	20 K2=a/D	0.700	0.000	0.000	3.700	0.060	0.050	0.000	0.000
COEF-1	23	CC	20 K2=a/D	0.700	0.000	0.000	3.700	0.050	0.050	0.000	0.000
COEF-1	24	CC	20 K2=a/D	0.700	0.000	0.000	3.700	0.050	0.050	0.000	0.000
COEF-1	25	CC	20 K2=a/D	0.700	0.000	0.000	3.700	0.040	0.050	0.000	0.000
COEF-1	26	CC	20 K2=a/D	0.700	0.000	0.000	3.750	0.030	0.050	0.000	0.000
COEF-1	27	CC	20 K2=a/D	0.700	0.000	0.000	3.750	0.040	0.050	0.000	0.000
COEF-1	28	CC	20 K2=a/D	0.700	0.000	0.000	3.100	0.040	0.050	0.000	0.000
COEF-1	29	CC	20 K2=a/D	0.700	0.000	0.000	3.100	0.040	0.050	0.000	0.000
COEF-1	30	CC	20 K2=a/D	0.700	0.000	0.000	3.100	0.030	0.050	0.000	0.000
COEF-1	31	CC	20 K2=a/D	0.700	0.000	0.000	2.700	0.030	0.050	0.000	0.000
COEF-1	32	CC	20 K2=a/D	0.700	0.000	0.000	2.550	0.030	0.050	0.000	0.000
COEF-1	33	CC	20 K2=a/D	0.700	0.000	0.000	3.650	0.030	0.050	0.000	0.000

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COEF-1      34   CC  20 K2=a/D           0.700     0.000     0.000     2.600     0.030     0.050     0.000     0.000
COEF-1      35   CC  20 K2=a/D           0.700     0.000     0.000     2.500     0.030     0.050     0.000     0.000
COEF-1      36   CC  20 K2=a/D           0.700     0.000     0.000     2.400     0.030     0.050     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

ENDATA13

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

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

ENDATA14

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

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

COEF-4           1   CC        0.00      0.04      0.05      0.00
COEF-4           2   CC        0.00      0.04      0.05      0.00
COEF-4           3   CC        0.00      0.04      0.05      0.00
COEF-4           4   CC        0.00      0.04      0.05      0.00
COEF-4           5   CC        0.00      0.04      0.05      0.00
COEF-4           6   CC        0.00      0.04      0.05      0.00
COEF-4           7   CC        0.00      0.04      0.05      0.00
COEF-4           8   CC        0.00      0.04      0.05      0.00
COEF-4           9   CC        0.00      0.04      0.05      0.00
COEF-4          10   CC        0.00      0.04      0.05      0.00
COEF-4          11   CC        0.00      0.04      0.05      0.00
COEF-4          12   CC        0.00      0.18      0.05      0.00
COEF-4          13   CC        0.00      0.18      0.05      0.00
COEF-4          14   CC        0.00      0.17      0.05      0.00
COEF-4          15   CC        0.00      0.17      0.05      0.00
COEF-4          16   CC        0.00      0.17      0.05      0.00
COEF-4          17   CC        0.00      0.17      0.05      0.00
COEF-4          18   CC        0.00      0.17      0.05      0.00
COEF-4          19   CC        0.00      0.17      0.05      0.00
COEF-4          20   CC        0.00      0.16      0.05      0.00
COEF-4          21   CC        0.00      0.16      0.05      0.00
COEF-4          22   CC        0.00      0.15      0.05      0.00
COEF-4          23   CC        0.00      0.15      0.05      0.00
COEF-4          24   CC        0.00      0.14      0.05      0.00
COEF-4          25   CC        0.00      0.13      0.05      0.00
COEF-4          26   CC        0.00      0.11      0.05      0.00
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COEF-4           27   CC        0.00      0.10      0.05      0.00
COEF-4           28   CC        0.00      0.09      0.05      0.00
COEF-4           29   CC        0.00      0.11      0.05      0.00
COEF-4           30   CC        0.00      0.13      0.05      0.00
COEF-4           31   CC        0.00      0.14      0.05      0.00
COEF-4           32   CC        0.00      0.14      0.05      0.00
COEF-4           33   CC        0.00      0.06      0.05      0.00
COEF-4           34   CC        0.00      0.06      0.05      0.00
COEF-4           35   CC        0.00      0.07      0.05      0.00
COEF-4           36   CC        0.00      0.09      0.05      0.00
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           32   CC       0.00000     0.02350     25.10      0.00      6.00      4.20   0.00470   0.00000
ENDATA16

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

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

INCR-2           32   CC        3.06      9.19      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           32   CC        0.00      0.00      0.00      0.84
ENDATA18

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

CARD TYPE      REACH  ID         BOD     ORG-N      COLI       NCM        DO

NONPOINT          1   CC       19.00      0.00      0.00      2.20      0.00
NONPOINT          2   CC        5.00      0.00      0.00      0.60      0.00
NONPOINT          3   CC        2.80      0.00      0.00      0.33      0.00
NONPOINT          4   CC        4.00      0.00      0.00      0.46      0.00
NONPOINT          5   CC        8.70      0.00      0.00      1.00      0.00
NONPOINT          6   CC        0.31      0.00      0.00      0.04      0.00
NONPOINT          7   CC       11.30      0.00      0.00      1.40      0.00
NONPOINT          8   CC        1.50      0.00      0.00      0.18      0.00
NONPOINT          9   CC        9.30      0.00      0.00      1.10      0.00
NONPOINT         10   CC        0.60      0.00      0.00      0.08      0.00
NONPOINT         11   CC       23.00      0.00      0.00      2.80      0.00
NONPOINT         12   CC       27.00      0.00      0.00      9.70      0.00
NONPOINT         13   CC        6.00      0.00      0.00      9.00      0.00
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NONPOINT         14   CC        8.00      0.00      0.00     15.00      0.00
NONPOINT         15   CC        2.00      0.00      0.00      3.40      0.00
NONPOINT         16   CC        5.00      0.00      0.00      9.00      0.00
NONPOINT         17   CC        0.60      0.00      0.00      1.10      0.00
NONPOINT         18   CC        3.00      0.00      0.00      5.30      0.00
NONPOINT         19   CC       11.50      0.00      0.00      5.00      0.00
NONPOINT         20   CC       17.00      0.00      0.00      8.00      0.00
NONPOINT         21   CC        9.70      0.00      0.00      4.50      0.00
NONPOINT         22   CC       15.60      0.00      0.00      4.50      0.00
NONPOINT         23   CC        5.20      0.00      0.00      1.50      0.00
NONPOINT         24   CC       15.00      0.00      0.00      4.00      0.00
NONPOINT         25   CC       46.00      0.00      0.00     13.00      0.00
NONPOINT         26   CC       11.00      0.00      0.00      3.30      0.00
NONPOINT         27   CC       31.70      0.00      0.00     23.00      0.00
NONPOINT         28   CC        3.00      0.00      0.00      1.00      0.00
NONPOINT         29   CC       40.00      0.00      0.00     13.00      0.00
NONPOINT         30   CC       15.00      0.00      0.00      4.00      0.00
NONPOINT         31   CC       23.00      0.00      0.00      5.50      0.00
NONPOINT         32   CC       27.00      0.00      0.00      6.70      0.00
NONPOINT         33   CC       42.00      0.00      0.00      6.50      0.00
NONPOINT         34   CC       10.00      0.00      0.00      1.00      0.00
NONPOINT         35   CC       15.00      0.00      0.00      2.00      0.00
NONPOINT         36   CC        4.00      0.00      0.00      0.30      0.00
ENDATA19

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

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

HDWTR-1           1     HEADWATER               0   0.00010    0.004   22.36     0.00     8.300     0.000
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO       BOD     ORG-N       NH3     NO3+2

HDWTR-2           1     HEADWATER                   2.55     14.74      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM

HDWTR-3           1     HEADWATER                    0.00      0.00      0.00      0.58
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

ENDATA24

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

ENDATA25

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

CARD TYPE     ELEMENT   NAME                        PHOS     CHL A      COLI       NCM

ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                       =     27.500 deg C
LOWER BC     SALINITY                          =      0.000 ppt
LOWER BC     CONSERVATIVE MATERIAL I           =     10.400 MG/L
LOWER BC     CONSERVATIVE MATERIAL II          =      5.000 MG/L
LOWER BC     DISSOLVED OXYGEN                  =      2.720 mg/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND         =      9.580 mg/L
LOWER BC     ORGANIC NITROGEN                  =      0.000 mg/L
LOWER BC     AMMONIA NITROGEN                  =      0.000 mg/L
LOWER BC     NITRATE + NITRITE                 =      0.030 mg/L
LOWER BC     PHOSPHORUS                        =      0.090 mg/L
LOWER BC     CHLOROPHYLL A                     =      0.000 µg/L
LOWER BC     COLIFORM                          =      0.000 #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL          =      0.620
ENDATA27

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

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

ENDATA28

$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$
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CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8

ENDATA29

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


NUMBER OF PLOTS =  6
NUMBER OF REACHES IN PLOT 1 =  36
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
         25 26 27 28 29 30 31 32 33 34 35 36
NUMBER OF REACHES IN PLOT 2 =  12
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12
NUMBER OF REACHES IN PLOT 3 =   9
PLOT RCH 12 13 14 15 16 17 18 19 20
NUMBER OF REACHES IN PLOT 4 =  10
PLOT RCH 19 20 21 22 23 24 25 26 27 28
NUMBER OF REACHES IN PLOT 5 =   8
PLOT RCH 26 27 28 29 30 31 32 33
NUMBER OF REACHES IN PLOT 6 =   6
PLOT RCH 31 32 33 34 35 36
ENDATA30

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


OVERLAY 1 castovl.txt                     :MAINSTEM
OVERLAY 2 castovl2.txt                    :Segments 1-12
OVERLAY 3 castovl3.txt                    :Segments 12-19
OVERLAY 4 castovl4.txt                    :Segments 19-28
OVERLAY 5 castovl5.txt                    :Segments 26-33
OVERLAY 6 castovl6.txt                    :Segments 31-36
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
     .....GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
     .....GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14
     .....GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 15
     .....GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 16


FINAL REPORT    HEADWATER                                        CASTOR CREEK WATERSHED MODEL
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REACH NO. 1 HEADWATER CC - MCDOWELL BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1	HDWTR	0.00010	22.36	0.00	8.30	0.00	2.55	14.74	14.74	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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	153.00	152.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
2	152.90	152.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
3	152.80	152.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
4	152.70	152.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
5	152.60	152.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
6	152.50	152.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
7	152.40	152.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
8	152.30	152.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
9	152.20	152.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
10	152.10	152.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
11	152.00	151.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
12	151.90	151.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
13	151.80	151.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
14	151.70	151.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
15	151.60	151.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
16	151.50	151.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
17	151.40	151.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
18	151.30	151.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
19	151.20	151.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
20	151.10	151.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
21	151.00	150.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
22	150.90	150.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
23	150.80	150.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
24	150.70	150.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
25	150.60	150.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
26	150.50	150.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
27	150.40	150.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
28	150.30	150.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
29	150.20	150.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
30	150.10	150.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
31	150.00	149.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
32	149.90	149.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
33	149.80	149.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

34	149.70	149.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
35	149.60	149.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
36	149.50	149.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
37	149.40	149.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
38	149.30	149.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
39	149.20	149.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
40	149.10	149.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
41	149.00	148.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
42	148.90	148.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
43	148.80	148.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
44	148.70	148.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
45	148.60	148.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
46	148.50	148.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
47	148.40	148.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
48	148.30	148.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
49	148.20	148.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
50	148.10	148.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
51	148.00	147.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
52	147.90	147.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
53	147.80	147.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
54	147.70	147.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
55	147.60	147.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
56	147.50	147.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
57	147.40	147.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
58	147.30	147.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
59	147.20	147.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						4328.19			37395.55	70224.80					
AVG					0.00002		0.53	11.90			6.34				
CUM						4328.19									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	152.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
2	152.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
3	152.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
4	152.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
5	152.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

6	152.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
7	152.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
8	152.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
9	152.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
10	152.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
11	151.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
12	151.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
13	151.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
14	151.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
15	151.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
16	151.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
17	151.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
18	151.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
19	151.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20	151.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
21	150.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
22	150.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
23	150.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
24	150.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
25	150.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
26	150.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
27	150.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
28	150.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
29	150.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
30	150.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

31	149.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
32	149.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
33	149.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
34	149.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
35	149.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
36	149.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
37	149.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
38	149.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
39	149.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
40	149.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
41	148.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
42	148.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
43	148.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
44	148.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
45	148.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
46	148.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
47	148.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
48	148.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
49	148.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
50	148.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
51	147.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
52	147.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
53	147.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
54	147.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
55	147.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

0.05																			
56	147.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
57	147.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
58	147.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
59	147.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.31		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1	152.900	22.70	0.00	8.30	0.00	2.54	6.32	6.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
2	152.800	22.70	0.00	8.30	0.00	2.57	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
3	152.700	22.70	0.00	8.30	0.00	2.57	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
4	152.600	22.70	0.00	8.30	0.00	2.57	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
5	152.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
6	152.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
7	152.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
8	152.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
9	152.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
10	152.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
11	151.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
12	151.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
13	151.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
14	151.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
15	151.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
16	151.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
17	151.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
18	151.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
19	151.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
20	151.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
21	150.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
22	150.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
23	150.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
24	150.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
25	150.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
26	150.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
27	150.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
28	150.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

29	150.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
30	150.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
31	149.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
32	149.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
33	149.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
34	149.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
35	149.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
36	149.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
37	149.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
38	149.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
39	149.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
40	149.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
41	148.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
42	148.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
43	148.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
44	148.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
45	148.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
46	148.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
47	148.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
48	148.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
49	148.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
50	148.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
51	147.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
52	147.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
53	147.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
54	147.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
55	147.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
56	147.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
57	147.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
58	147.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
59	147.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 2 MCDOWELL BRANCH - HORSE CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
60	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
60	147.10	147.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
61	147.00	146.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
62	146.90	146.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
63	146.80	146.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
64	146.70	146.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
65	146.60	146.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
66	146.50	146.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
67	146.40	146.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
68	146.30	146.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
69	146.20	146.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
70	146.10	146.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
71	146.00	145.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
72	145.90	145.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
73	145.80	145.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
74	145.70	145.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
75	145.60	145.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						1173.75			10141.17	19044.02					
AVG					0.00002		0.53	11.90			6.34				
CUM						5501.93									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
60	147.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
61	146.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
62	146.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
63	146.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
64	146.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
65	146.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
66	146.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05

67	146.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
68	146.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
69	146.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
70	146.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
71	145.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
72	145.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
73	145.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
74	145.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
75	145.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
60	147.000	22.70	0.00	8.30	0.00	2.58	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
61	146.900	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
62	146.800	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
63	146.700	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
64	146.600	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
65	146.500	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
66	146.400	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
67	146.300	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
68	146.200	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
69	146.100	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
70	146.000	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
71	145.900	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
72	145.800	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
73	145.700	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
74	145.600	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
75	145.500	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 3 HORSE CREEK - GUICE BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
76	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
76	145.50	145.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
77	145.40	145.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
78	145.30	145.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
79	145.20	145.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
80	145.10	145.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
81	145.00	144.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
82	144.90	144.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
83	144.80	144.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
84	144.70	144.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						660.23			5704.41	10712.26					
AVG					0.00002		0.53	11.90			6.34				
CUM						6162.16									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
76	145.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
77	145.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
78	145.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

79	145.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
80	145.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
81	144.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
82	144.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
83	144.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
84	144.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
76	145.400	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
77	145.300	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
78	145.200	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
79	145.100	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
80	145.000	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
81	144.900	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
82	144.800	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
83	144.700	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
84	144.600	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 4 GUICE BRANCH - CURR CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

85	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.57

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
85	144.60	144.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
86	144.50	144.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
87	144.40	144.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
88	144.30	144.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
89	144.20	144.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
90	144.10	144.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
91	144.00	143.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
92	143.90	143.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
93	143.80	143.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
94	143.70	143.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
95	143.60	143.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
96	143.50	143.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
97	143.40	143.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						953.67			8239.70	15473.26					
AVG					0.00002		0.53	11.90			6.34				
CUM						7115.83									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
85	144.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
86	144.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
87	144.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
88	144.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
89	144.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
90	144.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
91	143.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

0.05																			
92	143.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
93	143.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
94	143.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
95	143.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
96	143.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
97	143.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.31		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
85	144.500	22.70	0.00	8.30	0.00	2.58	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
86	144.400	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
87	144.300	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
88	144.200	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
89	144.100	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
90	144.000	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
91	143.900	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
92	143.800	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
93	143.700	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
94	143.600	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
95	143.500	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
96	143.400	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
97	143.300	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 5 CURR CREEK - POPLAR BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
98	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.55

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
98	143.30	143.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
99	143.20	143.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
100	143.10	143.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
101	143.00	142.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
102	142.90	142.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
103	142.80	142.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
104	142.70	142.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
105	142.60	142.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
106	142.50	142.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
107	142.40	142.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
108	142.30	142.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
109	142.20	142.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
110	142.10	142.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
111	142.00	141.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
112	141.90	141.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
113	141.80	141.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
114	141.70	141.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
115	141.60	141.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
116	141.50	141.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
117	141.40	141.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
118	141.30	141.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
119	141.20	141.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
120	141.10	141.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
121	141.00	140.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
122	140.90	140.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
123	140.80	140.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
124	140.70	140.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
125	140.60	140.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						2054.06			17747.04	33327.04					
AVG					0.00002		0.53	11.90			6.34				
CUM						9169.88									

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

ELEM	ENDING	SAT	REAER	CBOD	CBOD	ANBOD	BKGD	FULL	CORR	ORGN	ORGN	NH3	NH3	DENIT	PO4	ALG	MAC	COLI	NCM

NCM NO.	DIST	D.O.	RATE	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
98	143.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
99	143.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
100	143.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
101	142.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
102	142.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
103	142.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
104	142.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
105	142.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
106	142.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
107	142.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
108	142.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
109	142.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
110	142.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
111	141.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
112	141.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
113	141.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
114	141.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
115	141.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
116	141.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
117	141.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
118	141.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
119	141.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05

120	141.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
121	140.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
122	140.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
123	140.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
124	140.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
125	140.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
98	143.200	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
99	143.100	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
100	143.000	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
101	142.900	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
102	142.800	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
103	142.700	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
104	142.600	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
105	142.500	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
106	142.400	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
107	142.300	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
108	142.200	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
109	142.100	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
110	142.000	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
111	141.900	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
112	141.800	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
113	141.700	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
114	141.600	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
115	141.500	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
116	141.400	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
117	141.300	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
118	141.200	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
119	141.100	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
120	141.000	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
121	140.900	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
122	140.800	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56

123	140.700	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
124	140.600	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
125	140.500	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 6 POPLAR BRANCH - WHITE BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
126	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
126	140.50	140.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						73.36			633.82	1190.25					
AVG					0.00002		0.53	11.90			6.34				
CUM						9243.24									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
126	140.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
126	140.400	22.70	0.00	8.30	0.00	2.58	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 7 WHITE BRANCH - COLSTON CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
127	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.55

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
127	140.40	140.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
128	140.30	140.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
129	140.20	140.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
130	140.10	140.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
131	140.00	139.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
132	139.90	139.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
133	139.80	139.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
134	139.70	139.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
135	139.60	139.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
136	139.50	139.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
137	139.40	139.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
138	139.30	139.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
139	139.20	139.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
140	139.10	139.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
141	139.00	138.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
142	138.90	138.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
143	138.80	138.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

144	138.70	138.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
145	138.60	138.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
146	138.50	138.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
147	138.40	138.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
148	138.30	138.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
149	138.20	138.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
150	138.10	138.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
151	138.00	137.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
152	137.90	137.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
153	137.80	137.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
154	137.70	137.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
155	137.60	137.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
156	137.50	137.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
157	137.40	137.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
158	137.30	137.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
159	137.20	137.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
160	137.10	137.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
161	137.00	136.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
162	136.90	136.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
163	136.80	136.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
164	136.70	136.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						2787.65			24085.27	45229.54					
AVG					0.00002		0.53	11.90			6.34				
CUM						12030.90									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
127	140.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
128	140.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
129	140.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
130	140.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
131	139.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
132	139.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
133	139.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05

134	139.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
135	139.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
136	139.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
137	139.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
138	139.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
139	139.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
140	139.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
141	138.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
142	138.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
143	138.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
144	138.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
145	138.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
146	138.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
147	138.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
148	138.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
149	138.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
150	138.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
151	137.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
152	137.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
153	137.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
154	137.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
155	137.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
156	137.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
157	137.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
158	137.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			

159	137.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
160	137.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
161	136.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
162	136.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
163	136.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
164	136.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
127	140.300	22.70	0.00	8.30	0.00	2.59	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
128	140.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
129	140.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
130	140.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
131	139.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
132	139.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
133	139.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
134	139.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
135	139.500	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
136	139.400	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
137	139.300	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
138	139.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
139	139.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
140	139.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
141	138.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
142	138.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
143	138.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
144	138.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
145	138.500	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
146	138.400	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
147	138.300	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
148	138.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
149	138.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
150	138.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
151	137.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

152	137.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
153	137.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
154	137.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
155	137.500	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
156	137.400	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
157	137.300	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
158	137.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
159	137.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
160	137.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
161	136.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
162	136.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
163	136.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
164	136.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 8 COLSTON CREEK - FOURMILE CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
165	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.57

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
165	136.60	136.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
166	136.50	136.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
167	136.40	136.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
168	136.30	136.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
169	136.20	136.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						366.80			3169.11	5951.26					
AVG					0.00002		0.53	11.90			6.34				
CUM						12397.69									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
165	136.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
166	136.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
167	136.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
168	136.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
169	136.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
165	136.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
166	136.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
167	136.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
168	136.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
169	136.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 9 FOURMILE CREEK - POOL BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

170	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m^3/	PCT EFF	ADVCTV VELO m/s	TRAVEL TIME days	DEPTH m	WIDTH m	VOLUME m^3	SURFACE AREA m^2	X-SECT AREA m^2	TIDAL PRISM m^3	TIDAL VELO m/s	DISPRSN m^2/s	MEAN VELO m/s
170	136.10	136.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
171	136.00	135.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
172	135.90	135.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
173	135.80	135.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
174	135.70	135.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
175	135.60	135.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
176	135.50	135.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
177	135.40	135.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
178	135.30	135.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
179	135.20	135.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
180	135.10	135.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
181	135.00	134.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
182	134.90	134.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
183	134.80	134.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
184	134.70	134.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
185	134.60	134.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
186	134.50	134.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
187	134.40	134.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
188	134.30	134.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
189	134.20	134.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
190	134.10	134.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
191	134.00	133.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
192	133.90	133.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
193	133.80	133.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
194	133.70	133.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
195	133.60	133.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
196	133.50	133.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
197	133.40	133.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
198	133.30	133.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
199	133.20	133.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
200	133.10	133.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						2274.13			19648.51	36897.79					
AVG					0.00002		0.53	11.90			6.34				
CUM						14671.83									

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

ELEM	ENDING	SAT	REAER	CBOD	CBOD	ANBOD	BKGD	FULL	CORR	ORGN	ORGN	NH3	NH3	DENIT	PO4	ALG	MAC	COLI	NCM	NCM

NO.	DIST	D.O.	RATE	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
170	136.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
171	135.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
172	135.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
173	135.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
174	135.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
175	135.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
176	135.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
177	135.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
178	135.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
179	135.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
180	135.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
181	134.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
182	134.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
183	134.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
184	134.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
185	134.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
186	134.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
187	134.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
188	134.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
189	134.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
190	134.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
191	133.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
192	133.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

193	133.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
194	133.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
195	133.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
196	133.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
197	133.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
198	133.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
199	133.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
200	133.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
170	136.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
171	135.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
172	135.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
173	135.700	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
174	135.600	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
175	135.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
176	135.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
177	135.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
178	135.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
179	135.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
180	135.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
181	134.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
182	134.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
183	134.700	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
184	134.600	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
185	134.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
186	134.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
187	134.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
188	134.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
189	134.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55

190	134.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
191	133.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
192	133.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
193	133.700	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
194	133.600	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
195	133.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
196	133.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
197	133.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
198	133.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
199	133.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
200	133.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 10 POOL BRANCH - GINNEY BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
201	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.55

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
201	133.00	132.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
202	132.90	132.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						146.72			1267.65	2380.50					
AVG					0.00002		0.53	11.90			6.34				
CUM						14818.55									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

201	132.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
202	132.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
201	132.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
202	132.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 11 GINNEY BRANCH - EDWARDS BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
203	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
203	132.80	132.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
204	132.70	132.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
205	132.60	132.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
206	132.50	132.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
207	132.40	132.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

208	132.30	132.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
209	132.20	132.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
210	132.10	132.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
211	132.00	131.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
212	131.90	131.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
213	131.80	131.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
214	131.70	131.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
215	131.60	131.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
216	131.50	131.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
217	131.40	131.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
218	131.30	131.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
219	131.20	131.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
220	131.10	131.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
221	131.00	130.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
222	130.90	130.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
223	130.80	130.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
224	130.70	130.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
225	130.60	130.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
226	130.50	130.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
227	130.40	130.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
228	130.30	130.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
229	130.20	130.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
230	130.10	130.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
231	130.00	129.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
232	129.90	129.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
233	129.80	129.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
234	129.70	129.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
235	129.60	129.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
236	129.50	129.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
237	129.40	129.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
238	129.30	129.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
239	129.20	129.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
240	129.10	129.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
241	129.00	128.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
242	128.90	128.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
243	128.80	128.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
244	128.70	128.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
245	128.60	128.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
246	128.50	128.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
247	128.40	128.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
248	128.30	128.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
249	128.20	128.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
250	128.10	128.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
251	128.00	127.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
252	127.90	127.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
253	127.80	127.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
254	127.70	127.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
255	127.60	127.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
256	127.50	127.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
257	127.40	127.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

258	127.30	127.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
259	127.20	127.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
260	127.10	127.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
261	127.00	126.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
262	126.90	126.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
263	126.80	126.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
264	126.70	126.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
265	126.60	126.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
266	126.50	126.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
267	126.40	126.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
268	126.30	126.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
269	126.20	126.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
270	126.10	126.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
271	126.00	125.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
272	125.90	125.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
273	125.80	125.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
274	125.70	125.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
275	125.60	125.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
276	125.50	125.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
277	125.40	125.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
278	125.30	125.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
279	125.20	125.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						5648.65			48804.38	91649.30					
AVG					0.00002		0.53	11.90			6.34				
CUM						20467.22									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
203	132.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
204	132.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
205	132.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
206	132.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
207	132.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
208	132.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
209	132.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

210	132.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
211	131.900	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
212	131.800	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
213	131.700	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
214	131.600	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
215	131.500	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
216	131.400	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
217	131.300	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
218	131.200	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
219	131.100	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
220	131.000	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
221	130.900	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
222	130.800	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
223	130.700	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
224	130.600	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
225	130.500	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
226	130.400	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
227	130.300	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
228	130.200	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
229	130.100	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
230	130.000	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
231	129.900	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
232	129.800	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
233	129.700	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
234	129.600	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

235	129.500	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
236	129.400	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
237	129.300	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
238	129.200	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
239	129.100	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
240	129.000	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
241	128.900	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
242	128.800	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
243	128.700	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
244	128.600	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
245	128.500	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
246	128.400	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
247	128.300	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
248	128.200	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
249	128.100	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
250	128.000	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
251	127.900	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
252	127.800	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
253	127.700	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
254	127.600	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
255	127.500	8.62	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
256	127.400	8.62	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
257	127.300	8.62	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
258	127.200	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
259	127.100	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

0.05																			
260	127.000	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
261	126.900	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
262	126.800	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
263	126.700	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
264	126.600	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
265	126.500	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
266	126.400	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
267	126.300	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
268	126.200	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
269	126.100	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
270	126.000	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
271	125.900	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
272	125.800	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
273	125.700	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
274	125.600	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
275	125.500	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
276	125.400	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
277	125.300	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
278	125.200	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
279	125.100	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.31		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
203	132.700	22.70	0.00	8.30	0.00	2.59	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
204	132.600	22.70	0.00	8.30	0.00	2.59	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
205	132.500	22.70	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
206	132.400	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
207	132.300	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
208	132.200	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
209	132.100	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
210	132.000	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
211	131.900	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
212	131.800	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
213	131.700	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
214	131.600	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
215	131.500	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
216	131.400	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
217	131.300	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
218	131.200	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
219	131.100	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
220	131.000	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
221	130.900	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
222	130.800	22.73	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
223	130.700	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
224	130.600	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
225	130.500	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
226	130.400	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
227	130.300	22.73	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
228	130.200	22.73	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
229	130.100	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
230	130.000	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
231	129.900	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
232	129.800	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
233	129.700	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
234	129.600	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
235	129.500	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
236	129.400	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
237	129.300	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
238	129.200	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
239	129.100	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
240	129.000	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
241	128.900	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
242	128.800	22.75	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
243	128.700	22.75	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
244	128.600	22.75	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
245	128.500	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
246	128.400	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
247	128.300	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
248	128.200	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

249	128.100	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
250	128.000	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
251	127.900	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
252	127.800	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
253	127.700	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
254	127.600	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
255	127.500	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
256	127.400	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
257	127.300	22.77	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
258	127.200	22.77	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
259	127.100	22.77	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
260	127.000	22.78	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
261	126.900	22.78	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
262	126.800	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
263	126.700	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
264	126.600	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
265	126.500	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
266	126.400	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
267	126.300	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
268	126.200	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
269	126.100	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
270	126.000	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
271	125.900	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
272	125.800	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
273	125.700	22.79	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
274	125.600	22.79	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
275	125.500	22.79	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
276	125.400	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
277	125.300	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
278	125.200	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
279	125.100	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 12 EDWARDS BRANCH - LITTLE FLAT CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
280	UPR RCH	0.00010	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.57

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
280	125.10	125.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
281	125.00	124.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
282	124.90	124.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
283	124.80	124.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
284	124.70	124.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
285	124.60	124.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
286	124.50	124.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
287	124.40	124.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
288	124.30	124.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
289	124.20	124.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
290	124.10	124.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
291	124.00	123.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
292	123.90	123.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
293	123.80	123.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
294	123.70	123.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
295	123.60	123.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
296	123.50	123.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
297	123.40	123.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
298	123.30	123.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
299	123.20	123.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
300	123.10	123.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
301	123.00	122.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
302	122.90	122.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
303	122.80	122.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
304	122.70	122.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
305	122.60	122.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
306	122.50	122.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
307	122.40	122.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
308	122.30	122.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
309	122.20	122.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
310	122.10	122.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
311	122.00	121.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
312	121.90	121.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
313	121.80	121.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
314	121.70	121.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
315	121.60	121.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
316	121.50	121.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
317	121.40	121.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
318	121.30	121.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
319	121.20	121.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
320	121.10	121.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
321	121.00	120.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
322	120.90	120.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
323	120.80	120.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
324	120.70	120.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000

325	120.60	120.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
326	120.50	120.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
327	120.40	120.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
328	120.30	120.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
329	120.20	120.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
330	120.10	120.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
331	120.00	119.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
332	119.90	119.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
333	119.80	119.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
334	119.70	119.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
335	119.60	119.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
336	119.50	119.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
337	119.40	119.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
338	119.30	119.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
339	119.20	119.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
340	119.10	119.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
341	119.00	118.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
342	118.90	118.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
343	118.80	118.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
344	118.70	118.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
345	118.60	118.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
346	118.50	118.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
347	118.40	118.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
348	118.30	118.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
349	118.20	118.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
350	118.10	118.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
351	118.00	117.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
352	117.90	117.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
353	117.80	117.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
TOT						8275.58			71501.02	82898.55					
AVG					0.00001		0.86	11.20			9.66				
CUM						28742.79									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
280	125.000	8.61	0.86	0.02	0.05	0.00	5.13	5.13	5.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
281	124.900	8.61	0.86	0.02	0.05	0.00	5.13	5.13	5.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
282	124.800	8.61	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05

283	124.700	8.61	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
284	124.600	8.60	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
285	124.500	8.60	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
286	124.400	8.60	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
287	124.300	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
288	124.200	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
289	124.100	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
290	124.000	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
291	123.900	8.60	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
292	123.800	8.60	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
293	123.700	8.60	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
294	123.600	8.59	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
295	123.500	8.59	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
296	123.400	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
297	123.300	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
298	123.200	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
299	123.100	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
300	123.000	8.59	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
301	122.900	8.59	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
302	122.800	8.59	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
303	122.700	8.58	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
304	122.600	8.58	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
305	122.500	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
306	122.400	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
307	122.300	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05

308	122.200	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
309	122.100	8.58	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
310	122.000	8.58	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
311	121.900	8.58	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
312	121.800	8.57	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
313	121.700	8.57	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
314	121.600	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
315	121.500	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
316	121.400	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
317	121.300	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
318	121.200	8.57	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
319	121.100	8.57	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
320	121.000	8.57	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
321	120.900	8.56	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
322	120.800	8.56	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
323	120.700	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
324	120.600	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
325	120.500	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
326	120.400	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
327	120.300	8.56	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
328	120.200	8.56	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
329	120.100	8.56	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
330	120.000	8.55	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
331	119.900	8.55	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
332	119.800	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05

333	119.700	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
334	119.600	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
335	119.500	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
336	119.400	8.55	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
337	119.300	8.55	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
338	119.200	8.55	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
339	119.100	8.54	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
340	119.000	8.54	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
341	118.900	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
342	118.800	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
343	118.700	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
344	118.600	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
345	118.500	8.54	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
346	118.400	8.54	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
347	118.300	8.54	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
348	118.200	8.53	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
349	118.100	8.53	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
350	118.000	8.53	0.86	0.02	0.05	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
351	117.900	8.53	0.86	0.02	0.05	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
352	117.800	8.53	0.87	0.02	0.05	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
353	117.700	8.53	0.87	0.02	0.05	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
20 DEG C RATE				0.03		0.00	4.30			0.00		0.00	0.00	0.00	0.00			0.00	0.18	
AVG 20 DEG C RATE			0.81		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
280	125.000	22.81	0.00	8.30	0.00	1.43	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
281	124.900	22.81	0.00	8.30	0.00	1.41	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
282	124.800	22.82	0.00	8.30	0.00	1.41	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
283	124.700	22.83	0.00	8.30	0.00	1.40	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
284	124.600	22.83	0.00	8.30	0.00	1.40	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
285	124.500	22.84	0.00	8.30	0.00	1.40	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
286	124.400	22.85	0.00	8.30	0.00	1.40	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
287	124.300	22.85	0.00	8.30	0.00	1.39	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
288	124.200	22.86	0.00	8.30	0.00	1.39	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
289	124.100	22.87	0.00	8.30	0.00	1.39	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
290	124.000	22.87	0.00	8.30	0.00	1.38	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
291	123.900	22.88	0.00	8.30	0.00	1.38	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
292	123.800	22.89	0.00	8.30	0.00	1.38	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
293	123.700	22.89	0.00	8.30	0.00	1.38	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
294	123.600	22.90	0.00	8.30	0.00	1.37	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
295	123.500	22.91	0.00	8.30	0.00	1.37	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
296	123.400	22.91	0.00	8.30	0.00	1.37	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
297	123.300	22.92	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
298	123.200	22.93	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
299	123.100	22.94	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
300	123.000	22.94	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
301	122.900	22.95	0.00	8.30	0.00	1.35	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
302	122.800	22.96	0.00	8.30	0.00	1.35	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
303	122.700	22.96	0.00	8.30	0.00	1.35	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
304	122.600	22.97	0.00	8.30	0.00	1.34	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
305	122.500	22.98	0.00	8.30	0.00	1.34	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
306	122.400	22.98	0.00	8.30	0.00	1.34	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
307	122.300	22.99	0.00	8.30	0.00	1.34	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
308	122.200	23.00	0.00	8.30	0.00	1.33	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
309	122.100	23.00	0.00	8.30	0.00	1.33	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
310	122.000	23.01	0.00	8.30	0.00	1.33	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
311	121.900	23.02	0.00	8.30	0.00	1.32	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
312	121.800	23.02	0.00	8.30	0.00	1.32	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
313	121.700	23.03	0.00	8.30	0.00	1.32	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
314	121.600	23.04	0.00	8.30	0.00	1.31	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
315	121.500	23.04	0.00	8.30	0.00	1.31	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
316	121.400	23.05	0.00	8.30	0.00	1.31	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
317	121.300	23.06	0.00	8.30	0.00	1.31	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
318	121.200	23.06	0.00	8.30	0.00	1.30	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
319	121.100	23.07	0.00	8.30	0.00	1.30	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
320	121.000	23.08	0.00	8.30	0.00	1.30	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
321	120.900	23.08	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
322	120.800	23.09	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
323	120.700	23.10	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
324	120.600	23.10	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69

325	120.500	23.11	0.00	8.30	0.00	1.28	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
326	120.400	23.12	0.00	8.30	0.00	1.28	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
327	120.300	23.12	0.00	8.30	0.00	1.28	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
328	120.200	23.13	0.00	8.30	0.00	1.27	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
329	120.100	23.14	0.00	8.30	0.00	1.27	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
330	120.000	23.14	0.00	8.30	0.00	1.27	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
331	119.900	23.15	0.00	8.30	0.00	1.27	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
332	119.800	23.16	0.00	8.30	0.00	1.26	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
333	119.700	23.16	0.00	8.30	0.00	1.26	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
334	119.600	23.17	0.00	8.30	0.00	1.26	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
335	119.500	23.18	0.00	8.30	0.00	1.25	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
336	119.400	23.19	0.00	8.30	0.00	1.25	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
337	119.300	23.19	0.00	8.30	0.00	1.25	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
338	119.200	23.20	0.00	8.30	0.00	1.25	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
339	119.100	23.21	0.00	8.30	0.00	1.24	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
340	119.000	23.21	0.00	8.30	0.00	1.24	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
341	118.900	23.22	0.00	8.30	0.00	1.24	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
342	118.800	23.23	0.00	8.30	0.00	1.23	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
343	118.700	23.23	0.00	8.30	0.00	1.23	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
344	118.600	23.24	0.00	8.30	0.00	1.23	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
345	118.500	23.25	0.00	8.30	0.00	1.22	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
346	118.400	23.25	0.00	8.30	0.00	1.22	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
347	118.300	23.26	0.00	8.30	0.00	1.22	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
348	118.200	23.27	0.00	8.30	0.00	1.22	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
349	118.100	23.27	0.00	8.30	0.00	1.21	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
350	118.000	23.28	0.00	8.30	0.00	1.21	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
351	117.900	23.29	0.00	8.30	0.00	1.21	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
352	117.800	23.29	0.00	8.30	0.00	1.20	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
353	117.700	23.30	0.00	8.30	0.00	1.20	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 13 LITTLE FLAT - GLADE CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
354	UPR RCH	0.00010	23.30	0.00	8.30	0.00	1.20	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72

********** 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	m^3/	EFF	VELO m/s	TIME days	m	m	m^3	AREA m^2	AREA m^2	PRISM m^3	VELO m/s	m^2/s	VELO m/s
354	117.70	117.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
355	117.60	117.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
356	117.50	117.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
357	117.40	117.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
358	117.30	117.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
359	117.20	117.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
360	117.10	117.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
361	117.00	116.90	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
362	116.90	116.80	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
363	116.80	116.70	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
364	116.70	116.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
365	116.60	116.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
366	116.50	116.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
367	116.40	116.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
368	116.30	116.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
369	116.20	116.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
370	116.10	116.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
371	116.00	115.90	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
372	115.90	115.80	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
373	115.80	115.70	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
374	115.70	115.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
375	115.60	115.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
376	115.50	115.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
377	115.40	115.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
378	115.30	115.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
379	115.20	115.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
380	115.10	115.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
381	115.00	114.90	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
382	114.90	114.80	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
383	114.80	114.70	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
384	114.70	114.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
385	114.60	114.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
386	114.50	114.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
387	114.40	114.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
388	114.30	114.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
389	114.20	114.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
390	114.10	114.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
TOT						4005.76			34609.80	41079.29					
AVG					0.00001		0.84	11.10			9.35				
CUM						32748.55									

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

ELEM	ENDING	SAT	REAER	CBOD	CBOD	ANBOD	BKGD	FULL	CORR	ORGN	ORGN	NH3	NH3	DENIT	PO4	ALG	MAC	COLI	NCM	NCM

NO.	DIST	D.O.	RATE	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
354	117.600	8.53	0.89	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
355	117.500	8.53	0.89	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
356	117.400	8.52	0.89	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
357	117.300	8.52	0.89	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
358	117.200	8.52	0.89	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
359	117.100	8.52	0.89	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
360	117.000	8.52	0.89	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
361	116.900	8.52	0.89	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
362	116.800	8.51	0.89	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
363	116.700	8.51	0.89	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
364	116.600	8.51	0.89	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
365	116.500	8.51	0.89	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
366	116.400	8.51	0.89	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
367	116.300	8.50	0.89	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
368	116.200	8.50	0.89	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
369	116.100	8.50	0.89	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
370	116.000	8.50	0.89	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
371	115.900	8.50	0.89	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
372	115.800	8.50	0.89	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
373	115.700	8.49	0.89	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
374	115.600	8.49	0.89	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
375	115.500	8.49	0.89	0.02	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
376	115.400	8.49	0.89	0.02	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	

0.05																				
377	115.300	8.49	0.89	0.02	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
378	115.200	8.49	0.89	0.02	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
379	115.100	8.48	0.89	0.02	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
380	115.000	8.48	0.89	0.02	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
381	114.900	8.48	0.89	0.02	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
382	114.800	8.48	0.89	0.02	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
383	114.700	8.48	0.89	0.02	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
384	114.600	8.48	0.89	0.02	0.05	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
385	114.500	8.47	0.89	0.02	0.05	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
386	114.400	8.47	0.89	0.02	0.05	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
387	114.300	8.47	0.89	0.02	0.05	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
388	114.200	8.47	0.89	0.02	0.05	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
389	114.100	8.47	0.89	0.02	0.05	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	
0.05																				
390	114.000	8.47	0.89	0.02	0.05	0.00	5.43	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
20 DEG C RATE				0.04		0.00	4.30			0.00		0.00	0.00	0.00	0.00			0.00	0.18	
AVG 20 DEG C RATE			0.83		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
354	117.600	23.31	0.00	8.30	0.00	1.15	2.44	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38
355	117.500	23.32	0.00	8.30	0.00	1.15	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41
356	117.400	23.33	0.00	8.30	0.00	1.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41
357	117.300	23.34	0.00	8.30	0.00	1.14	2.14	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
358	117.200	23.35	0.00	8.30	0.00	1.14	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
359	117.100	23.36	0.00	8.30	0.00	1.13	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
360	117.000	23.38	0.00	8.30	0.00	1.13	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
361	116.900	23.39	0.00	8.30	0.00	1.12	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43

362	116.800	23.40	0.00	8.30	0.00	1.12	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
363	116.700	23.41	0.00	8.30	0.00	1.12	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
364	116.600	23.42	0.00	8.30	0.00	1.11	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
365	116.500	23.43	0.00	8.30	0.00	1.11	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
366	116.400	23.44	0.00	8.30	0.00	1.10	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
367	116.300	23.45	0.00	8.30	0.00	1.10	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
368	116.200	23.46	0.00	8.30	0.00	1.09	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
369	116.100	23.47	0.00	8.30	0.00	1.09	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
370	116.000	23.48	0.00	8.30	0.00	1.08	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
371	115.900	23.49	0.00	8.30	0.00	1.08	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
372	115.800	23.51	0.00	8.30	0.00	1.07	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
373	115.700	23.52	0.00	8.30	0.00	1.07	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
374	115.600	23.53	0.00	8.30	0.00	1.06	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
375	115.500	23.54	0.00	8.30	0.00	1.06	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
376	115.400	23.55	0.00	8.30	0.00	1.05	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
377	115.300	23.56	0.00	8.30	0.00	1.05	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
378	115.200	23.57	0.00	8.30	0.00	1.05	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
379	115.100	23.58	0.00	8.30	0.00	1.04	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
380	115.000	23.59	0.00	8.30	0.00	1.04	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
381	114.900	23.60	0.00	8.30	0.00	1.03	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
382	114.800	23.61	0.00	8.30	0.00	1.03	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
383	114.700	23.62	0.00	8.30	0.00	1.02	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51
384	114.600	23.64	0.00	8.30	0.00	1.02	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51
385	114.500	23.65	0.00	8.30	0.00	1.01	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
386	114.400	23.66	0.00	8.30	0.00	1.01	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
387	114.300	23.67	0.00	8.30	0.00	1.00	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
388	114.200	23.68	0.00	8.30	0.00	1.00	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53
389	114.100	23.69	0.00	8.30	0.00	0.99	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53
390	114.000	23.70	0.00	8.30	0.00	0.99	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 14 GLADE CREEK - CUB CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
391	UPR RCH	0.00010	23.70	0.00	8.30	0.00	0.99	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	1.53

********** 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	m^3/	EFF	VELO m/s	TIME days	m	m	m^3	AREA m^2	AREA m^2	PRISM m^3	VELO m/s	m^2/s	VELO m/s
391	114.00	113.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
392	113.90	113.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
393	113.80	113.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
394	113.70	113.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
395	113.60	113.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
396	113.50	113.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
397	113.40	113.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
398	113.30	113.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
399	113.20	113.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
400	113.10	113.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
401	113.00	112.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
402	112.90	112.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
403	112.80	112.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
404	112.70	112.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
405	112.60	112.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
406	112.50	112.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
407	112.40	112.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
408	112.30	112.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
409	112.20	112.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
410	112.10	112.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
411	112.00	111.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
412	111.90	111.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
413	111.80	111.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
414	111.70	111.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
415	111.60	111.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
416	111.50	111.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
417	111.40	111.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
418	111.30	111.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
419	111.20	111.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
420	111.10	111.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
421	111.00	110.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
422	110.90	110.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
423	110.80	110.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
424	110.70	110.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
425	110.60	110.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
426	110.50	110.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
427	110.40	110.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
428	110.30	110.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
429	110.20	110.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
430	110.10	110.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
431	110.00	109.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
432	109.90	109.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
433	109.80	109.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
434	109.70	109.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
435	109.60	109.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
436	109.50	109.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
437	109.40	109.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000

438	109.30	109.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
439	109.20	109.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
440	109.10	109.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
441	109.00	108.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
442	108.90	108.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
443	108.80	108.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
444	108.70	108.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
445	108.60	108.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
TOT						5813.16			50225.74	61063.79					
AVG					0.00001		0.82	11.10			9.13				
CUM						38561.79									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
391	113.900	8.46	0.91	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
392	113.800	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
393	113.700	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
394	113.600	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
395	113.500	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
396	113.400	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
397	113.300	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
398	113.200	8.46	0.91	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
399	113.100	8.46	0.91	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
400	113.000	8.46	0.91	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
401	112.900	8.46	0.92	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
402	112.800	8.45	0.92	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
403	112.700	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
404	112.600	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	

405	112.500	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
406	112.400	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
407	112.300	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
408	112.200	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
409	112.100	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
410	112.000	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
411	111.900	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
412	111.800	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
413	111.700	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
414	111.600	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
415	111.500	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
416	111.400	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
417	111.300	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
418	111.200	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
419	111.100	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
420	111.000	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
421	110.900	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
422	110.800	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
423	110.700	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
424	110.600	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
425	110.500	8.44	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
426	110.400	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
427	110.300	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
428	110.200	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
429	110.100	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

0.05																				
430	110.000	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
431	109.900	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
432	109.800	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
433	109.700	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
434	109.600	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
435	109.500	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
436	109.400	8.43	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
437	109.300	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
438	109.200	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
439	109.100	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
440	109.000	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
441	108.900	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
442	108.800	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
443	108.700	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
444	108.600	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
445	108.500	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
20 DEG C RATE				0.05		0.00	4.20			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.85		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
391	113.900	23.71	0.00	8.30	0.00	1.12	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68
392	113.800	23.71	0.00	8.30	0.00	1.12	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69
393	113.700	23.72	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69
394	113.600	23.72	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70

395	113.500	23.73	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
396	113.400	23.73	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
397	113.300	23.74	0.00	8.30	0.00	1.10	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
398	113.200	23.74	0.00	8.30	0.00	1.10	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
399	113.100	23.75	0.00	8.30	0.00	1.10	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
400	113.000	23.75	0.00	8.30	0.00	1.10	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71
401	112.900	23.76	0.00	8.30	0.00	1.10	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71
402	112.800	23.77	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71
403	112.700	23.77	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71
404	112.600	23.78	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71
405	112.500	23.78	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72
406	112.400	23.79	0.00	8.30	0.00	1.08	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72
407	112.300	23.79	0.00	8.30	0.00	1.08	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72
408	112.200	23.80	0.00	8.30	0.00	1.08	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72
409	112.100	23.80	0.00	8.30	0.00	1.08	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72
410	112.000	23.81	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
411	111.900	23.81	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
412	111.800	23.82	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
413	111.700	23.83	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
414	111.600	23.83	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
415	111.500	23.84	0.00	8.30	0.00	1.06	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74
416	111.400	23.84	0.00	8.30	0.00	1.06	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74
417	111.300	23.85	0.00	8.30	0.00	1.06	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74
418	111.200	23.85	0.00	8.30	0.00	1.06	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74
419	111.100	23.86	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
420	111.000	23.86	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
421	110.900	23.87	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
422	110.800	23.87	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
423	110.700	23.88	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
424	110.600	23.89	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
425	110.500	23.89	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
426	110.400	23.90	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
427	110.300	23.90	0.00	8.30	0.00	1.04	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
428	110.200	23.91	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
429	110.100	23.91	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
430	110.000	23.92	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
431	109.900	23.92	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
432	109.800	23.93	0.00	8.30	0.00	1.02	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
433	109.700	23.93	0.00	8.30	0.00	1.02	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
434	109.600	23.94	0.00	8.30	0.00	1.02	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
435	109.500	23.95	0.00	8.30	0.00	1.02	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
436	109.400	23.95	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
437	109.300	23.96	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
438	109.200	23.96	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
439	109.100	23.97	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
440	109.000	23.97	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
441	108.900	23.98	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
442	108.800	23.98	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
443	108.700	23.99	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80
444	108.600	23.99	0.00	8.30	0.00	1.00	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80

445	108.500	24.00	0.00	8.30	0.00	0.99	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 15 CUB CREEK - COW CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
446	UPR RCH	0.00010	24.00	0.00	8.30	0.00	0.99	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	1.80

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
446	108.50	108.40	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
447	108.40	108.30	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
448	108.30	108.20	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
449	108.20	108.10	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
450	108.10	108.00	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
451	108.00	107.90	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
452	107.90	107.80	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
453	107.80	107.70	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
454	107.70	107.60	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
455	107.60	107.50	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
456	107.50	107.40	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
457	107.40	107.30	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
TOT						1252.91			10825.11	13323.01					
AVG					0.00001		0.81	11.10			9.02				
CUM						39814.71									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

446	108.400	8.41	0.93	0.04	0.06	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
447	108.300	8.41	0.93	0.04	0.06	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
448	108.200	8.41	0.93	0.04	0.06	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
449	108.100	8.40	0.93	0.04	0.06	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
450	108.000	8.40	0.93	0.04	0.06	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
451	107.900	8.39	0.93	0.04	0.06	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
452	107.800	8.39	0.93	0.04	0.06	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
453	107.700	8.39	0.93	0.04	0.06	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
454	107.600	8.38	0.93	0.04	0.06	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
455	107.500	8.38	0.93	0.04	0.06	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
456	107.400	8.37	0.94	0.04	0.06	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
457	107.300	8.37	0.94	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
20 DEG C RATE				0.06		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.86		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
446	108.400	24.02	0.00	8.30	0.00	1.11	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
447	108.300	24.05	0.00	8.30	0.00	1.10	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
448	108.200	24.08	0.00	8.30	0.00	1.09	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
449	108.100	24.10	0.00	8.30	0.00	1.08	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
450	108.000	24.12	0.00	8.30	0.00	1.07	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
451	107.900	24.15	0.00	8.30	0.00	1.06	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80
452	107.800	24.17	0.00	8.30	0.00	1.05	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
453	107.700	24.20	0.00	8.30	0.00	1.04	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82
454	107.600	24.23	0.00	8.30	0.00	1.03	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83
455	107.500	24.25	0.00	8.30	0.00	1.02	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84
456	107.400	24.27	0.00	8.30	0.00	1.01	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85

457	107.300	24.30	0.00	8.30	0.00	1.00	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.86

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 16 COW CREEK - BEAR CREEK BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
458	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.00	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	1.86

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
458	107.30	107.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
459	107.20	107.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
460	107.10	107.00	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
461	107.00	106.90	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
462	106.90	106.80	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
463	106.80	106.70	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
464	106.70	106.60	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
465	106.60	106.50	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
466	106.50	106.40	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
467	106.40	106.30	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
468	106.30	106.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
469	106.20	106.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
470	106.10	106.00	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
471	106.00	105.90	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
472	105.90	105.80	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
473	105.80	105.70	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
474	105.70	105.60	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
475	105.60	105.50	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
476	105.50	105.40	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
477	105.40	105.30	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
478	105.30	105.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
479	105.20	105.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
480	105.10	105.00	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
481	105.00	104.90	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
482	104.90	104.80	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000

483	104.80	104.70	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
484	104.70	104.60	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
485	104.60	104.50	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
486	104.50	104.40	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
487	104.40	104.30	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
488	104.30	104.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
489	104.20	104.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
TOT						3299.96			28511.68	35528.04					
AVG					0.00001		0.80	11.10			8.91				
CUM						43114.71									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
458	107.200	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
459	107.100	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
460	107.000	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
461	106.900	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
462	106.800	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
463	106.700	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
464	106.600	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
465	106.500	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
466	106.400	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
467	106.300	8.37	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
468	106.200	8.37	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
469	106.100	8.37	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
470	106.000	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
471	105.900	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06

472	105.800	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
473	105.700	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
474	105.600	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
475	105.500	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
476	105.400	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
477	105.300	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
478	105.200	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
479	105.100	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
480	105.000	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
481	104.900	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
482	104.800	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
483	104.700	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
484	104.600	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
485	104.500	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
486	104.400	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
487	104.300	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
488	104.200	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
489	104.100	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
20 DEG C RATE				0.06		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.87		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
458	107.200	24.30	0.00	8.30	0.00	1.00	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87

459	107.100	24.31	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
460	107.000	24.31	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
461	106.900	24.31	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
462	106.800	24.32	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
463	106.700	24.32	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
464	106.600	24.32	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
465	106.500	24.32	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
466	106.400	24.33	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
467	106.300	24.33	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
468	106.200	24.33	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
469	106.100	24.34	0.00	8.30	0.00	0.99	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
470	106.000	24.34	0.00	8.30	0.00	0.99	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
471	105.900	24.34	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
472	105.800	24.35	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.88
473	105.700	24.35	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89
474	105.600	24.35	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89
475	105.500	24.36	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89
476	105.400	24.36	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89
477	105.300	24.36	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89
478	105.200	24.37	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89
479	105.100	24.37	0.00	8.30	0.00	0.97	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89
480	105.000	24.37	0.00	8.30	0.00	0.97	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
481	104.900	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
482	104.800	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
483	104.700	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
484	104.600	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
485	104.500	24.39	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
486	104.400	24.39	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90
487	104.300	24.39	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91
488	104.200	24.40	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91
489	104.100	24.40	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 17 BEAR CREEK BRANCH - BILES BR CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
490	UPR RCH	0.00010	24.40	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	1.91

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
490	104.10	104.00	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
491	104.00	103.90	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
492	103.90	103.80	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
493	103.80	103.70	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
TOT						403.69			3487.85	4401.00					
AVG					0.00001		0.79	11.00			8.72				
CUM						43518.40									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
490	104.000	8.35	0.96	0.04	0.06	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
491	103.900	8.35	0.96	0.04	0.06	0.00	5.43	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
492	103.800	8.34	0.96	0.04	0.06	0.00	5.43	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
493	103.700	8.34	0.96	0.04	0.06	0.00	5.44	5.44	5.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
20 DEG C RATE				0.07		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.88		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
490	104.000	24.42	0.00	8.30	0.00	0.95	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92
491	103.900	24.45	0.00	8.30	0.00	0.94	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
492	103.800	24.48	0.00	8.30	0.00	0.93	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94
493	103.700	24.50	0.00	8.30	0.00	0.92	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 18 BILES BRANCH - HURRICANE CR CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
494	UPR RCH	0.00010	24.50	0.00	8.30	0.00	0.92	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	1.95

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
494	103.70	103.60	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
495	103.60	103.50	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
496	103.50	103.40	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
497	103.40	103.30	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
498	103.30	103.20	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
499	103.20	103.10	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
500	103.10	103.00	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
501	103.00	102.90	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
502	102.90	102.80	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
503	102.80	102.70	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
504	102.70	102.60	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
505	102.60	102.50	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
506	102.50	102.40	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
507	102.40	102.30	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
508	102.30	102.20	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
509	102.20	102.10	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
510	102.10	102.00	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
511	102.00	101.90	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
512	101.90	101.80	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
TOT						1917.51			16567.28	20904.77					
AVG					0.00001		0.79	11.00			8.72				
CUM						45435.92									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
494	103.600	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
495	103.500	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
496	103.400	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
497	103.300	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
498	103.200	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
499	103.100	8.33	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
500	103.000	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
501	102.900	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
502	102.800	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
503	102.700	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
504	102.600	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
505	102.500	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
506	102.400	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
507	102.300	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
508	102.200	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
509	102.100	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
510	102.000	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
511	101.900	8.33	0.96	0.04	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
512	101.800	8.32	0.96	0.04	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
20 DEG C RATE				0.07		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.88		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
494	103.600	24.51	0.00	8.30	0.00	0.91	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99
495	103.500	24.51	0.00	8.30	0.00	0.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
496	103.400	24.52	0.00	8.30	0.00	0.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
497	103.300	24.52	0.00	8.30	0.00	0.90	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
498	103.200	24.53	0.00	8.30	0.00	0.90	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
499	103.100	24.53	0.00	8.30	0.00	0.90	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
500	103.000	24.54	0.00	8.30	0.00	0.90	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
501	102.900	24.54	0.00	8.30	0.00	0.89	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
502	102.800	24.55	0.00	8.30	0.00	0.89	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
503	102.700	24.55	0.00	8.30	0.00	0.89	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
504	102.600	24.56	0.00	8.30	0.00	0.89	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
505	102.500	24.56	0.00	8.30	0.00	0.89	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
506	102.400	24.57	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
507	102.300	24.57	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
508	102.200	24.58	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
509	102.100	24.58	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
510	102.000	24.59	0.00	8.30	0.00	0.87	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
511	101.900	24.59	0.00	8.30	0.00	0.87	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04
512	101.800	24.60	0.00	8.30	0.00	0.87	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 19 HURRICANE CR - INDIAN BRANCH CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
513	UPR RCH	0.00010	24.60	0.00	8.30	0.00	0.87	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	2.04

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

513	101.80	101.70	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
514	101.70	101.60	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
515	101.60	101.50	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
516	101.50	101.40	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
517	101.40	101.30	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
518	101.30	101.20	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
519	101.20	101.10	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
520	101.10	101.00	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
521	101.00	100.90	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
522	100.90	100.80	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
523	100.80	100.70	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
524	100.70	100.60	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
525	100.60	100.50	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
526	100.50	100.40	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
527	100.40	100.30	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
528	100.30	100.20	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
529	100.20	100.10	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
530	100.10	100.00	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
531	100.00	99.90	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
532	99.90	99.80	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
533	99.80	99.70	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
534	99.70	99.60	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
535	99.60	99.50	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
TOT						2291.91			19802.07	25305.78					
AVG					0.00001		0.78	11.00			8.61				
CUM						47727.83									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
513	101.700	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
514	101.600	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
515	101.500	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
516	101.400	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
517	101.300	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
518	101.200	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	

0.06																				
519	101.100	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
520	101.000	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
521	100.900	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
522	100.800	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
523	100.700	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
524	100.600	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
525	100.500	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
526	100.400	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
527	100.300	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
528	100.200	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
529	100.100	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
530	100.000	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
531	99.900	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
532	99.800	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
533	99.700	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
534	99.600	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
535	99.500	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	
0.06																				
20 DEG C RATE				0.07		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.89		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
513	101.700	24.60	0.00	8.30	0.00	0.79	6.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
514	101.600	24.60	0.00	8.30	0.00	0.78	6.44	6.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73

515	101.500	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
516	101.400	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
517	101.300	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
518	101.200	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
519	101.100	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
520	101.000	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
521	100.900	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
522	100.800	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
523	100.700	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
524	100.600	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
525	100.500	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
526	100.400	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
527	100.300	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
528	100.200	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
529	100.100	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
530	100.000	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
531	99.900	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
532	99.800	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
533	99.700	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
534	99.600	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72
535	99.500	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 20 INDIAN BRANCH - MOODY CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
536	UPR RCH	0.00010	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	1.72

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
536	99.50	99.40	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
537	99.40	99.30	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
538	99.30	99.20	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
539	99.20	99.10	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
540	99.10	99.00	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000

541	99.00	98.90	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
542	98.90	98.80	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
543	98.80	98.70	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
544	98.70	98.60	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
545	98.60	98.50	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
546	98.50	98.40	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
547	98.40	98.30	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
548	98.30	98.20	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
549	98.20	98.10	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
550	98.10	98.00	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
551	98.00	97.90	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
552	97.90	97.80	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
553	97.80	97.70	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
554	97.70	97.60	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
555	97.60	97.50	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
556	97.50	97.40	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
557	97.40	97.30	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
558	97.30	97.20	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
559	97.20	97.10	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
560	97.10	97.00	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
561	97.00	96.90	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
562	96.90	96.80	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
563	96.80	96.70	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
564	96.70	96.60	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
565	96.60	96.50	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
TOT						2951.24			25498.71	33007.54					
AVG					0.00001		0.77	11.00			8.50				
CUM						50679.08									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
536	99.400	8.32	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
537	99.300	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
538	99.200	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
539	99.100	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
540	99.000	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06

541	98.900	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
542	98.800	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
543	98.700	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
544	98.600	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
545	98.500	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
546	98.400	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
547	98.300	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
548	98.200	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
549	98.100	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
550	98.000	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
551	97.900	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
552	97.800	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
553	97.700	8.33	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
554	97.600	8.33	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
555	97.500	8.33	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
556	97.400	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
557	97.300	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
558	97.200	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
559	97.100	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
560	97.000	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
561	96.900	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
562	96.800	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
563	96.700	8.34	0.99	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
564	96.600	8.34	0.99	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
565	96.500	8.34	0.99	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

20 DEG C RATE 0.06 0.00 3.70 0.00 0.00 0.00 0.00 0.00 0.00 0.16
AVG 20 DEG C RATE 0.91 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
536	99.400	24.60	0.00	8.30	0.00	1.31	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59
537	99.300	24.59	0.00	8.30	0.00	1.32	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
538	99.200	24.59	0.00	8.30	0.00	1.32	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
539	99.100	24.59	0.00	8.30	0.00	1.32	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
540	99.000	24.58	0.00	8.30	0.00	1.32	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
541	98.900	24.58	0.00	8.30	0.00	1.32	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
542	98.800	24.58	0.00	8.30	0.00	1.33	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
543	98.700	24.57	0.00	8.30	0.00	1.33	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
544	98.600	24.57	0.00	8.30	0.00	1.33	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
545	98.500	24.57	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
546	98.400	24.56	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
547	98.300	24.56	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
548	98.200	24.56	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
549	98.100	24.55	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
550	98.000	24.55	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
551	97.900	24.55	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
552	97.800	24.54	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
553	97.700	24.54	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
554	97.600	24.54	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
555	97.500	24.53	0.00	8.30	0.00	1.34	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
556	97.400	24.53	0.00	8.30	0.00	1.34	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
557	97.300	24.53	0.00	8.30	0.00	1.34	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
558	97.200	24.52	0.00	8.30	0.00	1.35	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
559	97.100	24.52	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
560	97.000	24.52	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
561	96.900	24.51	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
562	96.800	24.51	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
563	96.700	24.51	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
564	96.600	24.50	0.00	8.30	0.00	1.35	6.33	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
565	96.500	24.50	0.00	8.30	0.00	1.35	6.33	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

REACH NO. 21 MOODY CREEK - BULL CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
566	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.35	6.33	6.33	0.00	0.00	0.00	0.00	0.00	0.00	1.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
566	96.50	96.40	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
567	96.40	96.30	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
568	96.30	96.20	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
569	96.20	96.10	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
570	96.10	96.00	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
571	96.00	95.90	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
572	95.90	95.80	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
573	95.80	95.70	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
574	95.70	95.60	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
575	95.60	95.50	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
576	95.50	95.40	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
577	95.40	95.30	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
578	95.30	95.20	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
579	95.20	95.10	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
580	95.10	95.00	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
581	95.00	94.90	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
582	94.90	94.80	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
TOT						1650.72			14262.22	18704.27					
AVG					0.00001		0.76	11.00			8.39				
CUM						52329.81									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
566	96.400	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	

0.06																				
567	96.300	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
568	96.200	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
569	96.100	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
570	96.000	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
571	95.900	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
572	95.800	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
573	95.700	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
574	95.600	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
575	95.500	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
576	95.400	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
577	95.300	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
578	95.200	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
579	95.100	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
580	95.000	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
581	94.900	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
582	94.800	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	
0.06																				
20 DEG C RATE				0.06		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.16	
AVG 20 DEG C RATE			0.92		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
566	96.400	24.50	0.00	8.30	0.00	1.35	6.45	6.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
567	96.300	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
568	96.200	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
569	96.100	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56

570	96.000	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
571	95.900	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
572	95.800	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
573	95.700	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
574	95.600	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
575	95.500	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
576	95.400	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
577	95.300	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
578	95.200	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
579	95.100	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
580	95.000	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
581	94.900	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
582	94.800	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 22 BULL CREEK - SWEETWATER CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
583	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	1.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
583	94.80	94.70	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
584	94.70	94.60	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
585	94.60	94.50	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
586	94.50	94.40	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
587	94.40	94.30	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
588	94.30	94.20	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
589	94.20	94.10	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
590	94.10	94.00	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
591	94.00	93.90	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
592	93.90	93.80	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
593	93.80	93.70	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
594	93.70	93.60	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
595	93.60	93.50	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000

596	93.50	93.40	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
597	93.40	93.30	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
598	93.30	93.20	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
599	93.20	93.10	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
600	93.10	93.00	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
601	93.00	92.90	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
602	92.90	92.80	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
603	92.80	92.70	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
604	92.70	92.60	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
605	92.60	92.50	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
606	92.50	92.40	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
607	92.40	92.30	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
608	92.30	92.20	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
609	92.20	92.10	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
610	92.10	92.00	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000	0.000
TOT						2683.18			23182.65	30807.04					
AVG					0.00001		0.75	11.00			8.28				
CUM						55013.00									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
583	94.700	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
584	94.600	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
585	94.500	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
586	94.400	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
587	94.300	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
588	94.200	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
589	94.100	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
590	94.000	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
591	93.900	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
592	93.800	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

593	93.700	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
594	93.600	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
595	93.500	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
596	93.400	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
597	93.300	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
598	93.200	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
599	93.100	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
600	93.000	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
601	92.900	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
602	92.800	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
603	92.700	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
604	92.600	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
605	92.500	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
606	92.400	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
607	92.300	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
608	92.200	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
609	92.100	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
610	92.000	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.06		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.15	
AVG 20 DEG C RATE			0.93		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
583	94.700	24.50	0.00	8.30	0.00	1.44	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00

584	94.600	24.50	0.00	8.30	0.00	1.44	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
585	94.500	24.50	0.00	8.30	0.00	1.44	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
586	94.400	24.50	0.00	8.30	0.00	1.44	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
587	94.300	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
588	94.200	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
589	94.100	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
590	94.000	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
591	93.900	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
592	93.800	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
593	93.700	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
594	93.600	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
595	93.500	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
596	93.400	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
597	93.300	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
598	93.200	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
599	93.100	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
600	93.000	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
601	92.900	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
602	92.800	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
603	92.700	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
604	92.600	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
605	92.500	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
606	92.400	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
607	92.300	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
608	92.200	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
609	92.100	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
610	92.000	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 23 SWEETWATER CREEK - BRUSHY CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
611	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.96

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

611	92.00	91.90	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
612	91.90	91.80	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
613	91.80	91.70	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
614	91.70	91.60	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
615	91.60	91.50	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
616	91.50	91.40	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
617	91.40	91.30	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
618	91.30	91.20	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
619	91.20	91.10	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
620	91.10	91.00	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
TOT						945.54			8169.50	11002.51					
AVG					0.00001		0.74	11.00			8.17				
CUM						55958.54									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
611	91.900	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
612	91.800	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
613	91.700	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
614	91.600	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
615	91.500	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
616	91.400	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
617	91.300	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
618	91.200	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
619	91.100	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
620	91.000	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.05		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.15	
AVG 20 DEG C RATE			0.94		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
611	91.900	24.50	0.00	8.30	0.00	1.49	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
612	91.800	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
613	91.700	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
614	91.600	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
615	91.500	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
616	91.400	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
617	91.300	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
618	91.200	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
619	91.100	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
620	91.000	24.50	0.00	8.30	0.00	1.49	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 24 BRUSHY CREEK - WHITE OAK CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
621	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.49	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.89

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
621	91.00	90.90	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
622	90.90	90.80	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
623	90.80	90.70	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
624	90.70	90.60	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
625	90.60	90.50	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
626	90.50	90.40	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
627	90.40	90.30	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000

628	90.30	90.20	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
629	90.20	90.10	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
630	90.10	90.00	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
631	90.00	89.90	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
632	89.90	89.80	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
633	89.80	89.70	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
634	89.70	89.60	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
635	89.60	89.50	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
636	89.50	89.40	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
637	89.40	89.30	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
638	89.30	89.20	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
639	89.20	89.10	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
640	89.10	89.00	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
641	89.00	88.90	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
642	88.90	88.80	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
643	88.80	88.70	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
644	88.70	88.60	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
645	88.60	88.50	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
646	88.50	88.40	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
647	88.40	88.30	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
648	88.30	88.20	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
649	88.20	88.10	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
TOT						2705.15			23372.47	31907.29					
AVG					0.00001		0.73	11.00			8.06				
CUM						58663.70									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
621	90.900	8.34	1.04	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
622	90.800	8.34	1.04	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
623	90.700	8.34	1.04	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
624	90.600	8.34	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
625	90.500	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
626	90.400	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
627	90.300	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	

628	90.200	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
629	90.100	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
630	90.000	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
631	89.900	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
632	89.800	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
633	89.700	8.35	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
634	89.600	8.35	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
635	89.500	8.36	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
636	89.400	8.36	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
637	89.300	8.36	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
638	89.200	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
639	89.100	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
640	89.000	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
641	88.900	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
642	88.800	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
643	88.700	8.36	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
644	88.600	8.37	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
645	88.500	8.37	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
646	88.400	8.37	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
647	88.300	8.37	1.04	0.05	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
648	88.200	8.37	1.04	0.05	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
649	88.100	8.37	1.04	0.05	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.05		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			0.96		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
621	90.900	24.49	0.00	8.30	0.00	1.51	6.31	6.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
622	90.800	24.49	0.00	8.30	0.00	1.51	6.31	6.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
623	90.700	24.48	0.00	8.30	0.00	1.51	6.30	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
624	90.600	24.47	0.00	8.30	0.00	1.52	6.30	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
625	90.500	24.47	0.00	8.30	0.00	1.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
626	90.400	24.46	0.00	8.30	0.00	1.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
627	90.300	24.45	0.00	8.30	0.00	1.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
628	90.200	24.44	0.00	8.30	0.00	1.53	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
629	90.100	24.44	0.00	8.30	0.00	1.53	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
630	90.000	24.43	0.00	8.30	0.00	1.53	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
631	89.900	24.42	0.00	8.30	0.00	1.54	6.27	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
632	89.800	24.42	0.00	8.30	0.00	1.54	6.27	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
633	89.700	24.41	0.00	8.30	0.00	1.54	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
634	89.600	24.40	0.00	8.30	0.00	1.54	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
635	89.500	24.40	0.00	8.30	0.00	1.55	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
636	89.400	24.39	0.00	8.30	0.00	1.55	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
637	89.300	24.38	0.00	8.30	0.00	1.55	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
638	89.200	24.38	0.00	8.30	0.00	1.55	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
639	89.100	24.37	0.00	8.30	0.00	1.56	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
640	89.000	24.36	0.00	8.30	0.00	1.56	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
641	88.900	24.36	0.00	8.30	0.00	1.56	6.23	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
642	88.800	24.35	0.00	8.30	0.00	1.56	6.23	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
643	88.700	24.34	0.00	8.30	0.00	1.57	6.23	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
644	88.600	24.33	0.00	8.30	0.00	1.57	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
645	88.500	24.33	0.00	8.30	0.00	1.57	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
646	88.400	24.32	0.00	8.30	0.00	1.58	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
647	88.300	24.31	0.00	8.30	0.00	1.58	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
648	88.200	24.31	0.00	8.30	0.00	1.58	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
649	88.100	24.30	0.00	8.30	0.00	1.58	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 25 WHITE OAK CREEK - BILLS CREEK CASTOR CREEK CALIBRATION RUN

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

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

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
650	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.58	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.84

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
650	88.10	88.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
651	88.00	87.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
652	87.90	87.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
653	87.80	87.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
654	87.70	87.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
655	87.60	87.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
656	87.50	87.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
657	87.40	87.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
658	87.30	87.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
659	87.20	87.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
660	87.10	87.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
661	87.00	86.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
662	86.90	86.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
663	86.80	86.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
664	86.70	86.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
665	86.60	86.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
666	86.50	86.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
667	86.40	86.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
668	86.30	86.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
669	86.20	86.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
670	86.10	86.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
671	86.00	85.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
672	85.90	85.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
673	85.80	85.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
674	85.70	85.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
675	85.60	85.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
676	85.50	85.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
677	85.40	85.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
678	85.30	85.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
679	85.20	85.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
680	85.10	85.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
681	85.00	84.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
682	84.90	84.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
683	84.80	84.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
684	84.70	84.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
685	84.60	84.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
686	84.50	84.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
687	84.40	84.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
688	84.30	84.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000

689	84.20	84.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
690	84.10	84.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
691	84.00	83.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
692	83.90	83.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
693	83.80	83.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
694	83.70	83.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
695	83.60	83.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
696	83.50	83.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
697	83.40	83.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
698	83.30	83.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
699	83.20	83.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
700	83.10	83.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
701	83.00	82.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
702	82.90	82.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
703	82.80	82.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
704	82.70	82.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
705	82.60	82.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
706	82.50	82.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
707	82.40	82.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
708	82.30	82.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
709	82.20	82.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
710	82.10	82.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
711	82.00	81.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
712	81.90	81.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
713	81.80	81.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
714	81.70	81.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
715	81.60	81.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
716	81.50	81.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
717	81.40	81.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
718	81.30	81.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
719	81.20	81.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
720	81.10	81.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
721	81.00	80.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
722	80.90	80.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
723	80.80	80.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
724	80.70	80.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
725	80.60	80.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
726	80.50	80.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
727	80.40	80.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
728	80.30	80.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
729	80.20	80.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
730	80.10	80.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
731	80.00	79.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
732	79.90	79.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
733	79.80	79.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
734	79.70	79.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
735	79.60	79.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
736	79.50	79.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
737	79.40	79.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
738	79.30	79.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000

739	79.20	79.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
740	79.10	79.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
741	79.00	78.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
742	78.90	78.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
743	78.80	78.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
744	78.70	78.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
745	78.60	78.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
746	78.50	78.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
TOT						8721.20			75351.25	105754.30					
AVG					0.00001		0.71	10.90			7.77				
CUM						67384.91									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
650	88.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
651	87.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
652	87.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
653	87.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
654	87.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
655	87.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
656	87.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
657	87.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
658	87.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
659	87.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
660	87.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
661	86.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
662	86.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
663	86.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	

0.06																			
664	86.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
665	86.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
666	86.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
667	86.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
668	86.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
669	86.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
670	86.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
671	85.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
672	85.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
673	85.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
674	85.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
675	85.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
676	85.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
677	85.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
678	85.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
679	85.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
680	85.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
681	84.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
682	84.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
683	84.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
684	84.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
685	84.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
686	84.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
687	84.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.06																			
688	84.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

689	84.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
690	84.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
691	83.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
692	83.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
693	83.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
694	83.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
695	83.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
696	83.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
697	83.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
698	83.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
699	83.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
700	83.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
701	82.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
702	82.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
703	82.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
704	82.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
705	82.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
706	82.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
707	82.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
708	82.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
709	82.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
710	82.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
711	81.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
712	81.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
713	81.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

714	81.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
715	81.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
716	81.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
717	81.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
718	81.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
719	81.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
720	81.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
721	80.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
722	80.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
723	80.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
724	80.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
725	80.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
726	80.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
727	80.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
728	80.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
729	80.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
730	80.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
731	79.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
732	79.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
733	79.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
734	79.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
735	79.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
736	79.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
737	79.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
738	79.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

739	79.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
740	79.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
741	78.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
742	78.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
743	78.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
744	78.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
745	78.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
746	78.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
20 DEG C RATE				0.04		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			0.98		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
650	88.000	24.30	0.00	8.30	0.00	1.64	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
651	87.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
652	87.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
653	87.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
654	87.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
655	87.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
656	87.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
657	87.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
658	87.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
659	87.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
660	87.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
661	86.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
662	86.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
663	86.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
664	86.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
665	86.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
666	86.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
667	86.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
668	86.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
669	86.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88

670	86.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
671	85.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
672	85.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
673	85.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
674	85.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
675	85.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
676	85.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
677	85.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
678	85.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
679	85.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
680	85.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
681	84.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
682	84.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
683	84.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
684	84.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
685	84.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
686	84.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
687	84.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
688	84.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
689	84.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
690	84.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
691	83.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
692	83.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
693	83.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
694	83.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
695	83.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
696	83.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
697	83.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
698	83.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
699	83.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
700	83.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
701	82.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
702	82.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
703	82.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
704	82.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
705	82.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
706	82.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
707	82.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
708	82.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
709	82.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
710	82.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
711	81.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
712	81.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
713	81.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
714	81.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
715	81.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
716	81.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
717	81.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
718	81.200	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
719	81.100	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87

720	81.000	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
721	80.900	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
722	80.800	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
723	80.700	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
724	80.600	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
725	80.500	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
726	80.400	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
727	80.300	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
728	80.200	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
729	80.100	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
730	80.000	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
731	79.900	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
732	79.800	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
733	79.700	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
734	79.600	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
735	79.500	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
736	79.400	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
737	79.300	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
738	79.200	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
739	79.100	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
740	79.000	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
741	78.900	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
742	78.800	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
743	78.700	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
744	78.600	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
745	78.500	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
746	78.400	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 26 BILLS CREEK - LOST CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
747	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.87

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

747	78.40	78.30	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
748	78.30	78.20	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
749	78.20	78.10	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
750	78.10	78.00	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
751	78.00	77.90	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
752	77.90	77.80	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
753	77.80	77.70	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
754	77.70	77.60	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
755	77.60	77.50	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
756	77.50	77.40	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
757	77.40	77.30	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
758	77.30	77.20	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
759	77.20	77.10	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
760	77.10	77.00	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
761	77.00	76.90	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
762	76.90	76.80	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
763	76.80	76.70	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
764	76.70	76.60	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
765	76.60	76.50	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
766	76.50	76.40	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
767	76.40	76.30	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
768	76.30	76.20	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
769	76.20	76.10	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
770	76.10	76.00	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
771	76.00	75.90	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
772	75.90	75.80	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
773	75.80	75.70	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
TOT						2325.34			20090.95	29436.79					
AVG					0.00001		0.68	10.90			7.44				
CUM						69710.28									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
747	78.300	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
748	78.200	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
749	78.100	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
750	78.000	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	

751	77.900	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
752	77.800	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
753	77.700	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
754	77.600	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
755	77.500	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
756	77.400	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
757	77.300	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
758	77.200	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
759	77.100	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
760	77.000	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
761	76.900	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
762	76.800	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
763	76.700	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
764	76.600	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
765	76.500	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
766	76.400	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
767	76.300	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
768	76.200	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
769	76.100	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
770	76.000	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
771	75.900	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
772	75.800	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
773	75.700	8.37	1.11	0.03	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
20 DEG C RATE				0.03		0.00	3.75			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			1.03		0.05						0.00									

0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
747	78.300	24.30	0.00	8.30	0.00	1.63	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
748	78.200	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
749	78.100	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
750	78.000	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
751	77.900	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
752	77.800	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
753	77.700	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
754	77.600	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
755	77.500	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
756	77.400	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
757	77.300	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
758	77.200	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
759	77.100	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
760	77.000	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
761	76.900	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
762	76.800	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
763	76.700	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
764	76.600	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
765	76.500	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
766	76.400	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
767	76.300	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
768	76.200	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
769	76.100	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
770	76.000	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
771	75.900	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
772	75.800	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
773	75.700	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 27 LOST CREEK - MESSER CREEK CASTOR CREEK CALIBRATION RUN

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

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

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
774	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.94

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
774	75.70	75.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
775	75.60	75.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
776	75.50	75.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
777	75.40	75.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
778	75.30	75.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
779	75.20	75.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
780	75.10	75.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
781	75.00	74.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
782	74.90	74.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
783	74.80	74.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
784	74.70	74.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
785	74.60	74.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
786	74.50	74.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
787	74.40	74.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
788	74.30	74.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
789	74.20	74.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
790	74.10	74.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
791	74.00	73.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
792	73.90	73.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
793	73.80	73.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
794	73.70	73.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
795	73.60	73.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
796	73.50	73.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
797	73.40	73.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
798	73.30	73.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
799	73.20	73.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
800	73.10	73.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
801	73.00	72.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
802	72.90	72.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
803	72.80	72.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
804	72.70	72.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
805	72.60	72.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
806	72.50	72.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
807	72.40	72.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
808	72.30	72.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
809	72.20	72.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
810	72.10	72.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
811	72.00	71.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
812	71.90	71.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000

813	71.80	71.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
814	71.70	71.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
815	71.60	71.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
816	71.50	71.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
817	71.40	71.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
818	71.30	71.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
819	71.20	71.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
820	71.10	71.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
821	71.00	70.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
822	70.90	70.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
823	70.80	70.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
824	70.70	70.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
825	70.60	70.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
826	70.50	70.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
827	70.40	70.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
828	70.30	70.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
829	70.20	70.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
830	70.10	70.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
831	70.00	69.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
832	69.90	69.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
833	69.80	69.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
834	69.70	69.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
835	69.60	69.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
836	69.50	69.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
837	69.40	69.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
838	69.30	69.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
839	69.20	69.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
840	69.10	69.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
841	69.00	68.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
842	68.90	68.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
843	68.80	68.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
844	68.70	68.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
845	68.60	68.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
846	68.50	68.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
847	68.40	68.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
848	68.30	68.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
849	68.20	68.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
850	68.10	68.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
851	68.00	67.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
852	67.90	67.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
853	67.80	67.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
854	67.70	67.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
855	67.60	67.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
856	67.50	67.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
857	67.40	67.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
858	67.30	67.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
859	67.20	67.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
860	67.10	67.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
861	67.00	66.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
862	66.90	66.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000

863	66.80	66.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
864	66.70	66.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
865	66.60	66.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
866	66.50	66.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
867	66.40	66.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
868	66.30	66.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
869	66.20	66.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
870	66.10	66.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
871	66.00	65.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
872	65.90	65.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
873	65.80	65.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
874	65.70	65.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
875	65.60	65.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
876	65.50	65.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
877	65.40	65.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
878	65.30	65.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
879	65.20	65.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
880	65.10	65.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
881	65.00	64.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
882	64.90	64.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
883	64.80	64.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
884	64.70	64.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
TOT						9055.71			78241.22	119907.80					
AVG					0.00001		0.65	10.80			7.05				
CUM						78766.32									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
774	75.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
775	75.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
776	75.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
777	75.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
778	75.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
779	75.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
780	75.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	

0.06																			
781	74.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
782	74.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
783	74.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
784	74.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
785	74.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
786	74.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
787	74.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
788	74.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
789	74.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
790	74.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
791	73.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
792	73.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
793	73.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
794	73.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
795	73.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
796	73.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
797	73.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
798	73.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
799	73.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
800	73.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
801	72.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
802	72.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
803	72.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
804	72.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
805	72.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

0.06																			
806	72.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
807	72.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
808	72.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
809	72.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
810	72.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
811	71.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
812	71.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
813	71.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
814	71.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
815	71.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
816	71.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
817	71.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
818	71.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
819	71.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
820	71.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
821	70.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
822	70.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
823	70.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
824	70.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
825	70.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
826	70.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
827	70.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
828	70.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
829	70.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
830	70.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

0.06																			
831	69.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
832	69.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
833	69.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
834	69.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
835	69.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
836	69.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
837	69.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
838	69.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
839	69.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
840	69.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
841	68.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
842	68.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
843	68.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
844	68.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
845	68.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
846	68.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
847	68.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
848	68.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
849	68.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
850	68.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
851	67.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
852	67.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
853	67.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
854	67.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
855	67.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

0.06																			
856	67.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
857	67.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
858	67.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
859	67.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
860	67.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
861	66.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
862	66.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
863	66.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
864	66.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
865	66.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
866	66.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
867	66.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
868	66.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
869	66.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
870	66.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
871	65.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
872	65.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
873	65.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
874	65.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
875	65.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
876	65.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
877	65.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
878	65.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
879	65.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.06																			
880	65.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

0.06																				
881	64.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.06																				
882	64.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.06																				
883	64.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.06																				
884	64.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.06																				
20 DEG C RATE				0.04		0.00	3.75			0.00		0.00	0.00	0.00	0.00			0.00	0.10	
AVG 20 DEG C RATE			1.07		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
774	75.600	24.30	0.00	8.30	0.00	1.59	4.55	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
775	75.500	24.30	0.00	8.30	0.00	1.59	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
776	75.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
777	75.300	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
778	75.200	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
779	75.100	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
780	75.000	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
781	74.900	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
782	74.800	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
783	74.700	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
784	74.600	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
785	74.500	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
786	74.400	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
787	74.300	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
788	74.200	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
789	74.100	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
790	74.000	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
791	73.900	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
792	73.800	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
793	73.700	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
794	73.600	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
795	73.500	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
796	73.400	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
797	73.300	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
798	73.200	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
799	73.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
800	73.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
801	72.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81

802	72.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
803	72.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
804	72.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
805	72.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
806	72.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
807	72.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
808	72.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
809	72.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
810	72.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
811	71.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
812	71.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
813	71.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
814	71.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
815	71.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
816	71.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
817	71.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
818	71.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
819	71.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
820	71.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
821	70.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
822	70.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
823	70.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
824	70.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
825	70.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
826	70.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
827	70.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
828	70.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
829	70.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
830	70.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
831	69.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
832	69.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
833	69.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
834	69.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
835	69.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
836	69.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
837	69.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
838	69.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
839	69.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
840	69.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
841	68.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
842	68.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
843	68.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
844	68.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
845	68.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
846	68.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
847	68.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
848	68.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
849	68.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
850	68.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
851	67.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81

852	67.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
853	67.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
854	67.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
855	67.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
856	67.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
857	67.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
858	67.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
859	67.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
860	67.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
861	66.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
862	66.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
863	66.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
864	66.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
865	66.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
866	66.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
867	66.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
868	66.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
869	66.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
870	66.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
871	65.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
872	65.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
873	65.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
874	65.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
875	65.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
876	65.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
877	65.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
878	65.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
879	65.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
880	65.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
881	64.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
882	64.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
883	64.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
884	64.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 28 MESSER CREEK - RICHLAND CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
885	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	1.81

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
885	64.60	64.50	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
886	64.50	64.40	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
887	64.40	64.30	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
888	64.30	64.20	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
889	64.20	64.10	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
890	64.10	64.00	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
891	64.00	63.90	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
892	63.90	63.80	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
TOT						632.66			5466.17	8642.01					
AVG					0.00001		0.63	10.80			6.83				
CUM						79399.01									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
885	64.500	8.37	1.20	0.05	0.06	0.00	4.07	4.07	4.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
886	64.400	8.36	1.20	0.05	0.06	0.00	4.08	4.08	4.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
887	64.300	8.35	1.20	0.05	0.06	0.00	4.09	4.09	4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
888	64.200	8.35	1.21	0.05	0.06	0.00	4.10	4.10	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
889	64.100	8.34	1.21	0.05	0.06	0.00	4.11	4.11	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
890	64.000	8.34	1.21	0.05	0.06	0.00	4.12	4.12	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
891	63.900	8.33	1.21	0.05	0.06	0.00	4.13	4.13	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
892	63.800	8.32	1.21	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
20 DEG C RATE				0.04		0.00	3.10			0.00		0.00	0.00	0.00	0.00			0.00	0.09	
AVG 20 DEG C RATE			1.11		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
885	64.500	24.34	0.00	8.30	0.00	2.68	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
886	64.400	24.38	0.00	8.30	0.00	2.68	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
887	64.300	24.41	0.00	8.30	0.00	2.66	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
888	64.200	24.45	0.00	8.30	0.00	2.65	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
889	64.100	24.49	0.00	8.30	0.00	2.63	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
890	64.000	24.52	0.00	8.30	0.00	2.62	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
891	63.900	24.56	0.00	8.30	0.00	2.60	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
892	63.800	24.60	0.00	8.30	0.00	2.59	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 29 RICHLAND CREEK - PINEY CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
893	UPR RCH	0.00010	24.60	0.00	8.30	0.00	2.59	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	1.02

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
893	63.80	63.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
894	63.70	63.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
895	63.60	63.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
896	63.50	63.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
897	63.40	63.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
898	63.30	63.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
899	63.20	63.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
900	63.10	63.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
901	63.00	62.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000

902	62.90	62.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
903	62.80	62.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
904	62.70	62.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
905	62.60	62.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
906	62.50	62.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
907	62.40	62.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
908	62.30	62.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
909	62.20	62.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
910	62.10	62.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
911	62.00	61.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
912	61.90	61.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
913	61.80	61.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
914	61.70	61.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
915	61.60	61.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
916	61.50	61.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
917	61.40	61.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
918	61.30	61.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
919	61.20	61.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
920	61.10	61.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
921	61.00	60.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
922	60.90	60.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
923	60.80	60.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
924	60.70	60.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
925	60.60	60.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
926	60.50	60.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
927	60.40	60.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
928	60.30	60.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
929	60.20	60.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
930	60.10	60.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
931	60.00	59.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
932	59.90	59.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
933	59.80	59.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
934	59.70	59.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
935	59.60	59.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
936	59.50	59.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
937	59.40	59.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
938	59.30	59.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
939	59.20	59.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
940	59.10	59.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
941	59.00	58.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
942	58.90	58.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
943	58.80	58.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
944	58.70	58.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
945	58.60	58.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
946	58.50	58.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
947	58.40	58.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
948	58.30	58.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
949	58.20	58.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
950	58.10	58.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
951	58.00	57.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000

952	57.90	57.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
953	57.80	57.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
954	57.70	57.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
955	57.60	57.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
956	57.50	57.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
957	57.40	57.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
958	57.30	57.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
959	57.20	57.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
960	57.10	57.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
961	57.00	56.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
962	56.90	56.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
963	56.80	56.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
964	56.70	56.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
965	56.60	56.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
966	56.50	56.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
967	56.40	56.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
968	56.30	56.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
969	56.20	56.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
970	56.10	56.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
971	56.00	55.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
972	55.90	55.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
973	55.80	55.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
974	55.70	55.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
975	55.60	55.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
976	55.50	55.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
977	55.40	55.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
978	55.30	55.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
979	55.20	55.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
980	55.10	55.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
981	55.00	54.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
982	54.90	54.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
983	54.80	54.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
984	54.70	54.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
985	54.60	54.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
986	54.50	54.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
987	54.40	54.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
988	54.30	54.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
TOT						7351.86			63520.05	103704.05					
AVG					0.00002		0.61	10.80			6.62				
CUM						86750.51									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

893	63.700	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
894	63.600	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
895	63.500	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
896	63.400	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
897	63.300	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
898	63.200	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
899	63.100	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
900	63.000	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
901	62.900	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
902	62.800	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
903	62.700	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
904	62.600	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
905	62.500	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
906	62.400	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
907	62.300	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
908	62.200	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
909	62.100	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
910	62.000	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
911	61.900	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
912	61.800	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
913	61.700	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
914	61.600	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
915	61.500	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
916	61.400	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			

917	61.300	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
918	61.200	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
919	61.100	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
920	61.000	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
921	60.900	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
922	60.800	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
923	60.700	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
924	60.600	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
925	60.500	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
926	60.400	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
927	60.300	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
928	60.200	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
929	60.100	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
930	60.000	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
931	59.900	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
932	59.800	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
933	59.700	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
934	59.600	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
935	59.500	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
936	59.400	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
937	59.300	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
938	59.200	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
939	59.100	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
940	59.000	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			
941	58.900	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
0.06																			

942	58.800	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
943	58.700	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
944	58.600	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
945	58.500	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
946	58.400	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
947	58.300	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
948	58.200	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
949	58.100	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
950	58.000	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
951	57.900	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
952	57.800	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
953	57.700	8.30	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
954	57.600	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
955	57.500	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
956	57.400	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
957	57.300	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
958	57.200	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
959	57.100	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
960	57.000	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
961	56.900	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
962	56.800	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
963	56.700	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
964	56.600	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
965	56.500	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
966	56.400	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

967	56.300	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
968	56.200	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
969	56.100	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
970	56.000	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
971	55.900	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
972	55.800	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
973	55.700	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
974	55.600	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
975	55.500	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
976	55.400	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
977	55.300	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
978	55.200	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
979	55.100	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
980	55.000	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
981	54.900	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
982	54.800	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
983	54.700	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
984	54.600	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
985	54.500	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
986	54.400	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
987	54.300	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
988	54.200	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.04		0.00	3.10			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			1.14		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
893	63.700	24.60	0.00	8.30	0.00	2.55	5.90	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
894	63.600	24.60	0.00	8.30	0.00	2.55	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
895	63.500	24.61	0.00	8.30	0.00	2.55	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
896	63.400	24.61	0.00	8.30	0.00	2.55	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
897	63.300	24.61	0.00	8.30	0.00	2.55	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
898	63.200	24.61	0.00	8.30	0.00	2.55	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
899	63.100	24.61	0.00	8.30	0.00	2.55	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
900	63.000	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
901	62.900	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
902	62.800	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
903	62.700	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
904	62.600	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
905	62.500	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
906	62.400	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
907	62.300	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
908	62.200	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
909	62.100	24.64	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
910	62.000	24.64	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
911	61.900	24.64	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
912	61.800	24.64	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
913	61.700	24.64	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
914	61.600	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
915	61.500	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
916	61.400	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
917	61.300	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
918	61.200	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
919	61.100	24.66	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
920	61.000	24.66	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
921	60.900	24.66	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
922	60.800	24.66	0.00	8.30	0.00	2.53	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
923	60.700	24.66	0.00	8.30	0.00	2.53	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
924	60.600	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
925	60.500	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
926	60.400	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
927	60.300	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
928	60.200	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
929	60.100	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
930	60.000	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
931	59.900	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
932	59.800	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
933	59.700	24.69	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
934	59.600	24.69	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
935	59.500	24.69	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99

936	59.400	24.69	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
937	59.300	24.69	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
938	59.200	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
939	59.100	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
940	59.000	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
941	58.900	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
942	58.800	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
943	58.700	24.71	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
944	58.600	24.71	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
945	58.500	24.71	0.00	8.30	0.00	2.51	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
946	58.400	24.71	0.00	8.30	0.00	2.51	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
947	58.300	24.71	0.00	8.30	0.00	2.51	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
948	58.200	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
949	58.100	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
950	58.000	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
951	57.900	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
952	57.800	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
953	57.700	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
954	57.600	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
955	57.500	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
956	57.400	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
957	57.300	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
958	57.200	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
959	57.100	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
960	57.000	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
961	56.900	24.74	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
962	56.800	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
963	56.700	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
964	56.600	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
965	56.500	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
966	56.400	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
967	56.300	24.76	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
968	56.200	24.76	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
969	56.100	24.76	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
970	56.000	24.76	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
971	55.900	24.76	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
972	55.800	24.77	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
973	55.700	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
974	55.600	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
975	55.500	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
976	55.400	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
977	55.300	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
978	55.200	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
979	55.100	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
980	55.000	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
981	54.900	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
982	54.800	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
983	54.700	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
984	54.600	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
985	54.500	24.79	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98

986	54.400	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
987	54.300	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
988	54.200	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 30 PINEY CREEK - BEAUCOUP CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
989	UPR RCH	0.00010	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.98

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
989	54.20	54.10	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
990	54.10	54.00	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
991	54.00	53.90	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
992	53.90	53.80	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
993	53.80	53.70	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
994	53.70	53.60	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
995	53.60	53.50	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
996	53.50	53.40	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
997	53.40	53.30	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
998	53.30	53.20	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
999	53.20	53.10	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1000	53.10	53.00	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1001	53.00	52.90	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1002	52.90	52.80	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1003	52.80	52.70	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1004	52.70	52.60	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1005	52.60	52.50	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1006	52.50	52.40	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1007	52.40	52.30	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1008	52.30	52.20	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1009	52.20	52.10	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1010	52.10	52.00	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1011	52.00	51.90	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000

1012	51.90	51.80	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1013	51.80	51.70	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1014	51.70	51.60	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1015	51.60	51.50	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1016	51.50	51.40	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1017	51.40	51.30	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1018	51.30	51.20	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
TOT						2164.70			18703.01	32107.54					
AVG					0.00002		0.58	10.70			6.23				
CUM						88915.20									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
989	54.100	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
990	54.000	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
991	53.900	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
992	53.800	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
993	53.700	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
994	53.600	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
995	53.500	8.29	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
996	53.400	8.29	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
997	53.300	8.28	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
998	53.200	8.28	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
999	53.100	8.28	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1000	53.000	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1001	52.900	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1002	52.800	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06

1003	52.700	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1004	52.600	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1005	52.500	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1006	52.400	8.28	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1007	52.300	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1008	52.200	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1009	52.100	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1010	52.000	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1011	51.900	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1012	51.800	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1013	51.700	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1014	51.600	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1015	51.500	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1016	51.400	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1017	51.300	8.26	1.32	0.04	0.06	0.00	4.25	4.25	4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1018	51.200	8.26	1.32	0.04	0.06	0.00	4.25	4.25	4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
20 DEG C RATE				0.03		0.00	3.10			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			1.20		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
989	54.100	24.81	0.00	8.30	0.00	2.47	8.24	8.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
990	54.000	24.81	0.00	8.30	0.00	2.46	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
991	53.900	24.82	0.00	8.30	0.00	2.45	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
992	53.800	24.83	0.00	8.30	0.00	2.45	8.58	8.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
993	53.700	24.83	0.00	8.30	0.00	2.45	8.58	8.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90

994	53.600	24.84	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
995	53.500	24.85	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
996	53.400	24.85	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
997	53.300	24.86	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
998	53.200	24.87	0.00	8.30	0.00	2.43	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
999	53.100	24.87	0.00	8.30	0.00	2.43	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1000	53.000	24.88	0.00	8.30	0.00	2.43	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1001	52.900	24.89	0.00	8.30	0.00	2.43	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1002	52.800	24.89	0.00	8.30	0.00	2.42	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1003	52.700	24.90	0.00	8.30	0.00	2.42	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1004	52.600	24.91	0.00	8.30	0.00	2.42	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1005	52.500	24.91	0.00	8.30	0.00	2.42	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1006	52.400	24.92	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1007	52.300	24.93	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1008	52.200	24.93	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1009	52.100	24.94	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1010	52.000	24.95	0.00	8.30	0.00	2.40	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1011	51.900	24.95	0.00	8.30	0.00	2.40	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1012	51.800	24.96	0.00	8.30	0.00	2.40	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1013	51.700	24.97	0.00	8.30	0.00	2.39	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1014	51.600	24.97	0.00	8.30	0.00	2.39	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1015	51.500	24.98	0.00	8.30	0.00	2.39	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1016	51.400	24.99	0.00	8.30	0.00	2.39	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1017	51.300	24.99	0.00	8.30	0.00	2.38	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1018	51.200	25.00	0.00	8.30	0.00	2.38	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 31 BEAUCOUP CREEK - BANISTER CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1019	UPR RCH	0.00010	25.00	0.00	8.30	0.00	2.38	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.90

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1019	51.20	51.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000

1020	51.10	51.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1021	51.00	50.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1022	50.90	50.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1023	50.80	50.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1024	50.70	50.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1025	50.60	50.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1026	50.50	50.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1027	50.40	50.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1028	50.30	50.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1029	50.20	50.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1030	50.10	50.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1031	50.00	49.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1032	49.90	49.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1033	49.80	49.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1034	49.70	49.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1035	49.60	49.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1036	49.50	49.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1037	49.40	49.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1038	49.30	49.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1039	49.20	49.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1040	49.10	49.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1041	49.00	48.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1042	48.90	48.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1043	48.80	48.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1044	48.70	48.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1045	48.60	48.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1046	48.50	48.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1047	48.40	48.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1048	48.30	48.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1049	48.20	48.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1050	48.10	48.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1051	48.00	47.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1052	47.90	47.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1053	47.80	47.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1054	47.70	47.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1055	47.60	47.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1056	47.50	47.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1057	47.40	47.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1058	47.30	47.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1059	47.20	47.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1060	47.10	47.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
TOT						2978.55			25734.74	44950.55					
AVG					0.00002		0.57	10.70			6.13				
CUM						91893.91									

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

ELEM	ENDING	SAT	REAER	CBOD	CBOD	ANBOD	BKGD	FULL	CORR	ORGN	ORGN	NH3	NH3	DENIT	PO4	ALG	MAC	COLI	NCM

NCM NO.	DIST	D.O.	RATE	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
1019	51.100	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1020	51.000	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1021	50.900	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1022	50.800	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1023	50.700	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1024	50.600	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1025	50.500	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1026	50.400	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1027	50.300	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1028	50.200	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1029	50.100	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1030	50.000	8.25	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1031	49.900	8.25	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1032	49.800	8.25	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1033	49.700	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1034	49.600	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1035	49.500	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1036	49.400	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1037	49.300	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1038	49.200	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1039	49.100	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1040	49.000	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06

1041	48.900	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1042	48.800	8.25	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1043	48.700	8.25	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1044	48.600	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1045	48.500	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1046	48.400	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1047	48.300	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1048	48.200	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1049	48.100	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1050	48.000	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1051	47.900	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1052	47.800	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1053	47.700	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1054	47.600	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1055	47.500	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1056	47.400	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1057	47.300	8.23	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1058	47.200	8.23	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1059	47.100	8.23	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1060	47.000	8.23	1.35	0.04	0.06	0.00	3.75	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
20 DEG C RATE				0.03		0.00	2.70			0.00		0.00	0.00	0.00	0.00			0.00	0.14	0.05
AVG 20 DEG C RATE			1.22		0.05						0.00									

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1019	51.100	25.00	0.00	8.30	0.00	3.06	9.38	9.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1020	51.000	25.01	0.00	8.30	0.00	3.07	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1021	50.900	25.01	0.00	8.30	0.00	3.07	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1022	50.800	25.02	0.00	8.30	0.00	3.06	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1023	50.700	25.02	0.00	8.30	0.00	3.06	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1024	50.600	25.03	0.00	8.30	0.00	3.06	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1025	50.500	25.03	0.00	8.30	0.00	3.06	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1026	50.400	25.04	0.00	8.30	0.00	3.06	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1027	50.300	25.04	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1028	50.200	25.05	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1029	50.100	25.05	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1030	50.000	25.06	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1031	49.900	25.06	0.00	8.30	0.00	3.05	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1032	49.800	25.07	0.00	8.30	0.00	3.05	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1033	49.700	25.07	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1034	49.600	25.08	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1035	49.500	25.08	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1036	49.400	25.09	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1037	49.300	25.09	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1038	49.200	25.10	0.00	8.30	0.00	3.04	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1039	49.100	25.10	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1040	49.000	25.10	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1041	48.900	25.11	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1042	48.800	25.11	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1043	48.700	25.12	0.00	8.30	0.00E+00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1044	48.600	25.12	0.00	8.30	0.00E+00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1045	48.500	25.13	0.00	8.30	0.00E+00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1046	48.400	25.13	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1047	48.300	25.14	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1048	48.200	25.14	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1049	48.100	25.15	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1050	48.000	25.15	0.00	8.30	0.00	3.01	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1051	47.900	25.16	0.00	8.30	0.00	3.01	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1052	47.800	25.16	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1053	47.700	25.17	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1054	47.600	25.17	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1055	47.500	25.18	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1056	47.400	25.18	0.00	8.30	0.00	3.00	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1057	47.300	25.19	0.00	8.30	0.00	3.00	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1058	47.200	25.19	0.00	8.30	0.00	3.00	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1059	47.100	25.20	0.00	8.30	0.00	3.00	9.44	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1060	47.000	25.20	0.00	8.28	0.04	3.00	9.44	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m^3

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 32 BANISTER CREEK - BRUSHY CREEK2 CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1061	UPR RCH	0.00010	25.20	0.00	8.28	0.04	3.00	9.44	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.84
EACH	INCR	0.0005	25.10	0.00	6.00	4.20	3.06	9.19	9.19	0.00	0.00	0.00	0.00		0.00	0.84

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1061	47.00	46.90	0.00057	0.00	0.00010	12.06	0.56	10.71	594.17	1070.50	5.94	0.00	0.000	0.000	0.000
1062	46.90	46.80	0.00104	0.00	0.00017	6.63	0.56	10.71	595.71	1070.64	5.96	0.00	0.000	0.000	0.000
1063	46.80	46.70	0.00151	0.00	0.00025	4.58	0.56	10.71	596.88	1070.74	5.97	0.00	0.000	0.000	0.000
1064	46.70	46.60	0.00198	0.00	0.00033	3.49	0.56	10.71	597.84	1070.83	5.98	0.00	0.000	0.000	0.000
1065	46.60	46.50	0.00245	0.00	0.00041	2.83	0.56	10.71	598.67	1070.90	5.99	0.00	0.000	0.000	0.000
1066	46.50	46.40	0.00292	0.00	0.00049	2.38	0.56	10.71	599.41	1070.97	5.99	0.00	0.000	0.000	0.000
1067	46.40	46.30	0.00339	0.00	0.00056	2.05	0.56	10.71	600.08	1071.03	6.00	0.00	0.000	0.000	0.001
1068	46.30	46.20	0.00386	0.00	0.00064	1.80	0.56	10.71	600.70	1071.08	6.01	0.00	0.000	0.000	0.001
1069	46.20	46.10	0.00433	0.00	0.00072	1.61	0.56	10.71	601.27	1071.13	6.01	0.00	0.000	0.000	0.001
1070	46.10	46.00	0.00480	0.00	0.00080	1.45	0.56	10.71	601.81	1071.18	6.02	0.00	0.000	0.000	0.001
1071	46.00	45.90	0.00527	0.00	0.00087	1.32	0.56	10.71	602.31	1071.23	6.02	0.00	0.000	0.000	0.001
1072	45.90	45.80	0.00574	0.00	0.00095	1.22	0.56	10.71	602.80	1071.27	6.03	0.00	0.000	0.000	0.001
1073	45.80	45.70	0.00621	0.00	0.00103	1.12	0.56	10.71	603.25	1071.31	6.03	0.00	0.000	0.000	0.001
1074	45.70	45.60	0.00668	0.00	0.00111	1.05	0.56	10.71	603.69	1071.35	6.04	0.00	0.000	0.000	0.001
1075	45.60	45.50	0.00715	0.00	0.00118	0.98	0.56	10.71	604.11	1071.39	6.04	0.00	0.000	0.000	0.001
1076	45.50	45.40	0.00762	0.00	0.00126	0.92	0.56	10.71	604.51	1071.42	6.05	0.00	0.000	0.000	0.001
1077	45.40	45.30	0.00809	0.00	0.00134	0.87	0.56	10.71	604.90	1071.46	6.05	0.00	0.000	0.000	0.001
1078	45.30	45.20	0.00856	0.00	0.00141	0.82	0.56	10.71	605.28	1071.49	6.05	0.00	0.000	0.000	0.001
1079	45.20	45.10	0.00903	0.00	0.00149	0.78	0.57	10.72	605.64	1071.52	6.06	0.00	0.000	0.000	0.001
1080	45.10	45.00	0.00950	0.00	0.00157	0.74	0.57	10.72	605.99	1071.55	6.06	0.00	0.000	0.000	0.002
1081	45.00	44.90	0.00997	0.00	0.00164	0.70	0.57	10.72	606.33	1071.58	6.06	0.00	0.000	0.001	0.002
1082	44.90	44.80	0.01044	0.00	0.00172	0.67	0.57	10.72	606.67	1071.61	6.07	0.00	0.000	0.001	0.002
1083	44.80	44.70	0.01091	0.00	0.00180	0.64	0.57	10.72	606.99	1071.64	6.07	0.00	0.000	0.001	0.002
1084	44.70	44.60	0.01138	0.00	0.00187	0.62	0.57	10.72	607.30	1071.67	6.07	0.00	0.000	0.001	0.002
1085	44.60	44.50	0.01185	0.00	0.00195	0.59	0.57	10.72	607.61	1071.70	6.08	0.00	0.000	0.001	0.002
1086	44.50	44.40	0.01232	0.00	0.00203	0.57	0.57	10.72	607.91	1071.72	6.08	0.00	0.000	0.001	0.002
1087	44.40	44.30	0.01279	0.00	0.00210	0.55	0.57	10.72	608.20	1071.75	6.08	0.00	0.000	0.001	0.002
1088	44.30	44.20	0.01326	0.00	0.00218	0.53	0.57	10.72	608.49	1071.77	6.08	0.00	0.000	0.001	0.002
1089	44.20	44.10	0.01373	0.00	0.00226	0.51	0.57	10.72	608.77	1071.80	6.09	0.00	0.000	0.001	0.002
1090	44.10	44.00	0.01420	0.00	0.00233	0.50	0.57	10.72	609.05	1071.82	6.09	0.00	0.000	0.001	0.002

1091	44.00	43.90	0.01467	0.00	0.00241	0.48	0.57	10.72	609.32	1071.85	6.09	0.00	0.000	0.001	0.002
1092	43.90	43.80	0.01514	0.00	0.00248	0.47	0.57	10.72	609.58	1071.87	6.10	0.00	0.000	0.001	0.002
1093	43.80	43.70	0.01561	0.00	0.00256	0.45	0.57	10.72	609.84	1071.89	6.10	0.00	0.000	0.001	0.003
1094	43.70	43.60	0.01608	0.00	0.00264	0.44	0.57	10.72	610.10	1071.92	6.10	0.00	0.000	0.001	0.003
1095	43.60	43.50	0.01655	0.00	0.00271	0.43	0.57	10.72	610.35	1071.94	6.10	0.00	0.000	0.001	0.003
1096	43.50	43.40	0.01702	0.00	0.00279	0.42	0.57	10.72	610.59	1071.96	6.11	0.00	0.000	0.001	0.003
1097	43.40	43.30	0.01749	0.00	0.00286	0.40	0.57	10.72	610.84	1071.98	6.11	0.00	0.000	0.001	0.003
1098	43.30	43.20	0.01796	0.00	0.00294	0.39	0.57	10.72	611.08	1072.00	6.11	0.00	0.000	0.001	0.003
1099	43.20	43.10	0.01843	0.00	0.00301	0.38	0.57	10.72	611.31	1072.02	6.11	0.00	0.000	0.001	0.003
1100	43.10	43.00	0.01890	0.00	0.00309	0.37	0.57	10.72	611.54	1072.04	6.12	0.00	0.000	0.001	0.003
1101	43.00	42.90	0.01937	0.00	0.00317	0.37	0.57	10.72	611.77	1072.06	6.12	0.00	0.000	0.001	0.003
1102	42.90	42.80	0.01984	0.00	0.00324	0.36	0.57	10.72	611.99	1072.08	6.12	0.00	0.000	0.001	0.003
1103	42.80	42.70	0.02031	0.00	0.00332	0.35	0.57	10.72	612.22	1072.10	6.12	0.00	0.000	0.001	0.003
1104	42.70	42.60	0.02078	0.00	0.00339	0.34	0.57	10.72	612.43	1072.12	6.12	0.00	0.000	0.001	0.003
1105	42.60	42.50	0.02125	0.00	0.00347	0.33	0.57	10.72	612.65	1072.14	6.13	0.00	0.000	0.001	0.003
1106	42.50	42.40	0.02172	0.00	0.00354	0.33	0.57	10.72	612.86	1072.16	6.13	0.00	0.000	0.001	0.004
1107	42.40	42.30	0.02219	0.00	0.00362	0.32	0.57	10.72	613.07	1072.18	6.13	0.00	0.000	0.001	0.004
1108	42.30	42.20	0.02266	0.00	0.00369	0.31	0.57	10.72	613.28	1072.20	6.13	0.00	0.000	0.001	0.004
1109	42.20	42.10	0.02313	0.00	0.00377	0.31	0.57	10.72	613.48	1072.22	6.13	0.00	0.000	0.001	0.004
1110	42.10	42.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
TOT						62.12			30338.35	53581.06					
AVG					0.00093		0.57	10.72			6.07				
CUM						91956.07									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1061	46.900	8.23	1.39	0.04	0.06	0.00	3.54	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1062	46.800	8.22	1.39	0.04	0.06	0.00	3.55	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1063	46.700	8.22	1.39	0.04	0.06	0.00	3.56	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1064	46.600	8.21	1.39	0.04	0.06	0.00	3.56	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1065	46.500	8.21	1.39	0.04	0.06	0.00	3.57	3.57	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1066	46.400	8.21	1.39	0.04	0.06	0.00	3.58	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1067	46.300	8.20	1.39	0.04	0.06	0.00	3.59	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1068	46.200	8.20	1.38	0.04	0.06	0.00	3.59	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	

0.06																			
1069	46.100	8.19	1.38	0.04	0.06	0.00	3.60	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.06																			
1070	46.000	8.19	1.38	0.04	0.06	0.00	3.61	3.61	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.06																			
1071	45.900	8.18	1.38	0.04	0.06	0.00	3.61	3.61	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.06																			
1072	45.800	8.18	1.38	0.04	0.06	0.00	3.62	3.62	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.06																			
1073	45.700	8.17	1.38	0.04	0.06	0.00	3.63	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.06																			
1074	45.600	8.17	1.38	0.04	0.06	0.00	3.63	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.06																			
1075	45.500	8.17	1.38	0.04	0.06	0.00	3.64	3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1076	45.400	8.16	1.38	0.04	0.06	0.00	3.65	3.65	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1077	45.300	8.16	1.38	0.04	0.06	0.00	3.65	3.65	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1078	45.200	8.15	1.38	0.04	0.06	0.00	3.66	3.66	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1079	45.100	8.15	1.38	0.04	0.06	0.00	3.67	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1080	45.000	8.14	1.38	0.04	0.06	0.00	3.67	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1081	44.900	8.14	1.38	0.04	0.06	0.00	3.68	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1082	44.800	8.13	1.38	0.04	0.06	0.00	3.69	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1083	44.700	8.13	1.38	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1084	44.600	8.13	1.38	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1085	44.500	8.12	1.38	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1086	44.400	8.12	1.38	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1087	44.300	8.11	1.38	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1088	44.200	8.11	1.38	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1089	44.100	8.10	1.38	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1090	44.000	8.10	1.38	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1091	43.900	8.09	1.38	0.04	0.06	0.00	3.75	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1092	43.800	8.09	1.38	0.04	0.06	0.00	3.76	3.76	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
0.06																			
1093	43.700	8.09	1.38	0.04	0.06	0.00	3.77	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

0.06																				
1094	43.600	8.08	1.38	0.04	0.06	0.00	3.77	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1095	43.500	8.08	1.38	0.04	0.06	0.00	3.78	3.78	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1096	43.400	8.07	1.38	0.04	0.06	0.00	3.79	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1097	43.300	8.07	1.38	0.04	0.06	0.00	3.79	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1098	43.200	8.06	1.38	0.04	0.06	0.00	3.80	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1099	43.100	8.06	1.38	0.04	0.06	0.00	3.81	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1100	43.000	8.05	1.39	0.04	0.06	0.00	3.82	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1101	42.900	8.05	1.39	0.04	0.06	0.00	3.82	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1102	42.800	8.05	1.39	0.04	0.06	0.00	3.83	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1103	42.700	8.04	1.39	0.04	0.06	0.00	3.84	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1104	42.600	8.04	1.39	0.04	0.06	0.00	3.84	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	
0.06																				
1105	42.500	8.03	1.39	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	
0.06																				
1106	42.400	8.03	1.39	0.04	0.06	0.00	3.86	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	
0.06																				
1107	42.300	8.02	1.39	0.04	0.06	0.00	3.87	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	
0.06																				
1108	42.200	8.02	1.39	0.04	0.06	0.00	3.87	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	
0.06																				
1109	42.100	8.02	1.39	0.04	0.06	0.00	3.88	3.88	3.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	
0.06																				
1110	42.000	8.01	1.39	0.04	0.06	0.00	3.89	3.89	3.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	
0.06																				
20 DEG C RATE				0.03		0.00	2.55			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.24		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1061	46.900	25.23	0.00	6.40	3.46	3.25	9.43	9.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1062	46.800	25.26	0.00	6.22	3.80	3.24	9.41	9.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87

1063	46.700	25.29	0.00	6.15	3.92	3.23	9.40	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1064	46.600	25.32	0.00	6.12	3.99	3.22	9.39	9.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1065	46.500	25.35	0.00	6.09	4.03	3.21	9.38	9.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1066	46.400	25.38	0.00	6.08	4.06	3.20	9.37	9.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1067	46.300	25.41	0.00	6.07	4.08	3.19	9.36	9.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1068	46.200	25.44	0.00	6.06	4.09	3.18	9.35	9.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1069	46.100	25.47	0.00	6.05	4.10	3.17	9.34	9.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1070	46.000	25.50	0.00	6.05	4.11	3.16	9.34	9.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1071	45.900	25.53	0.00	6.04	4.12	3.15	9.33	9.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1072	45.800	25.56	0.00	6.04	4.13	3.14	9.32	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1073	45.700	25.59	0.00	6.04	4.13	3.13	9.31	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1074	45.600	25.62	0.00	6.03	4.14	3.12	9.31	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1075	45.500	25.65	0.00	6.03	4.14	3.11	9.30	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1076	45.400	25.68	0.00	6.03	4.14	3.10	9.29	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1077	45.300	25.71	0.00	6.03	4.15	3.09	9.29	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1078	45.200	25.74	0.00	6.03	4.15	3.08	9.28	9.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1079	45.100	25.77	0.00	6.03	4.15	3.07	9.27	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1080	45.000	25.80	0.00	6.02	4.16	3.06	9.27	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1081	44.900	25.83	0.00	6.02	4.16	3.05	9.26	9.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1082	44.800	25.86	0.00	6.02	4.16	3.04	9.25	9.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1083	44.700	25.89	0.00	6.02	4.16	3.03	9.25	9.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1084	44.600	25.92	0.00	6.02	4.16	3.02	9.24	9.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1085	44.500	25.95	0.00	6.02	4.16	3.01	9.23	9.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1086	44.400	25.98	0.00	6.02	4.17	3.00	9.23	9.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1087	44.300	26.01	0.00	6.02	4.17	2.99	9.22	9.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1088	44.200	26.04	0.00	6.02	4.17	2.98	9.22	9.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1089	44.100	26.07	0.00	6.02	4.17	2.97	9.21	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1090	44.000	26.10	0.00	6.02	4.17	2.96	9.21	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1091	43.900	26.13	0.00	6.02	4.17	2.95	9.20	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1092	43.800	26.16	0.00	6.02	4.17	2.94	9.19	9.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1093	43.700	26.19	0.00	6.01	4.17	2.93	9.19	9.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1094	43.600	26.22	0.00	6.01	4.17	2.92	9.18	9.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1095	43.500	26.25	0.00	6.01	4.17	2.91	9.18	9.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1096	43.400	26.28	0.00	6.01	4.18	2.90	9.17	9.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1097	43.300	26.31	0.00	6.01	4.18	2.89	9.17	9.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1098	43.200	26.34	0.00	6.01	4.18	2.88	9.16	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1099	43.100	26.37	0.00	6.01	4.18	2.87	9.16	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1100	43.000	26.40	0.00	6.01	4.18	2.86	9.16	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1101	42.900	26.43	0.00	6.01	4.18	2.85	9.15	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1102	42.800	26.46	0.00	6.01	4.18	2.84	9.15	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1103	42.700	26.49	0.00	6.01	4.18	2.83	9.14	9.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1104	42.600	26.52	0.00	6.01	4.18	2.82	9.14	9.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1105	42.500	26.55	0.00	6.01	4.18	2.81	9.13	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1106	42.400	26.58	0.00	6.01	4.18	2.80	9.13	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1107	42.300	26.61	0.00	6.01	4.18	2.79	9.12	9.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1108	42.200	26.64	0.00	6.01	4.18	2.78	9.12	9.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1109	42.100	26.67	0.00	6.01	4.18	2.77	9.12	9.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1110	42.000	26.70	0.00	6.01	4.18	2.76	9.11	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81

* CM-I = CHLORIDES CM-II = SULFATES NCM =

MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 33 BRUSHY CREEK2 - MCCLELLEN BR CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1111	UPR RCH	0.02360	26.70	0.00	6.01	4.18	2.76	9.11	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.81

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1111	42.00	41.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1112	41.90	41.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1113	41.80	41.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1114	41.70	41.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1115	41.60	41.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1116	41.50	41.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1117	41.40	41.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1118	41.30	41.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1119	41.20	41.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1120	41.10	41.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1121	41.00	40.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1122	40.90	40.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1123	40.80	40.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1124	40.70	40.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1125	40.60	40.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1126	40.50	40.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1127	40.40	40.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1128	40.30	40.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1129	40.20	40.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1130	40.10	40.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1131	40.00	39.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1132	39.90	39.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1133	39.80	39.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1134	39.70	39.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1135	39.60	39.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1136	39.50	39.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1137	39.40	39.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1138	39.30	39.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

1139	39.20	39.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1140	39.10	39.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1141	39.00	38.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1142	38.90	38.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1143	38.80	38.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1144	38.70	38.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1145	38.60	38.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1146	38.50	38.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1147	38.40	38.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1148	38.30	38.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1149	38.20	38.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1150	38.10	38.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1151	38.00	37.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1152	37.90	37.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1153	37.80	37.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1154	37.70	37.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1155	37.60	37.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1156	37.50	37.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1157	37.40	37.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1158	37.30	37.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1159	37.20	37.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1160	37.10	37.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1161	37.00	36.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1162	36.90	36.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1163	36.80	36.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1164	36.70	36.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1165	36.60	36.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1166	36.50	36.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1167	36.40	36.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1168	36.30	36.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1169	36.20	36.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1170	36.10	36.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1171	36.00	35.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1172	35.90	35.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1173	35.80	35.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1174	35.70	35.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1175	35.60	35.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1176	35.50	35.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1177	35.40	35.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1178	35.30	35.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1179	35.20	35.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1180	35.10	35.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1181	35.00	34.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1182	34.90	34.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1183	34.80	34.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1184	34.70	34.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1185	34.60	34.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1186	34.50	34.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1187	34.40	34.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1188	34.30	34.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

1189	34.20	34.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1190	34.10	34.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1191	34.00	33.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1192	33.90	33.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1193	33.80	33.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1194	33.70	33.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1195	33.60	33.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
TOT						25.58			52163.43	91139.93					
AVG					0.00385		0.57	10.72			6.14				
CUM						91981.97									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1111	41.900	8.01	1.39	0.04	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
1112	41.800	8.01	1.39	0.04	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06
1113	41.700	8.01	1.39	0.03	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
1114	41.600	8.01	1.39	0.03	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
1115	41.500	8.01	1.39	0.02	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06
1116	41.400	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06
1117	41.300	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06
1118	41.200	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1119	41.100	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1120	41.000	8.00	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1121	40.900	8.00	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1122	40.800	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1123	40.700	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1124	40.600	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06

1125	40.500	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1126	40.400	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1127	40.300	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1128	40.200	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1129	40.100	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1130	40.000	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1131	39.900	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1132	39.800	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1133	39.700	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1134	39.600	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1135	39.500	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1136	39.400	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1137	39.300	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1138	39.200	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1139	39.100	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1140	39.000	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1141	38.900	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1142	38.800	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1143	38.700	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1144	38.600	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1145	38.500	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1146	38.400	7.99	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1147	38.300	7.99	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1148	38.200	7.99	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1149	38.100	7.98	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06

1150	38.000	7.98	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1151	37.900	7.98	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1152	37.800	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1153	37.700	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1154	37.600	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1155	37.500	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1156	37.400	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1157	37.300	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1158	37.200	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1159	37.100	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1160	37.000	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1161	36.900	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1162	36.800	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1163	36.700	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1164	36.600	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1165	36.500	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1166	36.400	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1167	36.300	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1168	36.200	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1169	36.100	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1170	36.000	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1171	35.900	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1172	35.800	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1173	35.700	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1174	35.600	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			

1175	35.500	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1176	35.400	7.97	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1177	35.300	7.97	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1178	35.200	7.97	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1179	35.100	7.96	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1180	35.000	7.96	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1181	34.900	7.96	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1182	34.800	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1183	34.700	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1184	34.600	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1185	34.500	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1186	34.400	7.96	1.40	0.01	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1187	34.300	7.96	1.40	0.01	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1188	34.200	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1189	34.100	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1190	34.000	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1191	33.900	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1192	33.800	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1193	33.700	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1194	33.600	7.95	1.40	0.01	0.06	0.00	5.71	5.71	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1195	33.500	7.95	1.40	0.01	0.06	0.00	5.71	5.71	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
20 DEG C RATE				0.03		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1111	41.900	26.70	0.00	6.01	4.18	2.15	9.08	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1112	41.800	26.71	0.00	6.01	4.18	1.73	9.07	9.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1113	41.700	26.71	0.00	6.01	4.18	1.45	9.07	9.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1114	41.600	26.72	0.00	6.01	4.18	1.25	9.08	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
1115	41.500	26.72	0.00	6.01	4.18	1.12	9.10	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1116	41.400	26.73	0.00	6.01	4.18	1.03	9.13	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1117	41.300	26.73	0.00	6.01	4.18	0.97	9.15	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1118	41.200	26.74	0.00	6.01	4.18	0.93	9.18	9.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1119	41.100	26.74	0.00	6.01	4.18	0.90	9.21	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1120	41.000	26.75	0.00	6.01	4.18	0.88	9.23	9.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
1121	40.900	26.75	0.00	6.01	4.18	0.87	9.26	9.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1122	40.800	26.76	0.00	6.01	4.18	0.86	9.29	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
1123	40.700	26.76	0.00	6.01	4.18	0.85	9.32	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
1124	40.600	26.77	0.00	6.01	4.18	0.84	9.35	9.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
1125	40.500	26.77	0.00	6.01	4.18	0.84	9.37	9.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
1126	40.400	26.78	0.00	6.01	4.18	0.84	9.40	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
1127	40.300	26.78	0.00	6.01	4.18	0.83	9.43	9.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
1128	40.200	26.78	0.00	6.01	4.18	0.83	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
1129	40.100	26.79	0.00	6.01	4.18	0.83	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
1130	40.000	26.79	0.00	6.01	4.18	0.82	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
1131	39.900	26.80	0.00	6.01	4.18	0.82	9.53	9.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
1132	39.800	26.80	0.00	6.01	4.18	0.82	9.55	9.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
1133	39.700	26.81	0.00	6.01	4.18	0.82	9.58	9.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01
1134	39.600	26.81	0.00	6.01	4.18	0.81	9.60	9.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01
1135	39.500	26.82	0.00	6.01	4.18	0.81	9.62	9.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
1136	39.400	26.82	0.00	6.01	4.18	0.81	9.65	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
1137	39.300	26.83	0.00	6.01	4.18	0.81	9.67	9.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
1138	39.200	26.83	0.00	6.01	4.18	0.80	9.69	9.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
1139	39.100	26.84	0.00	6.01	4.18	0.80	9.71	9.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05
1140	39.000	26.84	0.00	6.01	4.18	0.80	9.73	9.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
1141	38.900	26.85	0.00	6.01	4.18	0.80	9.75	9.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
1142	38.800	26.85	0.00	6.01	4.18	0.79	9.77	9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
1143	38.700	26.86	0.00	6.01	4.18	0.79	9.79	9.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
1144	38.600	26.86	0.00	6.01	4.18	0.79	9.81	9.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08
1145	38.500	26.86	0.00	6.01	4.18	0.79	9.83	9.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09
1146	38.400	26.87	0.00	6.01	4.18	0.79	9.85	9.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09
1147	38.300	26.87	0.00	6.01	4.18	0.78	9.87	9.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1148	38.200	26.88	0.00	6.01	4.18	0.78	9.89	9.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1149	38.100	26.88	0.00	6.01	4.18	0.78	9.91	9.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
1150	38.000	26.89	0.00	6.01	4.18	0.78	9.92	9.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
1151	37.900	26.89	0.00	6.01	4.18	0.77	9.94	9.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
1152	37.800	26.90	0.00	6.01	4.18	0.77	9.96	9.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
1153	37.700	26.90	0.00	6.01	4.18	0.77	9.97	9.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
1154	37.600	26.91	0.00	6.01	4.18	0.77	9.99	9.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13
1155	37.500	26.91	0.00	6.01	4.18	0.77	10.01	10.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14

1156	37.400	26.92	0.00	6.01	4.18	0.76	10.02	10.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
1157	37.300	26.92	0.00	6.01	4.18	0.76	10.04	10.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
1158	37.200	26.93	0.00	6.01	4.18	0.76	10.05	10.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
1159	37.100	26.93	0.00	6.01	4.18	0.76	10.07	10.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
1160	37.000	26.94	0.00	6.01	4.18	0.75	10.08	10.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1161	36.900	26.94	0.00	6.01	4.18	0.75	10.10	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1162	36.800	26.94	0.00	6.01	4.18	0.75	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1163	36.700	26.95	0.00	6.01	4.18	0.75	10.13	10.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17
1164	36.600	26.95	0.00	6.01	4.18	0.75	10.14	10.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17
1165	36.500	26.96	0.00	6.01	4.18	0.74	10.15	10.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
1166	36.400	26.96	0.00	6.01	4.18	0.74	10.17	10.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
1167	36.300	26.97	0.00	6.01	4.18	0.74	10.18	10.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
1168	36.200	26.97	0.00	6.01	4.18	0.74	10.19	10.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19
1169	36.100	26.98	0.00	6.01	4.18	0.74	10.21	10.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19
1170	36.000	26.98	0.00	6.01	4.18	0.73	10.22	10.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19
1171	35.900	26.99	0.00	6.01	4.18	0.73	10.23	10.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
1172	35.800	26.99	0.00	6.01	4.18	0.73	10.24	10.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
1173	35.700	27.00	0.00	6.01	4.18	0.73	10.26	10.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
1174	35.600	27.00	0.00	6.01	4.18	0.73	10.27	10.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
1175	35.500	27.01	0.00	6.01	4.18	0.72	10.28	10.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
1176	35.400	27.01	0.00	6.01	4.18	0.72	10.29	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
1177	35.300	27.02	0.00	6.01	4.18	0.72	10.30	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21
1178	35.200	27.02	0.00	6.01	4.18	0.72	10.31	10.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22
1179	35.100	27.02	0.00	6.01	4.18	0.72	10.33	10.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22
1180	35.000	27.03	0.00	6.01	4.18	0.71	10.34	10.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22
1181	34.900	27.03	0.00	6.01	4.18	0.71	10.35	10.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22
1182	34.800	27.04	0.00	6.01	4.18	0.71	10.36	10.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1183	34.700	27.04	0.00	6.01	4.18	0.71	10.37	10.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1184	34.600	27.05	0.00	6.01	4.18	0.71	10.38	10.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1185	34.500	27.05	0.00	6.01	4.18	0.70	10.39	10.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1186	34.400	27.06	0.00	6.01	4.18	0.70	10.40	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1187	34.300	27.06	0.00	6.01	4.18	0.70	10.41	10.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1188	34.200	27.07	0.00	6.01	4.18	0.70	10.42	10.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1189	34.100	27.07	0.00	6.01	4.18	0.70	10.43	10.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1190	34.000	27.08	0.00	6.01	4.18	0.69	10.44	10.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
1191	33.900	27.08	0.00	6.01	4.18	0.69	10.45	10.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
1192	33.800	27.09	0.00	6.01	4.18	0.69	10.46	10.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
1193	33.700	27.09	0.00	6.01	4.18	0.69	10.47	10.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
1194	33.600	27.10	0.00	6.01	4.18	0.69	10.47	10.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25
1195	33.500	27.10	0.00	6.01	4.18	0.68	10.48	10.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.26

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 34 MCCLELLEN BR - FLAT CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1196	UPR RCH	0.02360	27.10	0.00	6.01	4.18	0.68	10.48	10.48	0.00	0.00	0.00	0.00	0.00	0.00	1.26

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1196	33.50	33.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1197	33.40	33.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1198	33.30	33.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1199	33.20	33.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1200	33.10	33.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1201	33.00	32.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1202	32.90	32.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1203	32.80	32.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1204	32.70	32.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1205	32.60	32.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1206	32.50	32.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1207	32.40	32.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1208	32.30	32.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1209	32.20	32.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1210	32.10	32.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
TOT						4.51			9205.31	16083.52					
AVG					0.00385		0.57	10.72			6.14				
CUM						91986.54									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
1196	33.400	7.95	1.40	0.03	0.06	0.00	4.07	4.07	4.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
1197	33.300	7.95	1.40	0.03	0.06	0.00	4.08	4.08	4.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06
1198	33.200	7.94	1.40	0.04	0.06	0.00	4.09	4.09	4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06

1199	33.100	7.94	1.40	0.04	0.06	0.00	4.09	4.09	4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1200	33.000	7.93	1.40	0.04	0.06	0.00	4.10	4.10	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1201	32.900	7.93	1.40	0.04	0.06	0.00	4.11	4.11	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1202	32.800	7.93	1.40	0.04	0.06	0.00	4.11	4.11	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1203	32.700	7.92	1.40	0.04	0.06	0.00	4.12	4.12	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1204	32.600	7.92	1.40	0.04	0.06	0.00	4.13	4.13	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1205	32.500	7.92	1.40	0.04	0.06	0.00	4.13	4.13	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1206	32.400	7.91	1.41	0.04	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1207	32.300	7.91	1.41	0.04	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1208	32.200	7.90	1.41	0.04	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1209	32.100	7.90	1.41	0.04	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1210	32.000	7.90	1.41	0.04	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
20 DEG C RATE				0.03		0.00	2.60			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1196	33.400	27.13	0.00	6.01	4.18	1.25	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1197	33.300	27.15	0.00	6.01	4.18	1.63	10.57	10.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1198	33.200	27.18	0.00	6.01	4.18	1.88	10.58	10.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
1199	33.100	27.21	0.00	6.01	4.18	2.04	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
1200	33.000	27.23	0.00	6.01	4.18	2.16	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1201	32.900	27.26	0.00	6.01	4.18	2.24	10.60	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
1202	32.800	27.29	0.00	6.01	4.18	2.29	10.60	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
1203	32.700	27.31	0.00	6.01	4.18	2.32	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1204	32.600	27.34	0.00	6.01	4.18	2.34	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08
1205	32.500	27.37	0.00	6.01	4.18	2.35	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
1206	32.400	27.39	0.00	6.01	4.18	2.36	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
1207	32.300	27.42	0.00	6.01	4.18	2.36	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
1208	32.200	27.45	0.00	6.01	4.18	2.36	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01

1209	32.100	27.47	0.00	6.01	4.18	2.35	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
1210	32.000	27.50	0.00	6.01	4.18	2.35	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 35 FLAT CREEK - SANDY CREEK CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1211	UPR RCH	0.02360	27.50	0.00	6.01	4.18	2.35	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.98

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1211	32.00	31.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1212	31.90	31.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1213	31.80	31.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1214	31.70	31.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1215	31.60	31.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1216	31.50	31.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1217	31.40	31.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1218	31.30	31.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1219	31.20	31.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1220	31.10	31.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1221	31.00	30.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1222	30.90	30.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1223	30.80	30.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1224	30.70	30.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1225	30.60	30.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1226	30.50	30.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1227	30.40	30.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1228	30.30	30.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1229	30.20	30.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1230	30.10	30.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1231	30.00	29.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1232	29.90	29.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1233	29.80	29.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

TOT								6.92				14114.81	24661.39						
AVG						0.00385			0.57	10.72					6.14				
CUM							91993.55												

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1211	31.900	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1212	31.800	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1213	31.700	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1214	31.600	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1215	31.500	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1216	31.400	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1217	31.300	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1218	31.200	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1219	31.100	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1220	31.000	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1221	30.900	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1222	30.800	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1223	30.700	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1224	30.600	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1225	30.500	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1226	30.400	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1227	30.300	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1228	30.200	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06

1229	30.100	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1230	30.000	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1231	29.900	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1232	29.800	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1233	29.700	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
20 DEG C RATE				0.03		0.00	2.50			0.00		0.00	0.00	0.00	0.00			0.00	0.07	
AVG 20 DEG C RATE			1.22		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1211	31.900	27.50	0.00	6.01	4.18	2.40	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
1212	31.800	27.50	0.00	6.01	4.18	2.44	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
1213	31.700	27.50	0.00	6.01	4.18	2.46	10.60	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
1214	31.600	27.50	0.00	6.01	4.18	2.48	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
1215	31.500	27.50	0.00	6.01	4.18	2.49	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
1216	31.400	27.50	0.00	6.01	4.18	2.50	10.58	10.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
1217	31.300	27.50	0.00	6.01	4.18	2.51	10.58	10.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
1218	31.200	27.50	0.00	6.01	4.18	2.52	10.57	10.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
1219	31.100	27.50	0.00	6.01	4.18	2.52	10.57	10.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
1220	31.000	27.50	0.00	6.01	4.18	2.52	10.56	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
1221	30.900	27.50	0.00	6.01	4.18	2.53	10.56	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
1222	30.800	27.50	0.00	6.01	4.18	2.53	10.56	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1223	30.700	27.50	0.00	6.01	4.18	2.53	10.55	10.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1224	30.600	27.50	0.00	6.01	4.18	2.53	10.55	10.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
1225	30.500	27.50	0.00	6.01	4.18	2.53	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
1226	30.400	27.50	0.00	6.01	4.18	2.53	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1227	30.300	27.50	0.00	6.01	4.18	2.53	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1228	30.200	27.50	0.00	6.01	4.18	2.53	10.53	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1229	30.100	27.50	0.00	6.01	4.18	2.53	10.53	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1230	30.000	27.50	0.00	6.01	4.18	2.53	10.52	10.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1231	29.900	27.50	0.00	6.01	4.18	2.53	10.52	10.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1232	29.800	27.50	0.00	6.01	4.18	2.53	10.52	10.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1233	29.700	27.50	0.00	6.01	4.18	2.53	10.51	10.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 36 SANDY CREEK - HWY 124 CASTOR CREEK CALIBRATION RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1234	UPR RCH	0.02360	27.50	0.00	6.01	4.18	2.53	10.51	10.51	0.00	0.00	0.00	0.00	0.00	0.00	0.86

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1234	29.70	29.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1235	29.60	29.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1236	29.50	29.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1237	29.40	29.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1238	29.30	29.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1239	29.20	29.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1240	29.10	29.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1241	29.00	28.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1242	28.90	28.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1243	28.80	28.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1244	28.70	28.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
TOT						3.31			6750.56	11794.58					
AVG					0.00385		0.57	10.72			6.14				
CUM						91996.90									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
1234	29.600	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1235	29.500	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

1236	29.400	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1237	29.300	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1238	29.200	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1239	29.100	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1240	29.000	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1241	28.900	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1242	28.800	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1243	28.700	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1244	28.600	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.03		0.00	2.40			0.00		0.00	0.00	0.00	0.00			0.00	0.09	
AVG 20 DEG C RATE			1.22		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1234	29.600	27.50	0.00	6.01	4.18	2.59	10.37	10.37	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.82
1235	29.500	27.50	0.00	6.01	4.18	2.63	10.24	10.24	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.78
1236	29.400	27.50	0.00	6.01	4.18	2.66	10.11	10.11	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.75
1237	29.300	27.50	0.00	6.01	4.18	2.69	9.98	9.98	0.00	0.00	0.01	0.01	0.03	0.00	0.00	0.00	0.72
1238	29.200	27.50	0.00	6.01	4.18	2.71	9.85	9.85	0.00	0.00	0.01	0.01	0.04	0.00	0.00	0.00	0.69
1239	29.100	27.50	0.00	6.01	4.18	2.72	9.73	9.73	0.00	0.00	0.02	0.02	0.05	0.00	0.00	0.00	0.66
1240	29.000	27.50	0.00	6.01	4.18	2.73	9.62	9.62	0.00	0.00	0.02	0.02	0.06	0.00	0.00	0.00	0.63
1241	28.900	27.50	0.00	6.01	4.18	2.75	9.50	9.50	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.61
1242	28.800	27.50	0.00	6.01	4.18	2.75	9.39	9.39	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.59
1243	28.700	27.50	0.00	6.01	4.18	2.76	9.28	9.28	0.00	0.00	0.03	0.03	0.08	0.00	0.00	0.00	0.56
1244	28.600	27.50	0.00	6.01	4.18	2.77	9.18	9.18	0.00	0.00	0.03	0.03	0.09	0.00	0.00	0.00	0.54

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

STREAM SUMMARY
HEADWATER

CASTOR CREEK WATERSHED MODEL
CASTOR CREEK CALIBRATION RUN

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TRAVEL TIME      =       91996.90 DAYS

MAXIMUM EFFLUENT =           0.00 PERCENT

FLOW             =   0.00010 TO    0.02360 m³/s
DISPERSION       =   0.0000  TO    0.0012  m²/s
VELOCITY         =   0.00001 TO    0.00385 m/s
DEPTH            =   0.53    TO    0.86    m
WIDTH            =  10.70    TO   11.90    m

BOD DECAY        =    0.01   TO    0.05    per day
NH3 DECAY        =    0.00   TO    0.00    per day
SDMNT OXYGEN DMND=    3.54   TO    5.71    g/m²/d
NH3 SOURCE       =    0.00   TO    0.00    g/m²/d
REAERATION       =    0.86   TO    1.41    per day
BOD SETTLING     =    0.05   TO    0.06    per day
ORGN DECAY       =    0.00   TO    0.00    per day
ORGN SETTLING    =    0.00   TO    0.00    per day

TEMPERATURE      =   22.70   TO   27.50    deg C
DISSOLVED OXYGEN =    0.68   TO    3.25    mg/L


    .....EXECUTION COMPLETED
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APPENDIX A4 - Calibration input justification form

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 3, Program Constants			
Description of Constant	**Value**	**Result**	**Source/Justification**
Maximum iteration limit	1000.0		Standard
KL Minimum	0.7	Minimum KL to be used.	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
Inhibition control value	3.0	Inhibits all decay rate except SOD for low DO.	Standard LA modeling procedure.
Ocean exchange ratio	0.0	Set 0% tidal exchange at lower boundary.	This was done to allow dispersion in the model but not to force the bottom element through the boundary conditions.
Hydraulic calculation method	2.0	Sets the Hydraulic calc. to width and depth coef.	The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions, making the Leopold relationships inaccurate. This method allows the model to predict a more accurate depth and width during low flow conditions.
Settled rate units.	2.0	Sets the settled rate to a velocity (m/day).	By making the settling rate a velocity the rate becomes dependent upon the depth.
K2 Max	25.0	Max K2 at 20 C allowed for any computational element	EPA Policy in the absence of a measured value.
NCM Oxygen Uptake	1.0	Oxygen Uptake Rate per Unit of NBOD decay.	Standard LA modeling procedure

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
2	McDowell Branch - Horse Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
3	Horse Creek - Guice Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
4	Guice Branch - Curr Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
5	Curr Creek - Poplar Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
6	Poplar Branch - White Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
			Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
7	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
9	Fourmile Creek - Pool Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
10	Pool Branch - Ginney Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
11	Ginney Branch - Edwards Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
12	Edwards Branch - Little Flat	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.20	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.86	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
13	Little Flat - Glade Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.84	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
14	Glade Creek - Cub Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.82	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
15	Cub Creek - Cow Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.81	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
16	Cow Creek - Bear Creek Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.8	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
17	Bear Creek Branch - Biles Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
18	Biles Branch - Hurricane Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
19	Hurricane Creek - Indian Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.78	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
20	Indian Branch - Moody Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.77	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
21	Moody Creek - Bull Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.76	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
22	Bull Creek - Sweetwater Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.75	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
23	Sweetwater Creek - Brushy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.74	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
24	Brushy Creek - White Oak Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.73	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
25	White Oak Creek - Bills Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.71	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
26	Bills Creek - Lost Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.68	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
27	Lost Creek - Messer Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.65	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
28	Messer Creek - Richland Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.63	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
29	Richland Creek - Piney Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.61	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
30	Piney Creek - Beaucoup Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.58	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
31	Beaucoup Creek - Banister Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.57	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
32	Banister Creek - Brushy Creek2	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
33	Brushy Creek 2 - McClellen Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
34	McClellen Branch - Flat Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
35	Flat Creek - Sandy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
36	Sandy Creek - Hwy 124	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
2	McDowell Branch - Horse Creek	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
3	Horse Creek - Guice Branch	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
4	Guice Branch - Curr Creek	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
5	Curr Creek - Poplar Branch	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
6	Poplar Branch - White Branch	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
7	White Branch - Colston Creek	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
8	White Branch - Colston Creek	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
9	Fourmile Creek - Pool Branch	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
10	Pool Branch - Ginney Branch	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
11	Ginney Branch - Edwards Branch	Temperature	^{o}Celcius	22.7	Site 8
		Dissolved O_2	mg/l	2.55	Site 8
12	Edwards Branch - Little Flat	Temperature	^{o}Celcius	22.78	Interpolation Between Sites 6 and 7
		Dissolved O_2	mg/l	1.36	Interpolation Between Sites 6 and 7
13	Little Flat - Glade Creek	Temperature	^{o}Celcius	23.3	Interpolation Between Sites 6 and 7
		Dissolved O_2	mg/l	1.22	Interpolation Between Sites 6 and 7
14	Glade Creek - Cub Creek	Temperature	^{o}Celcius	23.73	Interpolation Between Sites 6 and 7
		Dissolved O_2	mg/l	1.11	Interpolation Between Sites 6 and 7
15	Cub Creek - Cow Creek	Temperature	^{o}Celcius	24.04	Interpolation Between Sites 6 and 7
		Dissolved O_2	mg/l	1.03	Interpolation Between Sites 6 and 7
16	Cow Creek - Bear Creek Branch	Temperature	^{o}Celcius	24.25	Interpolation Between Sites 6 and 7
		Dissolved O_2	mg/l	0.98	Interpolation Between Sites 6 and 7
17	Bear Creek Branch - Biles Branch	Temperature	^{o}Celcius	24.41	Interpolation Between Sites 6 and 7
		Dissolved O_2	mg/l	0.93	Interpolation Between Sites 6 and 7
18	Biles Branch - Hurricane Creek	Temperature	^{o}Celcius	24.52	Interpolation Between Sites 6 and 7
		Dissolved O_2	mg/l	0.9	Interpolation Between Sites 6 and 7
19	Hurricane Creek - Indian Branch	Temperature	^{o}Celcius	24.6	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	0.92	Interpolation Between Sites 5 and 6
20	Indian Branch - Moody Creek	Temperature	^{o}Celcius	24.56	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	1	Interpolation Between Sites 5 and 6
21	Moody Creek - Bull Creek	Temperature	^{o}Celcius	24.53	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	1.07	Interpolation Between Sites 5 and 6
22	Bull Creek - Sweetwater Creek	Temperature	^{o}Celcius	24.5	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	1.14	Interpolation Between Sites 5 and 6

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
23	Sweetwater Creek - Brushy Creek	Temperature	^{o}Celcius	24.48	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	1.19	Interpolation Between Sites 5 and 6
24	Brushy Creek - White Oak Creek	Temperature	^{o}Celcius	24.45	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	1.25	Interpolation Between Sites 5 and 6
25	White Oak Creek - Bills Creek	Temperature	^{o}Celcius	24.37	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	1.45	Interpolation Between Sites 5 and 6
26	Bills Creek - Lost Creek	Temperature	^{o}Celcius	24.29	Interpolation Between Sites 5 and 6
		Dissolved O_2	mg/l	1.63	Interpolation Between Sites 5 and 6
27	Lost Creek - Messer Creek	Temperature	^{o}Celcius	24.3	Interpolation Between Sites 4 and 5
		Dissolved O_2	mg/l	1.63	Interpolation Between Sites 4 and 5
28	Messer Creek - Richland Creek	Temperature	^{o}Celcius	24.37	Interpolation Between Sites 3 and 4
		Dissolved O_2	mg/l	1.69	Interpolation Between Sites 3 and 4
29	Richland Creek - Piney Creek	Temperature	^{o}Celcius	24.58	Interpolation Between Sites 3 and 4
		Dissolved O_2	mg/l	2.07	Interpolation Between Sites 3 and 4
30	Piney Creek - Beaucoup Creek	Temperature	^{o}Celcius	24.82	Interpolation Between Sites 3 and 4
		Dissolved O_2	mg/l	2.52	Interpolation Between Sites 3 and 4
31	Beaucoup Creek - Banister Creek	Temperature	^{o}Celcius	24.97	Interpolation Between Sites 3 and 4
		Dissolved O_2	mg/l	2.78	Interpolation Between Sites 3 and 4
32	Banister Creek - Brushy Creek2	Temperature	^{o}Celcius	25.19	Interpolation Between Sites 2 and 3
		Dissolved O_2	mg/l	2.89	Interpolation Between Sites 2 and 3
33	Brushy Creek 2 - McClellen Branch	Temperature	^{o}Celcius	25.89	Interpolation Between Sites 2 and 3
		Dissolved O_2	mg/l	1.22	Interpolation Between Sites 2 and 3
34	McClellen Branch - Flat Creek	Temperature	^{o}Celcius	26.72	Interpolation Between Sites 1 and 2
		Dissolved O_2	mg/l	1.6	Interpolation Between Sites 1 and 2
35	Flat Creek - Sandy Creek	Temperature	^{o}Celcius	27.11	Interpolation Between Sites 1 and 2
		Dissolved O_2	mg/l	2.17	Interpolation Between Sites 1 and 2
36	Sandy Creek - Hwy 124	Temperature	^{o}Celcius	27.5	Site 1
		Dissolved O_2	mg/l	2.72	Site 1

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 22, Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		NCM	mg/l	0.58	Site 5

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 21, Headwater Data for DO, BOD, and Nitrogen					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		Dissolved O_2	mg/l	2.55	Site 5
		BOD	mg/l	14.74	Site 5

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 20, Headwater Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Element # of input		1	
		Headwater name		Castor Creek	
		Headwater flow	cms	0.0001	
		Temperature	^{o}Celcius	22.36	Site 5
		Conservative Matl. I	mg/l	8.30	Site 5
		Conservative Matl. II	mg/l	0.00	Site 5

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	BOD	kg/day	19	Calibration
		Nonconservative matl.		2.2	Calibration
2	McDowell Branch - Horse Creek	BOD	kg/day	5	Calibration
		Nonconservative matl.		0.6	Calibration
3	Horse Creek - Guice Branch	BOD	kg/day	2.8	Calibration
		Nonconservative matl.		0.33	Calibration
4	Guice Branch - Curr Creek	BOD	kg/day	4	Calibration
		Nonconservative matl.		0.46	Calibration
5	Curr Creek - Poplar Branch	BOD	kg/day	8.7	Calibration
		Nonconservative matl.		1	Calibration
6	Poplar Branch - White Branch	BOD	kg/day	0.31	Calibration
		Nonconservative matl.		0.035	Calibration
7	White Branch - Colston Creek	BOD	kg/day	11.3	Calibration
		Nonconservative matl.		1.4	Calibration
8	White Branch - Colston Creek	BOD	kg/day	1.5	Calibration
		Nonconservative matl.		0.18	Calibration
9	Fourmile Creek - Pool Branch	BOD	kg/day	9.3	Calibration
		Nonconservative matl.		1.1	Calibration
10	Pool Branch - Ginney Branch	BOD	kg/day	0.6	Calibration
		Nonconservative matl.		0.075	Calibration
11	Ginney Branch - Edwards Branch	BOD	kg/day	23	Calibration
		Nonconservative matl.		2.8	Calibration
12	Edwards Branch - Little Flat	BOD	kg/day	27	Calibration
		Nonconservative matl.		9.7	Calibration
13	Little Flat - Glade Creek	BOD	kg/day	6	Calibration
		Nonconservative matl.		9	Calibration
14	Glade Creek - Cub Creek	BOD	kg/day	8	Calibration
		Nonconservative matl.		15	Calibration
15	Cub Creek - Cow Creek	BOD	kg/day	2	Calibration
		Nonconservative matl.		3.4	Calibration
16	Cow Creek - Bear Creek Branch	BOD	kg/day	5	Calibration
		Nonconservative matl.		9	Calibration
17	Bear Creek Branch - Biles Branch	BOD	kg/day	0.6	Calibration
		Nonconservative matl.		1.1	Calibration
18	Biles Branch - Hurricane Creek	BOD	kg/day	3	Calibration
		Nonconservative matl.		5.3	Calibration

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
19	Hurricane Creek - Indian Branch	BOD	kg/day	11.5	Calibration
		Nonconservative matl.		5	Calibration
20	Indian Branch - Moody Creek	BOD	kg/day	17	Calibration
		Nonconservative matl.		8	Calibration
21	Moody Creek - Bull Creek	BOD	kg/day	9.7	Calibration
		Nonconservative matl.		4.5	Calibration
22	Bull Creek - Sweetwater Creek	BOD	kg/day	15.6	Calibration
		Nonconservative matl.		4.5	Calibration
23	Sweetwater Creek - Brushy Creek	BOD	kg/day	5.2	Calibration
		Nonconservative matl.		1.5	Calibration
24	Brushy Creek - White Oak Creek	BOD	kg/day	15	Calibration
		Nonconservative matl.		4	Calibration
25	White Oak Creek - Bills Creek	BOD	kg/day	46	Calibration
		Nonconservative matl.		13	Calibration
26	Bills Creek - Lost Creek	BOD	kg/day	11	Calibration
		Nonconservative matl.		3.3	Calibration
27	Lost Creek - Messer Creek	BOD	kg/day	31.7	Calibration
		Nonconservative matl.		23	Calibration
28	Messer Creek - Richland Creek	BOD	kg/day	3	Calibration
		Nonconservative matl.		1	Calibration
29	Richland Creek - Piney Creek	BOD	kg/day	40	Calibration
		Nonconservative matl.		13	Calibration
30	Piney Creek - Beaucoup Creek	BOD	kg/day	15	Calibration
		Nonconservative matl.		4	Calibration
31	Beaucoup Creek - Banister Creek	BOD	kg/day	23	Calibration
		Nonconservative matl.		5.5	Calibration
32	Banister Creek - Brushy Creek2	BOD	kg/day	27	Calibration
		Nonconservative matl.		6.7	Calibration
33	Brushy Creek 2 - McClellen Branch	BOD	kg/day	42	Calibration
		Nonconservative matl.		6.5	Calibration
34	McClellen Branch - Flat Creek	BOD	kg/day	10	Calibration
		Nonconservative matl.		1	Calibration
35	Flat Creek - Sandy Creek	BOD	kg/day	15	Calibration
		Nonconservative matl.		2	Calibration
36	Sandy Creek - Hwy 124	BOD	kg/day	4	Calibration
		Nonconservative matl.		0.3	Calibration

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 18, Incremetal Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Indian Bayou, Headwater to RKM 14.0	NCM	mg/l	0.84	Site 3

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 17, Incremetal Data for DO, BOD, Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Indian Bayou, Headwater to RKM 14.0	Dissolved O_2	mg/l	3.06	Site 3
		BOD	mg/l	9.19	Site 3
		Org.-N	mg/l		
		NH_3-N	mg/l		
		NO_{2+3} - N	mg/l		

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 16, Incremental Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
32	Indian Bayou, Headwater to RKM 14.0	Incremental Outflow	m^3/s		
		Incremental Inflow	m^3/s	0.0235	
		Temperature	$^oCelcius$	25.1	Site 3
		Salinity	ppt		
		Conservative Matl. I	mg/l	6	Site 3
		Conservative Matl. II	mg/l	4.2	Site 3

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
8	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
15	Cub Creek - Cow Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		NCM Settling Rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
22	Bull Creek - Sweetwater Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	NCM Decay	1/day	0.1	Interpolation of Bottle Rates from sites 4-5
		NCM Settling Rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	NCM Decay	1/day	0.09	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
29	Richland Creek - Piney Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	NCM Decay	1/day	0.07	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
36	Sandy Creek - Hwy 124	NCM Decay	1/day	0.09	Bottle Rate Site 1
		NCM Settling Rate	m/day	0.05	Calibration

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	K_2 option	Unitless	20	0.7/Depth
		Background SOD	g/m2-day	4.30	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	4.30	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	4.20	Calibration
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
15	Cub Creek - Cow Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	4.10	Calibration
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	K_2 option	Unitless	20	0.7/Depth

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Background SOD	g/m2-day	4.10	Calibration
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	4.10	Calibration
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	4.10	Calibration
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	4.10	Calibration
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	K_2 option	Unitless	20	0.7/Depth
		Background SOD	g/m2-day	3.70	Calibration
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	3.70	Calibration
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
22	Bull Creek - Sweetwater Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.70	Calibration
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
23	Sweetwater Creek - Brushy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.70	Calibration
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	K_2 option	Unitless	20	0.7/Depth
		Background SOD	g/m2-day	3.70	Calibration
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	K_2 option	Unitless	20	0.7/Depth
		Background SOD	g/m2-day	3.70	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	3.75	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.75	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 4 and 5
		BOD Settling rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	3.10	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
29	Richland Creek - Piney Creek	K_2 option	Unitless	20	0.7/Depth
		Background SOD	g/m2-day	3.10	Calibration
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	3.10	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	K_2 option	Unitless	20	0.7/Depth

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.70	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.55	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	K_2 option	Unitless	20	0.7/Depth
		Background SOD	g/m2-day	3.65	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.60	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.50	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration
36	Sandy Creek - Hwy 124	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.40	Calibration
		Aerobic BOD decay	1/day	0.03	Bottle Rate for Site 1
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Calibration Model Input Description

DATA TYPE 27, Lower Boundary Conditions

Reach #	NAME	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	Temperature	^{o}Celcius	27.5	Site 1
		Salinity	ppt		
		Conservative Matl. I	mg/l	10.4	Site 1
		Conservative Matl. II		5	Site 1
		Dissolved O_2	mg/l	2.72	Site 1
		BOD	mg/l	9.58	Site 1
		Org.- N	mg/l	0	
		NH_3-N	mg/l	0	
		NO_{2+3}-N	mg/l	0.03	
		Chlorophyll a	ug/l	0	
		Nonconservative	mg/l	0.62	Site 1

APPENDIX A5 - Calibration loading calculations

Calibration Model Non-Point Load Equivalent Calculations:

Modeled stream or water body:	Castor Creek - Current Standards Loading

Shaded cells are input values for calculations.

REACH NUMBER & DESCRIPTION	Calibration Model Reach Length (km)	Calibration Model Average Reach Width (meters)	Calibration Model UCBOD Nonpoint loading (kg/day)	Calibration Model UNBOD Nonpoint loading (kg/day)	Calibration Model UCBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model UNBOD Nonpoint loading (gm O_2/m^2/day)	Calibration Model SOD (gm O_2/m^2/day)	Calibration Model TOTAL Benthic Load (gm O_2/m^2/day)
	A	**B**	**C**	**D**	**E = C / (A x B)**	**F = D / (A x B)**	**G**	**H = E + F + G**
1	5.90	11.90	19.00	2.20	0.271	0.031	3.65	**3.95**
2	1.60	11.90	5.00	0.60	0.263	0.032	3.65	**3.94**
3	0.90	11.90	2.80	0.33	0.261	0.031	3.65	**3.94**
4	1.30	11.90	4.00	0.46	0.259	0.030	3.65	**3.94**
5	2.80	11.90	8.70	1.00	0.261	0.030	3.65	**3.94**
6	0.10	11.90	0.31	0.04	0.261	0.029	3.65	**3.94**
7	3.80	11.90	11.30	1.40	0.250	0.031	3.65	**3.93**
8	0.50	11.90	1.50	0.18	0.252	0.030	3.65	**3.93**
9	3.10	11.90	9.30	1.10	0.252	0.030	3.65	**3.93**
10	0.20	11.90	0.60	0.08	0.252	0.032	3.65	**3.93**
11	7.70	11.90	23.00	2.80	0.251	0.031	3.65	**3.93**
12	7.40	11.20	27.00	9.70	0.326	0.117	4.30	**4.74**
13	3.70	11.10	6.00	9.00	0.146	0.219	4.30	**4.67**
14	5.50	11.10	8.00	15.00	0.131	0.246	4.20	**4.58**
15	1.20	11.10	2.00	3.40	0.150	0.255	4.10	**4.51**
16	3.20	11.10	5.00	9.00	0.141	0.253	4.10	**4.49**
17	0.40	11.00	0.60	1.10	0.136	0.250	4.10	4.49
18	1.90	11.00	3.00	5.30	0.144	0.254	4.10	4.50
19	2.30	11.00	11.50	5.00	0.455	0.198	4.10	4.75
20	3.00	11.00	17.00	8.00	0.515	0.242	3.70	4.46
21	1.70	11.00	9.70	4.50	0.52	0.24	3.70	4.46
22	2.80	11.00	15.60	4.50	0.51	0.15	3.70	4.35
23	1.00	11.00	5.20	1.50	0.47	0.14	3.70	4.31
24	2.90	11.00	15.00	4.00	0.47	0.13	3.70	4.30
25	9.70	10.90	46.00	13.00	0.44	0.12	3.70	4.26
26	2.70	10.90	11.00	3.30	0.37	0.11	3.75	4.24
27	11.10	10.80	31.70	23.00	0.26	0.19	3.75	4.21
28	0.80	10.80	3.00	1.00	0.35	0.12	3.10	3.56
29	9.60	10.80	40.00	13.00	0.39	0.13	3.10	3.61
30	3.00	10.70	15.00	4.00	0.47	0.12	3.10	3.69
31	4.20	10.70	23.00	5.50	0.51	0.12	2.70	3.33
32	5.00	10.70	27.00	6.70	0.50	0.13	2.55	3.18
33	8.50	10.70	42.00	6.50	0.46	0.07	3.65	4.18
34	1.50	10.70	10.00	1.00	0.62	0.06	2.60	3.29
35	2.30	10.70	15.00	2.00	0.61	0.08	2.50	3.19
36	6.20	10.70	4.00	0.30	0.06	0.00	2.40	2.46

APPENDIX A6 - Calibration model sensitivity input/output

SENSITIVITY ANALYSIS SUMMARY

MAINSTEM
CASTOR CREEK SENSITIVITY RUN

Plot 1 Base Model Minimum DO = 0.68

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Stream Baseflow	-30.	0.68	-0.5	30.	0.69	0.5
Stream Depth	-30.	0.69	0.9	30.	0.68	-0.3
Stream Reaeration	-30.	0.00	-100.0	30.	2.24	227.8
BOD Decay Rate	-30.	0.71	3.6	30.	0.66	-3.1
BOD Settling Rate	-30.	0.66	-3.4	30.	0.70	2.5
Benthal Demand	-30.	2.55	272.6	30.	0.00	-100.0
Nonconservative Decay	-30.	0.69	0.6	30.	0.68	-0.5
Initial Temperature	-2.	1.49	117.2	2.	0.00	-100.0
Nonconservative Settling	-30.	0.68	-0.7	30.	0.69	0.5
Headwater Flow	-30.	0.68	0.0	30.	0.68	0.0
Headwater Temperature	-2.	0.68	0.0	2.	0.68	0.0
Headwater DO	-30.	0.68	0.0	30.	0.68	0.0
Headwater BOD	-30.	0.68	0.0	30.	0.68	0.0
Headwater Nonconservative	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Flow	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Temperature	-2.	0.68	0.0	2.	0.68	0.0
Wasteload DO	-30.	0.68	0.0	30.	0.68	0.0
Wasteload BOD	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Nonconservative	-30.	0.68	0.0	30.	0.68	0.0

SENSITIVITY ANALYSIS SUMMARY

Segments 1-12
CASTOR CREEK SENSITIVITY RUN

Plot 2 Base Model Minimum DO = 1.20

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Stream Baseflow	-30.	1.20	0.0	30.	1.20	0.0
Stream Depth	-30.	1.20	0.0	30.	1.20	0.0
Stream Reaeration	-30.	0.00	-100.0	30.	2.55	112.2
BOD Decay Rate	-30.	1.23	2.2	30.	1.18	-1.8
BOD Settling Rate	-30.	1.17	-2.5	30.	1.22	1.7
Benthal Demand	-30.	2.55	112.2	30.	0.00	-100.0
Nonconservative Decay	-30.	1.21	0.9	30.	1.19	-0.6
Initial Temperature	-2.	2.06	71.8	2.	0.35	-71.0
Nonconservative Settling	-30.	1.19	-0.8	30.	1.21	0.7
Headwater Flow	-30.	1.20	0.0	30.	1.20	0.0
Headwater Temperature	-2.	1.20	0.0	2.	1.20	0.0
Headwater DO	-30.	1.20	0.0	30.	1.20	0.0
Headwater BOD	-30.	1.20	0.0	30.	1.20	0.0
Headwater Nonconservative	-30.	1.20	0.0	30.	1.20	0.0

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LA-QUAL Version 5.02
Louisiana Department of Environmental Quality

Input file is D:\Castor\Input Files\castorsensi.txt
Output produced at 11:30 on 02/22/2002

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

CARD TYPE       CONTROL TITLES

TITLE01         CASTOR CREEK WATERSHED MODEL
TITLE02         CASTOR CREEK SENSITIVITY RUN
CNTROL04  YES   METRIC UNITS
CNTROL05  YES   OXYGEN DEPENDENT RATES
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = SULFATES                  IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   NITROGEN
MODOPT08   NO   PHOSPHORUS
MODOPT09   NO   CHLOROPHYLL A
MODOPT10   NO   MACROPHYTES
MODOPT11   NO   COLIFORM
MODOPT12  YES   NONCONSERVATIVE MATERIAL
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         MAXIMUM ITERATION LIMIT            =      1000.00000
PROGRAM         PLOT TYPE                          =         4.00000
PROGRAM         FINAL REPORT TYPE                  =         1.00000
PROGRAM         SPECIAL REPORT TYPE                =         3.00000
PROGRAM         KL MINIMUM                         =         0.70000 meters/day
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
PROGRAM         INHIBITION CONTROL VALUE           =         3.00000
PROGRAM         NH3 OXYGEN UPTAKE RATE             =         4.30000 mg O/mg N
PROGRAM         K2 MAXIMUM                         =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS                =         2.00000 (per day)
PROGRAM         OCEAN EXCHANGE RATIO               =         0.00000
ENDATA03

$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
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CARD TYPE RATE CODE THETA VALUE

ENDATA04

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA05

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA06

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA07

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	CC	HEADWATER CC - MCDOWELL BRANCH	153.00	TO	147.10	0.1000	5.90	59	1	59
REACH ID	2	CC	MCDOWELL BRANCH - HORSE CREEK	147.10	TO	145.50	0.1000	1.60	16	60	75
REACH ID	3	CC	HORSE CREEK - GUICE BRANCH	145.50	TO	144.60	0.1000	0.90	9	76	84
REACH ID	4	CC	GUICE BRANCH - CURR CREEK	144.60	TO	143.30	0.1000	1.30	13	85	97
REACH ID	5	CC	CURR CREEK - POPLAR BRANCH	143.30	TO	140.50	0.1000	2.80	28	98	125
REACH ID	6	CC	POPLAR BRANCH - WHITE BRANCH	140.50	TO	140.40	0.1000	0.10	1	126	126
REACH ID	7	CC	WHITE BRANCH - COLSTON CREEK	140.40	TO	136.60	0.1000	3.80	38	127	164
REACH ID	8	CC	COLSTON CREEK - FOURMILE CREEK	136.60	TO	136.10	0.1000	0.50	5	165	169
REACH ID	9	CC	FOURMILE CREEK - POOL BRANCH	136.10	TO	133.00	0.1000	3.10	31	170	200
REACH ID	10	CC	POOL BRANCH - GINNEY BRANCH	133.00	TO	132.80	0.1000	0.20	2	201	202
REACH ID	11	CC	GINNEY BRANCH - EDWARDS BRANCH	132.80	TO	125.10	0.1000	7.70	77	203	279
REACH ID	12	CC	EDWARDS BRANCH - LITTLE FLAT	125.10	TO	117.70	0.1000	7.40	74	280	353
REACH ID	13	CC	LITTLE FLAT - GLADE CREEK	117.70	TO	114.00	0.1000	3.70	37	354	390
REACH ID	14	CC	GLADE CREEK - CUB CREEK	114.00	TO	108.50	0.1000	5.50	55	391	445
REACH ID	15	CC	CUB CREEK - COW CREEK	108.50	TO	107.30	0.1000	1.20	12	446	457
REACH ID	16	CC	COW CREEK - BEAR CREEK BRANCH	107.30	TO	104.10	0.1000	3.20	32	458	489
REACH ID	17	CC	BEAR CREEK BRANCH - BILES BR	104.10	TO	103.70	0.1000	0.40	4	490	493
REACH ID	18	CC	BILES BRANCH - HURRICANE CR	103.70	TO	101.80	0.1000	1.90	19	494	512
REACH ID	19	CC	HURRICANE CR - INDIAN BRANCH	101.80	TO	99.50	0.1000	2.30	23	513	535
REACH ID	20	CC	INDIAN BRANCH - MOODY CREEK	99.50	TO	96.50	0.1000	3.00	30	536	565
REACH ID	21	CC	MOODY CREEK - BULL CREEK	96.50	TO	94.80	0.1000	1.70	17	566	582
REACH ID	22	CC	BULL CREEK - SWEETWATER CREEK	94.80	TO	92.00	0.1000	2.80	28	583	610
REACH ID	23	CC	SWEETWATER CREEK - BRUSHY CREEK	92.00	TO	91.00	0.1000	1.00	10	611	620
REACH ID	24	CC	BRUSHY CREEK - WHITE OAK CREEK	91.00	TO	88.10	0.1000	2.90	29	621	649
REACH ID	25	CC	WHITE OAK CREEK - BILLS CREEK	88.10	TO	78.40	0.1000	9.70	97	650	746
REACH ID	26	CC	BILLS CREEK - LOST CREEK	78.40	TO	75.70	0.1000	2.70	27	747	773
REACH ID	27	CC	LOST CREEK - MESSER CREEK	75.70	TO	64.60	0.1000	11.10	111	774	884

REACH ID	28	CC	MESSER CREEK - RICHLAND CREEK	64.60	TO	63.80	0.1000	0.80	8	885	892
REACH ID	29	CC	RICHLAND CREEK - PINEY CREEK	63.80	TO	54.20	0.1000	9.60	96	893	988
REACH ID	30	CC	PINEY CREEK - BEAUCOUP CREEK	54.20	TO	51.20	0.1000	3.00	30	989	1018
REACH ID	31	CC	BEAUCOUP CREEK - BANISTER CREEK	51.20	TO	47.00	0.1000	4.20	42	1019	1060
REACH ID	32	CC	BANISTER CREEK - BRUSHY CREEK2	47.00	TO	42.00	0.1000	5.00	50	1061	1110
REACH ID	33	CC	BRUSHY CREEK2 - MCCLELLEN BR	42.00	TO	33.50	0.1000	8.50	85	1111	1195
REACH ID	34	CC	MCCLELLEN BR - FLAT CREEK	33.50	TO	32.00	0.1000	1.50	15	1196	1210
REACH ID	35	CC	FLAT CREEK - SANDY CREEK	32.00	TO	29.70	0.1000	2.30	23	1211	1233
REACH ID	36	CC	SANDY CREEK - HWY 124	29.70	TO	28.60	0.1000	1.10	11	1234	1244

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	2	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	3	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	4	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	5	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	6	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	7	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	8	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	9	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	10	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	11	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	12	CC	0.100	0.400	11.200	0.100	0.400	0.860	0.00000	0.027
HYDR-1	13	CC	0.100	0.400	11.100	0.100	0.400	0.840	0.00000	0.027
HYDR-1	14	CC	0.100	0.400	11.100	0.100	0.400	0.820	0.00000	0.027
HYDR-1	15	CC	0.100	0.400	11.100	0.100	0.400	0.810	0.00000	0.027
HYDR-1	16	CC	0.100	0.400	11.100	0.100	0.400	0.800	0.00000	0.027
HYDR-1	17	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	18	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	19	CC	0.100	0.400	11.000	0.100	0.400	0.780	0.00000	0.027
HYDR-1	20	CC	0.100	0.400	11.000	0.100	0.400	0.770	0.00000	0.027
HYDR-1	21	CC	0.100	0.400	11.000	0.100	0.400	0.760	0.00000	0.027
HYDR-1	22	CC	0.100	0.400	11.000	0.100	0.400	0.750	0.00000	0.027
HYDR-1	23	CC	0.100	0.400	11.000	0.100	0.400	0.740	0.00000	0.027
HYDR-1	24	CC	0.100	0.400	11.000	0.100	0.400	0.730	0.00000	0.027
HYDR-1	25	CC	0.100	0.400	10.900	0.100	0.400	0.710	0.00000	0.027
HYDR-1	26	CC	0.100	0.400	10.900	0.100	0.400	0.680	0.00000	0.027
HYDR-1	27	CC	0.100	0.400	10.800	0.100	0.400	0.650	0.00000	0.027
HYDR-1	28	CC	0.100	0.400	10.800	0.100	0.400	0.630	0.00000	0.027
HYDR-1	29	CC	0.100	0.400	10.800	0.100	0.400	0.610	0.00000	0.027
HYDR-1	30	CC	0.100	0.400	10.700	0.100	0.400	0.580	0.00000	0.027
HYDR-1	31	CC	0.100	0.400	10.700	0.100	0.400	0.570	0.00000	0.027
HYDR-1	32	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	33	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	34	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	35	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	36	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	2	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	3	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	4	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	5	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	6	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	7	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	8	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	9	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	10	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	11	CC	22.70	0.00	2.55	0.00	0.00	0.00	0.00	0.00
INITIAL	12	CC	22.80	0.00	1.36	0.00	0.00	0.00	0.00	0.00
INITIAL	13	CC	23.30	0.00	1.22	0.00	0.00	0.00	0.00	0.00
INITIAL	14	CC	23.70	0.00	1.11	0.00	0.00	0.00	0.00	0.00
INITIAL	15	CC	24.00	0.00	1.03	0.00	0.00	0.00	0.00	0.00
INITIAL	16	CC	24.30	0.00	0.98	0.00	0.00	0.00	0.00	0.00
INITIAL	17	CC	24.40	0.00	0.93	0.00	0.00	0.00	0.00	0.00
INITIAL	18	CC	24.50	0.00	0.90	0.00	0.00	0.00	0.00	0.00
INITIAL	19	CC	24.60	0.00	0.92	0.00	0.00	0.00	0.00	0.00
INITIAL	20	CC	24.60	0.00	1.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	CC	24.50	0.00	1.07	0.00	0.00	0.00	0.00	0.00
INITIAL	22	CC	24.50	0.00	1.14	0.00	0.00	0.00	0.00	0.00
INITIAL	23	CC	24.50	0.00	1.19	0.00	0.00	0.00	0.00	0.00
INITIAL	24	CC	24.50	0.00	1.25	0.00	0.00	0.00	0.00	0.00
INITIAL	25	CC	24.30	0.00	1.45	0.00	0.00	0.00	0.00	0.00
INITIAL	26	CC	24.30	0.00	1.63	0.00	0.00	0.00	0.00	0.00
INITIAL	27	CC	24.30	0.00	1.63	0.00	0.00	0.00	0.00	0.00
INITIAL	28	CC	24.30	0.00	1.69	0.00	0.00	0.00	0.00	0.00
INITIAL	29	CC	24.60	0.00	2.07	0.00	0.00	0.00	0.00	0.00
INITIAL	30	CC	24.80	0.00	2.52	0.00	0.00	0.00	0.00	0.00
INITIAL	31	CC	25.00	0.00	2.78	0.00	0.00	0.00	0.00	0.00
INITIAL	32	CC	25.20	0.00	2.89	0.00	0.00	0.00	0.00	0.00
INITIAL	33	CC	26.70	0.00	1.22	0.00	0.00	0.00	0.00	0.00
INITIAL	34	CC	27.10	0.00	1.60	0.00	0.00	0.00	0.00	0.00
INITIAL	35	CC	27.50	0.00	2.17	0.00	0.00	0.00	0.00	0.00
INITIAL	36	CC	27.50	0.00	2.72	0.00	0.00	0.00	0.00	0.00

ENDATA11

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

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	AEROB BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD DECAY

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COEF-1       1   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       2   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       3   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       4   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       5   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       6   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       7   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       8   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1       9   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1      10   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1      11   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.040     0.050     0.000     0.000
COEF-1      12   CC  20 K2=a/D           0.700     0.000     0.000     4.300     0.030     0.050     0.000     0.000
COEF-1      13   CC  20 K2=a/D           0.700     0.000     0.000     4.300     0.040     0.050     0.000     0.000
COEF-1      14   CC  20 K2=a/D           0.700     0.000     0.000     4.200     0.050     0.050     0.000     0.000
COEF-1      15   CC  20 K2=a/D           0.700     0.000     0.000     4.100     0.060     0.050     0.000     0.000
COEF-1      16   CC  20 K2=a/D           0.700     0.000     0.000     4.100     0.060     0.050     0.000     0.000
COEF-1      17   CC  20 K2=a/D           0.700     0.000     0.000     4.100     0.070     0.050     0.000     0.000
COEF-1      18   CC  20 K2=a/D           0.700     0.000     0.000     4.100     0.070     0.050     0.000     0.000
COEF-1      19   CC  20 K2=a/D           0.700     0.000     0.000     4.100     0.070     0.050     0.000     0.000
COEF-1      20   CC  20 K2=a/D           0.700     0.000     0.000     3.700     0.060     0.050     0.000     0.000
COEF-1      21   CC  20 K2=a/D           0.700     0.000     0.000     3.700     0.060     0.050     0.000     0.000
COEF-1      22   CC  20 K2=a/D           0.700     0.000     0.000     3.700     0.060     0.050     0.000     0.000
COEF-1      23   CC  20 K2=a/D           0.700     0.000     0.000     3.700     0.050     0.050     0.000     0.000
COEF-1      24   CC  20 K2=a/D           0.700     0.000     0.000     3.700     0.050     0.050     0.000     0.000
COEF-1      25   CC  20 K2=a/D           0.700     0.000     0.000     3.700     0.040     0.050     0.000     0.000
COEF-1      26   CC  20 K2=a/D           0.700     0.000     0.000     3.750     0.030     0.050     0.000     0.000
COEF-1      27   CC  20 K2=a/D           0.700     0.000     0.000     3.750     0.040     0.050     0.000     0.000
COEF-1      28   CC  20 K2=a/D           0.700     0.000     0.000     3.100     0.040     0.050     0.000     0.000
COEF-1      29   CC  20 K2=a/D           0.700     0.000     0.000     3.100     0.040     0.050     0.000     0.000
COEF-1      30   CC  20 K2=a/D           0.700     0.000     0.000     3.100     0.030     0.050     0.000     0.000
COEF-1      31   CC  20 K2=a/D           0.700     0.000     0.000     2.700     0.030     0.050     0.000     0.000
COEF-1      32   CC  20 K2=a/D           0.700     0.000     0.000     2.550     0.030     0.050     0.000     0.000
COEF-1      33   CC  20 K2=a/D           0.700     0.000     0.000     3.650     0.030     0.050     0.000     0.000
COEF-1      34   CC  20 K2=a/D           0.700     0.000     0.000     2.600     0.030     0.050     0.000     0.000
COEF-1      35   CC  20 K2=a/D           0.700     0.000     0.000     2.500     0.030     0.050     0.000     0.000
COEF-1      36   CC  20 K2=a/D           0.700     0.000     0.000     2.400     0.030     0.050     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

ENDATA13

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

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

ENDATA14

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

CARD TYPE	REACH	ID	COLIFORM DIE-OFF	NCM DECAY	NCM SETT	NCM CONV TO SOD
COEF-4	1	CC	0.00	0.04	0.05	0.00
COEF-4	2	CC	0.00	0.04	0.05	0.00
COEF-4	3	CC	0.00	0.04	0.05	0.00
COEF-4	4	CC	0.00	0.04	0.05	0.00
COEF-4	5	CC	0.00	0.04	0.05	0.00
COEF-4	6	CC	0.00	0.04	0.05	0.00
COEF-4	7	CC	0.00	0.04	0.05	0.00
COEF-4	8	CC	0.00	0.04	0.05	0.00
COEF-4	9	CC	0.00	0.04	0.05	0.00
COEF-4	10	CC	0.00	0.04	0.05	0.00
COEF-4	11	CC	0.00	0.04	0.05	0.00
COEF-4	12	CC	0.00	0.18	0.05	0.00
COEF-4	13	CC	0.00	0.18	0.05	0.00
COEF-4	14	CC	0.00	0.17	0.05	0.00
COEF-4	15	CC	0.00	0.17	0.05	0.00
COEF-4	16	CC	0.00	0.17	0.05	0.00
COEF-4	17	CC	0.00	0.17	0.05	0.00
COEF-4	18	CC	0.00	0.17	0.05	0.00
COEF-4	19	CC	0.00	0.17	0.05	0.00
COEF-4	20	CC	0.00	0.16	0.05	0.00
COEF-4	21	CC	0.00	0.16	0.05	0.00
COEF-4	22	CC	0.00	0.15	0.05	0.00
COEF-4	23	CC	0.00	0.15	0.05	0.00
COEF-4	24	CC	0.00	0.14	0.05	0.00
COEF-4	25	CC	0.00	0.13	0.05	0.00
COEF-4	26	CC	0.00	0.11	0.05	0.00
COEF-4	27	CC	0.00	0.10	0.05	0.00
COEF-4	28	CC	0.00	0.09	0.05	0.00
COEF-4	29	CC	0.00	0.11	0.05	0.00
COEF-4	30	CC	0.00	0.13	0.05	0.00
COEF-4	31	CC	0.00	0.14	0.05	0.00
COEF-4	32	CC	0.00	0.14	0.05	0.00
COEF-4	33	CC	0.00	0.06	0.05	0.00
COEF-4	34	CC	0.00	0.06	0.05	0.00
COEF-4	35	CC	0.00	0.07	0.05	0.00
COEF-4	36	CC	0.00	0.09	0.05	0.00

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	32	CC	0.00000	0.02350	25.10	0.00	6.00	4.20	0.00470	0.00000

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3	NO3+2
INCR-2	32	CC	3.06	9.19	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	32	CC	0.00	0.00	0.00	0.84

ENDATA18

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

CARD TYPE	REACH	ID	BOD	ORG-N	COLI	NCM	DO
NONPOINT	1	CC	19.00	0.00	0.00	2.20	0.00
NONPOINT	2	CC	5.00	0.00	0.00	0.60	0.00
NONPOINT	3	CC	2.80	0.00	0.00	0.33	0.00
NONPOINT	4	CC	4.00	0.00	0.00	0.46	0.00
NONPOINT	5	CC	8.70	0.00	0.00	1.00	0.00
NONPOINT	6	CC	0.31	0.00	0.00	0.04	0.00
NONPOINT	7	CC	11.30	0.00	0.00	1.40	0.00
NONPOINT	8	CC	1.50	0.00	0.00	0.18	0.00
NONPOINT	9	CC	9.30	0.00	0.00	1.10	0.00
NONPOINT	10	CC	0.60	0.00	0.00	0.08	0.00
NONPOINT	11	CC	23.00	0.00	0.00	2.80	0.00
NONPOINT	12	CC	27.00	0.00	0.00	9.70	0.00
NONPOINT	13	CC	6.00	0.00	0.00	9.00	0.00
NONPOINT	14	CC	8.00	0.00	0.00	15.00	0.00
NONPOINT	15	CC	2.00	0.00	0.00	3.40	0.00
NONPOINT	16	CC	5.00	0.00	0.00	9.00	0.00
NONPOINT	17	CC	0.60	0.00	0.00	1.10	0.00
NONPOINT	18	CC	3.00	0.00	0.00	5.30	0.00
NONPOINT	19	CC	11.50	0.00	0.00	5.00	0.00
NONPOINT	20	CC	17.00	0.00	0.00	8.00	0.00
NONPOINT	21	CC	9.70	0.00	0.00	4.50	0.00
NONPOINT	22	CC	15.60	0.00	0.00	4.50	0.00
NONPOINT	23	CC	5.20	0.00	0.00	1.50	0.00
NONPOINT	24	CC	15.00	0.00	0.00	4.00	0.00
NONPOINT	25	CC	46.00	0.00	0.00	13.00	0.00
NONPOINT	26	CC	11.00	0.00	0.00	3.30	0.00
NONPOINT	27	CC	31.70	0.00	0.00	23.00	0.00
NONPOINT	28	CC	3.00	0.00	0.00	1.00	0.00
NONPOINT	29	CC	40.00	0.00	0.00	13.00	0.00
NONPOINT	30	CC	15.00	0.00	0.00	4.00	0.00
NONPOINT	31	CC	23.00	0.00	0.00	5.50	0.00
NONPOINT	32	CC	27.00	0.00	0.00	6.70	0.00
NONPOINT	33	CC	42.00	0.00	0.00	6.50	0.00
NONPOINT	34	CC	10.00	0.00	0.00	1.00	0.00
NONPOINT	35	CC	15.00	0.00	0.00	2.00	0.00
NONPOINT	36	CC	4.00	0.00	0.00	0.30	0.00

ENDATA19

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

CARD TYPE	ELEMENT	NAME	UNIT	FLOW	FLOW	TEMP	SALIN	CM-I	CM-II

```
                                                   m³/s      cfs   deg C      ppt  MG/L      MG/L

HDWTR-1           1     HEADWATER              0   0.00010    0.004   22.36     0.00     8.300     0.000
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO       BOD     ORG-N       NH3     NO3+2

HDWTR-2           1     HEADWATER                  2.55     14.74      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM

HDWTR-3           1     HEADWATER                   0.00      0.00      0.00      0.58
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

ENDATA24

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

ENDATA25

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM

ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                        =     27.500 deg C
LOWER BC     SALINITY                           =      0.000 ppt
LOWER BC     CONSERVATIVE MATERIAL I            =     10.400 MG/L
LOWER BC     CONSERVATIVE MATERIAL II           =      5.000 MG/L
LOWER BC     DISSOLVED OXYGEN                   =      2.720 mg/L
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LOWER BC     BIOCHEMICAL OXYGEN DEMAND          =      9.580 mg/L
LOWER BC     ORGANIC NITROGEN                   =      0.000 mg/L
LOWER BC     AMMONIA NITROGEN                   =      0.000 mg/L
LOWER BC     NITRATE + NITRITE                  =      0.030 mg/L
LOWER BC     PHOSPHORUS                         =      0.090 mg/L
LOWER BC     CHLOROPHYLL A                      =      0.000 µg/L
LOWER BC     COLIFORM                           =      0.000 #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL           =      0.620
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

                 BASEFLOW     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 DEPTH        -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 REAERATI     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 BOD DECA     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 BOD SETT     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 BENTHAL      -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 NCM DECA     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 TEMPERAT      -2.0       2.0       0.0       0.0       0.0       0.0       0.0       0.0
                 NCM SETT     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 HDW FLOW     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 HDW TEMP      -2.0       2.0       0.0       0.0       0.0       0.0       0.0       0.0
                 HDW DO       -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 HDW BOD      -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 HDW NCM      -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 WSL FLOW     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 WSL TEMP      -2.0       2.0       0.0       0.0       0.0       0.0       0.0       0.0
                 WSL DO       -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 WSL BOD      -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
                 WSL NCM      -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 =  6
NUMBER OF REACHES IN PLOT 1 =  36
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
         25 26 27 28 29 30 31 32 33 34 35 36
NUMBER OF REACHES IN PLOT 2 =  12
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12
NUMBER OF REACHES IN PLOT 3 =   9
PLOT RCH 12 13 14 15 16 17 18 19 20
NUMBER OF REACHES IN PLOT 4 =  10
PLOT RCH 19 20 21 22 23 24 25 26 27 28
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NUMBER OF REACHES IN PLOT 5 =   8
PLOT RCH 26 27 28 29 30 31 32 33
NUMBER OF REACHES IN PLOT 6 =   6
PLOT RCH 31 32 33 34 35 36
ENDATA30

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


OVERLAY 1 castovl.txt                    :MAINSTEM
OVERLAY 2 castovl2.txt                   :Segments 1-12
OVERLAY 3 castovl3.txt                   :Segments 12-19
OVERLAY 4 castovl4.txt                   :Segments 19-28
OVERLAY 5 castovl5.txt                   :Segments 26-33
OVERLAY 6 castovl6.txt                   :Segments 31-36
ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 21
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 22
     .....GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 23
     .....GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 24
     .....GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 25
     .....GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 26


FINAL REPORT    HEADWATER                                        CASTOR CREEK WATERSHED MODEL
REACH NO.  1    HEADWATER CC - MCDOWELL BRANCH                   CASTOR CREEK SENSITIVITY RUN


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

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II    DO     BOD   EBOD   ORGN    NH3  NO3+2   PHOS  CHL A     COLI
NCM
 NO.               m³/     DEG C      PPT       *        *    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    #/100mL
*

    1   HDWTR     0.00010   22.36     0.00     8.30     0.00   2.55  14.74  14.74   0.00   0.00   0.00   0.00   0.00     0.00
0.58


 ***************************************************** 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/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	
m/s															
1	153.00	152.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
2	152.90	152.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
3	152.80	152.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
4	152.70	152.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
5	152.60	152.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
6	152.50	152.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
7	152.40	152.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
8	152.30	152.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
9	152.20	152.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
10	152.10	152.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
11	152.00	151.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
12	151.90	151.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
13	151.80	151.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
14	151.70	151.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
15	151.60	151.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
16	151.50	151.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
17	151.40	151.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
18	151.30	151.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
19	151.20	151.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
20	151.10	151.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
21	151.00	150.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
22	150.90	150.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
23	150.80	150.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
24	150.70	150.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															
25	150.60	150.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	
0.000															

26	150.50	150.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
27	150.40	150.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
28	150.30	150.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
29	150.20	150.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
30	150.10	150.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
31	150.00	149.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
32	149.90	149.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
33	149.80	149.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
34	149.70	149.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
35	149.60	149.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
36	149.50	149.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
37	149.40	149.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
38	149.30	149.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
39	149.20	149.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
40	149.10	149.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
41	149.00	148.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
42	148.90	148.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
43	148.80	148.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
44	148.70	148.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
45	148.60	148.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
46	148.50	148.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
47	148.40	148.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
48	148.30	148.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
49	148.20	148.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
50	148.10	148.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
51	148.00	147.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
52	147.90	147.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

53	147.80	147.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
54	147.70	147.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
55	147.60	147.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
56	147.50	147.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
57	147.40	147.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
58	147.30	147.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
59	147.20	147.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						4328.19			37395.55	70224.80					
AVG					0.00002		0.53	11.90			6.34				
CUM						4328.19									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	152.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
2	152.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
3	152.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
4	152.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
5	152.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
6	152.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
7	152.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
8	152.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
9	152.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
10	152.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
11	151.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
12	151.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05

13	151.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
14	151.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
15	151.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
16	151.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
17	151.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
18	151.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
19	151.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
20	151.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
21	150.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
22	150.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
23	150.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
24	150.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
25	150.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
26	150.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
27	150.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
28	150.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
29	150.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
30	150.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
31	149.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
32	149.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
33	149.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
34	149.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
35	149.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
36	149.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
37	149.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
38	149.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
39	149.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

40	149.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	148.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	148.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	148.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	148.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	148.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	148.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	148.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	148.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	148.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	148.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	147.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	147.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	147.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	147.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	147.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	147.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	147.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	147.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	147.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM	ENDING	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	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	µg/L	**	#/100mL	*
1	152.900	22.70	0.00	8.30	0.00	2.54	6.32	6.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
2	152.800	22.70	0.00	8.30	0.00	2.57	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
3	152.700	22.70	0.00	8.30	0.00	2.57	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
4	152.600	22.70	0.00	8.30	0.00	2.57	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
5	152.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
6	152.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
7	152.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
8	152.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
9	152.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
10	152.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
11	151.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
12	151.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
13	151.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
14	151.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
15	151.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
16	151.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
17	151.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
18	151.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
19	151.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
20	151.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
21	150.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
22	150.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
23	150.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
24	150.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
25	150.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
26	150.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.58																
27	150.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
28	150.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
29	150.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
30	150.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
31	149.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
32	149.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
33	149.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
34	149.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
35	149.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
36	149.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
37	149.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
38	149.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
39	149.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
40	149.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
41	148.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
42	148.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
43	148.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
44	148.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
45	148.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
46	148.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
47	148.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
48	148.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
49	148.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
50	148.000	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
51	147.900	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
52	147.800	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58																
53	147.700	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

54	147.600	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
55	147.500	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
56	147.400	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
57	147.300	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
58	147.200	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
59	147.100	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 2 MCDOWELL BRANCH - HORSE CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
60	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.57	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
60	147.10	147.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
61	147.00	146.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
62	146.90	146.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
63	146.80	146.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
64	146.70	146.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	

0.000														
65	146.60	146.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
66	146.50	146.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
67	146.40	146.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
68	146.30	146.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
69	146.20	146.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
70	146.10	146.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
71	146.00	145.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
72	145.90	145.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
73	145.80	145.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
74	145.70	145.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
75	145.60	145.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
TOT						1173.75			10141.17	19044.02				
AVG					0.00002		0.53	11.90			6.34			
CUM						5501.93								

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
60	147.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
61	146.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
62	146.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
63	146.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
64	146.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
65	146.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
66	146.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
67	146.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.05	0.05																			
68	146.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
69	146.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
70	146.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
71	145.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
72	145.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
73	145.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
74	145.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
75	145.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.05	0.05																			
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00		
0.04																				
AVG 20 DEG C RATE			1.31		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
60	147.000	22.70	0.00	8.30	0.00	2.58	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
61	146.900	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
62	146.800	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
63	146.700	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
64	146.600	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
65	146.500	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
66	146.400	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
67	146.300	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
68	146.200	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
69	146.100	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

70	146.000	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
71	145.900	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
72	145.800	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
73	145.700	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
74	145.600	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
75	145.500	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 3 HORSE CREEK - GUICE BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
76	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
76	145.50	145.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
77	145.40	145.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
78	145.30	145.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
79	145.20	145.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
80	145.10	145.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

81	145.00	144.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
82	144.90	144.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
83	144.80	144.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
84	144.70	144.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
TOT						660.23			5704.41	10712.26				
AVG					0.00002		0.53	11.90			6.34			
CUM						6162.16								

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
76	145.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
77	145.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
78	145.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
79	145.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
80	145.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
81	144.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
82	144.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
83	144.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
84	144.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
76	145.400	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
77	145.300	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
78	145.200	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
79	145.100	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
80	145.000	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
81	144.900	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
82	144.800	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
83	144.700	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
84	144.600	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 4 GUICE BRANCH - CURR CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
85	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.57

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

85	144.60	144.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
86	144.50	144.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
87	144.40	144.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
88	144.30	144.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
89	144.20	144.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
90	144.10	144.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
91	144.00	143.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
92	143.90	143.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
93	143.80	143.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
94	143.70	143.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
95	143.60	143.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
96	143.50	143.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
97	143.40	143.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000
0.000														
TOT						953.67			8239.70	15473.26				
AVG					0.00002		0.53	11.90			6.34			
CUM						7115.83								

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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																	
85	144.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.05																	
86	144.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.05																	
87	144.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.05																	
88	144.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.05																	
89	144.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.05																	
90	144.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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0.05  0.05
  91  143.900  8.63    1.39   0.05  0.05   0.00  4.33  4.33  4.33   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.05  0.05
  92  143.800  8.63    1.39   0.05  0.05   0.00  4.33  4.33  4.33   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.05  0.05
  93  143.700  8.63    1.39   0.05  0.05   0.00  4.33  4.33  4.33   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.05  0.05
  94  143.600  8.63    1.39   0.05  0.05   0.00  4.33  4.33  4.33   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.05  0.05
  95  143.500  8.63    1.39   0.05  0.05   0.00  4.33  4.33  4.33   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.05  0.05
  96  143.400  8.63    1.39   0.05  0.05   0.00  4.33  4.33  4.33   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.05  0.05
  97  143.300  8.63    1.39   0.05  0.05   0.00  4.33  4.33  4.33   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.05  0.05

 20 DEG C RATE                0.04         0.00  3.65               0.00         0.00  0.00   0.00  0.00               0.00
0.04
 AVG 20 DEG C RATE     1.31         0.05                                  0.00
0.05

 * g/m²/d              ** mg/L/day


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

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

  85  144.500  22.70  0.00     8.30     0.00   2.58   4.93   4.93   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  86  144.400  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  87  144.300  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  88  144.200  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  89  144.100  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  90  144.000  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  91  143.900  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  92  143.800  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  93  143.700  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  94  143.600  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
  95  143.500  22.70  0.00     8.30     0.00   2.58   4.92   4.92   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.55
```

96	143.400	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
97	143.300	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 5 CURR CREEK - POPLAR BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
98	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.55

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
98	143.30	143.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
99	143.20	143.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
100	143.10	143.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
101	143.00	142.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
102	142.90	142.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
103	142.80	142.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
104	142.70	142.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
105	142.60	142.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
106	142.50	142.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

107	142.40	142.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
108	142.30	142.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
109	142.20	142.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
110	142.10	142.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
111	142.00	141.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
112	141.90	141.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
113	141.80	141.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
114	141.70	141.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
115	141.60	141.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
116	141.50	141.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
117	141.40	141.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
118	141.30	141.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
119	141.20	141.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
120	141.10	141.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
121	141.00	140.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
122	140.90	140.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
123	140.80	140.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
124	140.70	140.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
125	140.60	140.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						2054.06			17747.04	33327.04					
AVG					0.00002		0.53	11.90			6.34				
CUM						9169.88									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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

98	143.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
99	143.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
100	143.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
101	142.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
102	142.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
103	142.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
104	142.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
105	142.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
106	142.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
107	142.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
108	142.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
109	142.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
110	142.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
111	141.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
112	141.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
113	141.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
114	141.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
115	141.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
116	141.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
117	141.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
118	141.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
119	141.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
120	141.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
121	140.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
122	140.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
123	140.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
124	140.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

125	140.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
0.05																			
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
98	143.200	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
99	143.100	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
100	143.000	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
101	142.900	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
102	142.800	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
103	142.700	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
104	142.600	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
105	142.500	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
106	142.400	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
107	142.300	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
108	142.200	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
109	142.100	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
110	142.000	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
111	141.900	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
112	141.800	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
113	141.700	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
114	141.600	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
115	141.500	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

116	141.400	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
117	141.300	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
118	141.200	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
119	141.100	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
120	141.000	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
121	140.900	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
122	140.800	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
123	140.700	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
124	140.600	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
125	140.500	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 6 POPLAR BRANCH - WHITE BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
126	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
126	140.50	140.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	

0.000

TOT								73.36					633.82	1190.25							
AVG							0.00002		0.53	11.90					6.34						
CUM								9243.24													

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
126	140.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
126	140.400	22.70	0.00	8.30	0.00	2.58	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 7 WHITE BRANCH - COLSTON CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM

*

127	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.58	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.55

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
127	140.40	140.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
128	140.30	140.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
129	140.20	140.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
130	140.10	140.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
131	140.00	139.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
132	139.90	139.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
133	139.80	139.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
134	139.70	139.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
135	139.60	139.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
136	139.50	139.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
137	139.40	139.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
138	139.30	139.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
139	139.20	139.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
140	139.10	139.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
141	139.00	138.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
142	138.90	138.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
143	138.80	138.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
144	138.70	138.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
145	138.60	138.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

146	138.50	138.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
147	138.40	138.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
148	138.30	138.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
149	138.20	138.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
150	138.10	138.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
151	138.00	137.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
152	137.90	137.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
153	137.80	137.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
154	137.70	137.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
155	137.60	137.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
156	137.50	137.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
157	137.40	137.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
158	137.30	137.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
159	137.20	137.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
160	137.10	137.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
161	137.00	136.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
162	136.90	136.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
163	136.80	136.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
164	136.70	136.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						2787.65			24085.27	45229.54					
AVG					0.00002		0.53	11.90			6.34				
CUM						12030.90									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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 SETT	mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
DECAY	1/da																	

127	140.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
128	140.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
129	140.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
130	140.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
131	139.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
132	139.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
133	139.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
134	139.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
135	139.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
136	139.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
137	139.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
138	139.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
139	139.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
140	139.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
141	138.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
142	138.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
143	138.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
144	138.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
145	138.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
146	138.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
147	138.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
148	138.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
149	138.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
150	138.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
151	137.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
152	137.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
153	137.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

154	137.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
155	137.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
156	137.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
157	137.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
158	137.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
159	137.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
160	137.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
161	136.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
162	136.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
163	136.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
164	136.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
127	140.300	22.70	0.00	8.30	0.00	2.59	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
128	140.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
129	140.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
130	140.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
131	139.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
132	139.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
133	139.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
134	139.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.57																
135	139.500	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
136	139.400	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
137	139.300	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
138	139.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
139	139.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
140	139.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
141	138.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
142	138.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
143	138.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
144	138.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
145	138.500	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
146	138.400	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
147	138.300	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
148	138.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
149	138.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
150	138.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
151	137.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
152	137.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
153	137.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
154	137.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
155	137.500	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
156	137.400	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
157	137.300	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
158	137.200	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
159	137.100	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
160	137.000	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
161	136.900	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

162	136.800	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
163	136.700	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
164	136.600	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 8 COLSTON CREEK - FOURMILE CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
165	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.57

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
165	136.60	136.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
166	136.50	136.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
167	136.40	136.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
168	136.30	136.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
169	136.20	136.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						366.80			3169.11	5951.26					
AVG					0.00002		0.53	11.90			6.34				
CUM						12397.69									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
165	136.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
166	136.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
167	136.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
168	136.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
169	136.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
165	136.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
166	136.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
167	136.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
168	136.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
169	136.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 9 FOURMILE CREEK - POOL BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
170	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
170	136.10	136.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
171	136.00	135.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
172	135.90	135.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
173	135.80	135.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
174	135.70	135.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
175	135.60	135.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
176	135.50	135.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
177	135.40	135.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
178	135.30	135.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
179	135.20	135.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
180	135.10	135.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
181	135.00	134.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
182	134.90	134.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
183	134.80	134.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

184	134.70	134.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
185	134.60	134.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
186	134.50	134.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
187	134.40	134.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
188	134.30	134.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
189	134.20	134.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
190	134.10	134.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
191	134.00	133.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
192	133.90	133.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
193	133.80	133.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
194	133.70	133.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
195	133.60	133.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
196	133.50	133.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
197	133.40	133.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
198	133.30	133.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
199	133.20	133.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
200	133.10	133.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						2274.13			19648.51	36897.79					
AVG					0.00002		0.53	11.90			6.34				
CUM						14671.83									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
170	136.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
171	135.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05

172	135.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
173	135.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
174	135.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
175	135.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
176	135.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
177	135.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
178	135.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
179	135.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
180	135.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
181	134.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
182	134.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
183	134.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
184	134.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
185	134.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
186	134.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
187	134.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
188	134.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
189	134.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
190	134.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
191	133.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
192	133.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
193	133.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
194	133.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
195	133.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
196	133.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
197	133.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
198	133.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

199	133.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
200	133.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
170	136.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
171	135.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
172	135.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
173	135.700	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
174	135.600	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
175	135.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
176	135.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
177	135.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
178	135.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
179	135.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
180	135.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
181	134.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
182	134.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
183	134.700	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
184	134.600	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
185	134.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
186	134.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

187	134.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
188	134.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
189	134.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
190	134.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
191	133.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
192	133.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
193	133.700	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
194	133.600	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
195	133.500	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
196	133.400	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
197	133.300	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
198	133.200	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
199	133.100	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
200	133.000	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 10 POOL BRANCH - GINNEY BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
201	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.55

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

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN MEAN VELO
	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s m/s
201	133.00	132.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000 0.000
202	132.90	132.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000 0.000
TOT						146.72			1267.65	2380.50				
AVG					0.00002		0.53	11.90			6.34			
CUM						14818.55								

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
201	132.900	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
202	132.800	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI NCM #/100mL *
201	132.900	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.58
202	132.800	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.58

* CM-I = CHLORIDES CM-II = SULFATES NCM =

MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 11 GINNEY BRANCH - EDWARDS BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
203	UPR RCH	0.00010	22.70	0.00	8.30	0.00	2.59	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
203	132.80	132.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
204	132.70	132.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
205	132.60	132.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
206	132.50	132.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
207	132.40	132.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
208	132.30	132.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
209	132.20	132.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
210	132.10	132.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
211	132.00	131.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
212	131.90	131.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
213	131.80	131.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
214	131.70	131.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

215	131.60	131.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
216	131.50	131.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
217	131.40	131.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
218	131.30	131.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
219	131.20	131.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
220	131.10	131.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
221	131.00	130.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
222	130.90	130.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
223	130.80	130.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
224	130.70	130.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
225	130.60	130.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
226	130.50	130.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
227	130.40	130.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
228	130.30	130.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
229	130.20	130.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
230	130.10	130.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
231	130.00	129.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
232	129.90	129.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
233	129.80	129.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
234	129.70	129.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
235	129.60	129.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
236	129.50	129.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
237	129.40	129.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
238	129.30	129.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
239	129.20	129.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
240	129.10	129.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
241	129.00	128.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

242	128.90	128.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
243	128.80	128.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
244	128.70	128.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
245	128.60	128.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
246	128.50	128.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
247	128.40	128.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
248	128.30	128.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
249	128.20	128.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
250	128.10	128.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
251	128.00	127.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
252	127.90	127.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
253	127.80	127.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
254	127.70	127.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
255	127.60	127.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
256	127.50	127.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
257	127.40	127.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
258	127.30	127.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
259	127.20	127.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
260	127.10	127.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
261	127.00	126.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
262	126.90	126.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
263	126.80	126.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
264	126.70	126.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
265	126.60	126.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
266	126.50	126.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
267	126.40	126.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
268	126.30	126.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000

269	126.20	126.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
270	126.10	126.00	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
271	126.00	125.90	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
272	125.90	125.80	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
273	125.80	125.70	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
274	125.70	125.60	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
275	125.60	125.50	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
276	125.50	125.40	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
277	125.40	125.30	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
278	125.30	125.20	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
279	125.20	125.10	0.00010	0.00	0.00002	73.36	0.53	11.90	633.82	1190.25	6.34	0.00	0.000	0.000	0.000
TOT						5648.65			48804.38	91649.30					
AVG					0.00002		0.53	11.90			6.34				
CUM						20467.22									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
203	132.700	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
204	132.600	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
205	132.500	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
206	132.400	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
207	132.300	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
208	132.200	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
209	132.100	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
210	132.000	8.63	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05

211	131.900	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
212	131.800	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
213	131.700	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
214	131.600	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
215	131.500	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
216	131.400	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
217	131.300	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
218	131.200	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
219	131.100	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
220	131.000	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
221	130.900	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
222	130.800	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
223	130.700	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
224	130.600	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
225	130.500	8.62	1.39	0.05	0.05	0.00	4.33	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
226	130.400	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
227	130.300	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
228	130.200	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
229	130.100	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
230	130.000	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
231	129.900	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
232	129.800	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
233	129.700	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
234	129.600	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
235	129.500	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
236	129.400	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
237	129.300	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

238	129.200	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
239	129.100	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
240	129.000	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
241	128.900	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
242	128.800	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
243	128.700	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
244	128.600	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
245	128.500	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
246	128.400	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
247	128.300	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
248	128.200	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
249	128.100	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
250	128.000	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
251	127.900	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
252	127.800	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
253	127.700	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
254	127.600	8.62	1.39	0.05	0.05	0.00	4.34	4.34	4.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
255	127.500	8.62	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
256	127.400	8.62	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
257	127.300	8.62	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
258	127.200	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
259	127.100	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
260	127.000	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
261	126.900	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
262	126.800	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
263	126.700	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
264	126.600	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

265	126.500	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
266	126.400	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
267	126.300	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
268	126.200	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
269	126.100	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
270	126.000	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
271	125.900	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
272	125.800	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
273	125.700	8.61	1.39	0.05	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
274	125.600	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
275	125.500	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
276	125.400	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
277	125.300	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
278	125.200	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
279	125.100	8.61	1.39	0.04	0.05	0.00	4.35	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
20 DEG C RATE				0.04		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.31		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
203	132.700	22.70	0.00	8.30	0.00	2.59	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
204	132.600	22.70	0.00	8.30	0.00	2.59	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
205	132.500	22.70	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
206	132.400	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.57																
207	132.300	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
208	132.200	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
209	132.100	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
210	132.000	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
211	131.900	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
212	131.800	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
213	131.700	22.71	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
214	131.600	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
215	131.500	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
216	131.400	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
217	131.300	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
218	131.200	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
219	131.100	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
220	131.000	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
221	130.900	22.72	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
222	130.800	22.73	0.00	8.30	0.00	2.58	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
223	130.700	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
224	130.600	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
225	130.500	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
226	130.400	22.73	0.00	8.30	0.00	2.57	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
227	130.300	22.73	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
228	130.200	22.73	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
229	130.100	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
230	130.000	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
231	129.900	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
232	129.800	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
233	129.700	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.57																
234	129.600	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
235	129.500	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
236	129.400	22.74	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
237	129.300	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
238	129.200	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
239	129.100	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
240	129.000	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
241	128.900	22.75	0.00	8.30	0.00	2.57	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
242	128.800	22.75	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
243	128.700	22.75	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
244	128.600	22.75	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
245	128.500	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
246	128.400	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
247	128.300	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
248	128.200	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
249	128.100	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
250	128.000	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
251	127.900	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
252	127.800	22.76	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
253	127.700	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
254	127.600	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
255	127.500	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
256	127.400	22.77	0.00	8.30	0.00	2.56	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
257	127.300	22.77	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
258	127.200	22.77	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
259	127.100	22.77	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
260	127.000	22.78	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

261	126.900	22.78	0.00	8.30	0.00	2.56	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
262	126.800	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
263	126.700	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
264	126.600	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
265	126.500	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
266	126.400	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
267	126.300	22.78	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
268	126.200	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
269	126.100	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
270	126.000	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
271	125.900	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
272	125.800	22.79	0.00	8.30	0.00	2.55	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
273	125.700	22.79	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
274	125.600	22.79	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
275	125.500	22.79	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
276	125.400	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
277	125.300	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
278	125.200	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
279	125.100	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 12 EDWARDS BRANCH - LITTLE FLAT CASTOR CREEK SENSITIVITY RUN

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

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

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
280	UPR RCH	0.00010	22.80	0.00	8.30	0.00	2.55	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.57

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
280	125.10	125.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
281	125.00	124.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
282	124.90	124.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
283	124.80	124.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
284	124.70	124.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
285	124.60	124.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
286	124.50	124.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
287	124.40	124.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
288	124.30	124.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
289	124.20	124.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
290	124.10	124.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
291	124.00	123.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
292	123.90	123.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
293	123.80	123.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
294	123.70	123.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
295	123.60	123.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
296	123.50	123.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
297	123.40	123.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
298	123.30	123.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	

299	123.20	123.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
300	123.10	123.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
301	123.00	122.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
302	122.90	122.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
303	122.80	122.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
304	122.70	122.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
305	122.60	122.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
306	122.50	122.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
307	122.40	122.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
308	122.30	122.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
309	122.20	122.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
310	122.10	122.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
311	122.00	121.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
312	121.90	121.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
313	121.80	121.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
314	121.70	121.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
315	121.60	121.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
316	121.50	121.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
317	121.40	121.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
318	121.30	121.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
319	121.20	121.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
320	121.10	121.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
321	121.00	120.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
322	120.90	120.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
323	120.80	120.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
324	120.70	120.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000
325	120.60	120.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000

326	120.50	120.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
327	120.40	120.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
328	120.30	120.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
329	120.20	120.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
330	120.10	120.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
331	120.00	119.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
332	119.90	119.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
333	119.80	119.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
334	119.70	119.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
335	119.60	119.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
336	119.50	119.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
337	119.40	119.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
338	119.30	119.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
339	119.20	119.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
340	119.10	119.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
341	119.00	118.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
342	118.90	118.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
343	118.80	118.70	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
344	118.70	118.60	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
345	118.60	118.50	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
346	118.50	118.40	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
347	118.40	118.30	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
348	118.30	118.20	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
349	118.20	118.10	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
350	118.10	118.00	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
351	118.00	117.90	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000
352	117.90	117.80	0.00010	0.00	0.00001	111.83	0.86	11.20	966.23	1120.25	9.66	0.00	0.000	0.000	0.000

0.000
353 117.80 117.70 0.00010 0.00 0.00001 111.83 0.86 11.20 966.23 1120.25 9.66 0.00 0.000 0.000
0.000

TOT 8275.58 71501.02 82898.55
AVG 0.00001 0.86 11.20 9.66
CUM 28742.79

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
280	125.000	8.61	0.86	0.02	0.05	0.00	5.13	5.13	5.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
281	124.900	8.61	0.86	0.02	0.05	0.00	5.13	5.13	5.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
282	124.800	8.61	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
283	124.700	8.61	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
284	124.600	8.60	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
285	124.500	8.60	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
286	124.400	8.60	0.86	0.02	0.05	0.00	5.14	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
287	124.300	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
288	124.200	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
289	124.100	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
290	124.000	8.60	0.86	0.02	0.05	0.00	5.15	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
291	123.900	8.60	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
292	123.800	8.60	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
293	123.700	8.60	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
294	123.600	8.59	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
295	123.500	8.59	0.86	0.02	0.05	0.00	5.16	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
296	123.400	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
297	123.300	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

298	123.200	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
299	123.100	8.59	0.86	0.02	0.05	0.00	5.17	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
300	123.000	8.59	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
301	122.900	8.59	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
302	122.800	8.59	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
303	122.700	8.58	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
304	122.600	8.58	0.86	0.02	0.05	0.00	5.18	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
305	122.500	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
306	122.400	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
307	122.300	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
308	122.200	8.58	0.86	0.02	0.05	0.00	5.19	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
309	122.100	8.58	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
310	122.000	8.58	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
311	121.900	8.58	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
312	121.800	8.57	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
313	121.700	8.57	0.86	0.02	0.05	0.00	5.20	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
314	121.600	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
315	121.500	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
316	121.400	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
317	121.300	8.57	0.86	0.02	0.05	0.00	5.21	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
318	121.200	8.57	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
319	121.100	8.57	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
320	121.000	8.57	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
321	120.900	8.56	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
322	120.800	8.56	0.86	0.02	0.05	0.00	5.22	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
323	120.700	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
324	120.600	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.14	0.05																		
325	120.500	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
326	120.400	8.56	0.86	0.02	0.05	0.00	5.23	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
327	120.300	8.56	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
328	120.200	8.56	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
329	120.100	8.56	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
330	120.000	8.55	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
331	119.900	8.55	0.86	0.02	0.05	0.00	5.24	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
332	119.800	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
333	119.700	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
334	119.600	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
335	119.500	8.55	0.86	0.02	0.05	0.00	5.25	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
336	119.400	8.55	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
337	119.300	8.55	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
338	119.200	8.55	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
339	119.100	8.54	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
340	119.000	8.54	0.86	0.02	0.05	0.00	5.26	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
341	118.900	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
342	118.800	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
343	118.700	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
344	118.600	8.54	0.86	0.02	0.05	0.00	5.27	5.27	5.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
345	118.500	8.54	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
346	118.400	8.54	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
347	118.300	8.54	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
348	118.200	8.53	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
349	118.100	8.53	0.86	0.02	0.05	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
350	118.000	8.53	0.86	0.02	0.05	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.14	0.05																		
351	117.900	8.53	0.86	0.02	0.05	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

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0.14  0.05
 352  117.800  8.53    0.87   0.02  0.05   0.00  5.29  5.29  5.29   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.14  0.05
 353  117.700  8.53    0.87   0.02  0.05   0.00  5.29  5.29  5.29   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.14  0.05

 20 DEG C RATE                 0.03         0.00  4.30               0.00         0.00  0.00   0.00  0.00                0.00
0.18
 AVG 20 DEG C RATE     0.81         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day


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

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

 280  125.000  22.81  0.00     8.30     0.00   1.43   4.85   4.85   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.65
 281  124.900  22.81  0.00     8.30     0.00   1.41   4.87   4.87   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 282  124.800  22.82  0.00     8.30     0.00   1.41   4.87   4.87   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 283  124.700  22.83  0.00     8.30     0.00   1.40   4.88   4.88   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 284  124.600  22.83  0.00     8.30     0.00   1.40   4.88   4.88   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 285  124.500  22.84  0.00     8.30     0.00   1.40   4.88   4.88   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 286  124.400  22.85  0.00     8.30     0.00   1.40   4.88   4.88   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 287  124.300  22.85  0.00     8.30     0.00   1.39   4.88   4.88   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 288  124.200  22.86  0.00     8.30     0.00   1.39   4.89   4.89   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 289  124.100  22.87  0.00     8.30     0.00   1.39   4.89   4.89   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 290  124.000  22.87  0.00     8.30     0.00   1.38   4.89   4.89   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 291  123.900  22.88  0.00     8.30     0.00   1.38   4.89   4.89   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 292  123.800  22.89  0.00     8.30     0.00   1.38   4.90   4.90   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 293  123.700  22.89  0.00     8.30     0.00   1.38   4.90   4.90   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 294  123.600  22.90  0.00     8.30     0.00   1.37   4.90   4.90   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.67
 295  123.500  22.91  0.00     8.30     0.00   1.37   4.90   4.90   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.67
```

296	123.400	22.91	0.00	8.30	0.00	1.37	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
297	123.300	22.92	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
298	123.200	22.93	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
299	123.100	22.94	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
300	123.000	22.94	0.00	8.30	0.00	1.36	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
301	122.900	22.95	0.00	8.30	0.00	1.35	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
302	122.800	22.96	0.00	8.30	0.00	1.35	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
303	122.700	22.96	0.00	8.30	0.00	1.35	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
304	122.600	22.97	0.00	8.30	0.00	1.34	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
305	122.500	22.98	0.00	8.30	0.00	1.34	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67																
306	122.400	22.98	0.00	8.30	0.00	1.34	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
307	122.300	22.99	0.00	8.30	0.00	1.34	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
308	122.200	23.00	0.00	8.30	0.00	1.33	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
309	122.100	23.00	0.00	8.30	0.00	1.33	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
310	122.000	23.01	0.00	8.30	0.00	1.33	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
311	121.900	23.02	0.00	8.30	0.00	1.32	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
312	121.800	23.02	0.00	8.30	0.00	1.32	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
313	121.700	23.03	0.00	8.30	0.00	1.32	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
314	121.600	23.04	0.00	8.30	0.00	1.31	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
315	121.500	23.04	0.00	8.30	0.00	1.31	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
316	121.400	23.05	0.00	8.30	0.00	1.31	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
317	121.300	23.06	0.00	8.30	0.00	1.31	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
318	121.200	23.06	0.00	8.30	0.00	1.30	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
319	121.100	23.07	0.00	8.30	0.00	1.30	4.95	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
320	121.000	23.08	0.00	8.30	0.00	1.30	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
321	120.900	23.08	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
322	120.800	23.09	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																

323	120.700	23.10	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
324	120.600	23.10	0.00	8.30	0.00	1.29	4.96	4.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
325	120.500	23.11	0.00	8.30	0.00	1.28	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
326	120.400	23.12	0.00	8.30	0.00	1.28	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
327	120.300	23.12	0.00	8.30	0.00	1.28	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
328	120.200	23.13	0.00	8.30	0.00	1.27	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
329	120.100	23.14	0.00	8.30	0.00	1.27	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.69																
330	120.000	23.14	0.00	8.30	0.00	1.27	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
331	119.900	23.15	0.00	8.30	0.00	1.27	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
332	119.800	23.16	0.00	8.30	0.00	1.26	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
333	119.700	23.16	0.00	8.30	0.00	1.26	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
334	119.600	23.17	0.00	8.30	0.00	1.26	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
335	119.500	23.18	0.00	8.30	0.00	1.25	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
336	119.400	23.19	0.00	8.30	0.00	1.25	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
337	119.300	23.19	0.00	8.30	0.00	1.25	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
338	119.200	23.20	0.00	8.30	0.00	1.25	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
339	119.100	23.21	0.00	8.30	0.00	1.24	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
340	119.000	23.21	0.00	8.30	0.00	1.24	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70																
341	118.900	23.22	0.00	8.30	0.00	1.24	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
342	118.800	23.23	0.00	8.30	0.00	1.23	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
343	118.700	23.23	0.00	8.30	0.00	1.23	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
344	118.600	23.24	0.00	8.30	0.00	1.23	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
345	118.500	23.25	0.00	8.30	0.00	1.22	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
346	118.400	23.25	0.00	8.30	0.00	1.22	5.01	5.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
347	118.300	23.26	0.00	8.30	0.00	1.22	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
348	118.200	23.27	0.00	8.30	0.00	1.22	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																
349	118.100	23.27	0.00	8.30	0.00	1.21	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.71																

350	118.000	23.28	0.00	8.30	0.00	1.21	5.02	5.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
351	117.900	23.29	0.00	8.30	0.00	1.21	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
352	117.800	23.29	0.00	8.30	0.00	1.20	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
353	117.700	23.30	0.00	8.30	0.00	1.20	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 13 LITTLE FLAT - GLADE CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
354	UPR RCH	0.00010	23.30	0.00	8.30	0.00	1.20	5.03	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.72

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
354	117.70	117.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
355	117.60	117.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
356	117.50	117.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
357	117.40	117.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
358	117.30	117.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
359	117.20	117.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000
360	117.10	117.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000	0.000

361	117.00	116.90	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
362	116.90	116.80	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
363	116.80	116.70	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
364	116.70	116.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
365	116.60	116.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
366	116.50	116.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
367	116.40	116.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
368	116.30	116.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
369	116.20	116.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
370	116.10	116.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
371	116.00	115.90	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
372	115.90	115.80	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
373	115.80	115.70	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
374	115.70	115.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
375	115.60	115.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
376	115.50	115.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
377	115.40	115.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
378	115.30	115.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
379	115.20	115.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
380	115.10	115.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
381	115.00	114.90	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
382	114.90	114.80	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
383	114.80	114.70	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
384	114.70	114.60	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
385	114.60	114.50	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
386	114.50	114.40	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
387	114.40	114.30	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														

388	114.30	114.20	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
389	114.20	114.10	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
390	114.10	114.00	0.00010	0.00	0.00001	108.26	0.84	11.10	935.40	1110.25	9.35	0.00	0.000	0.000
0.000														
TOT						4005.76			34609.80	41079.29				
AVG					0.00001		0.84	11.10			9.35			
CUM						32748.55								

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																	
354	117.600	8.53	0.89	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
355	117.500	8.53	0.89	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
356	117.400	8.52	0.89	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
357	117.300	8.52	0.89	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
358	117.200	8.52	0.89	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
359	117.100	8.52	0.89	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
360	117.000	8.52	0.89	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
361	116.900	8.52	0.89	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
362	116.800	8.51	0.89	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
363	116.700	8.51	0.89	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
364	116.600	8.51	0.89	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
365	116.500	8.51	0.89	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
366	116.400	8.51	0.89	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.05																	
367	116.300	8.50	0.89	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.12	0.05																	
368	116.200	8.50	0.89	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.12	0.05																	
369	116.100	8.50	0.89	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.12	0.05																	

370	116.000	8.50	0.89	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
371	115.900	8.50	0.89	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
372	115.800	8.50	0.89	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
373	115.700	8.49	0.89	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
374	115.600	8.49	0.89	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
375	115.500	8.49	0.89	0.02	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
376	115.400	8.49	0.89	0.02	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
377	115.300	8.49	0.89	0.02	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
378	115.200	8.49	0.89	0.02	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
379	115.100	8.48	0.89	0.02	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
380	115.000	8.48	0.89	0.02	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
381	114.900	8.48	0.89	0.02	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
382	114.800	8.48	0.89	0.02	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
383	114.700	8.48	0.89	0.02	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
384	114.600	8.48	0.89	0.02	0.05	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
385	114.500	8.47	0.89	0.02	0.05	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
386	114.400	8.47	0.89	0.02	0.05	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
387	114.300	8.47	0.89	0.02	0.05	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
388	114.200	8.47	0.89	0.02	0.05	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
389	114.100	8.47	0.89	0.02	0.05	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
390	114.000	8.47	0.89	0.02	0.05	0.00	5.43	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
20 DEG C RATE				0.04		0.00	4.30			0.00		0.00	0.00	0.00	0.00			0.00	0.18
AVG 20 DEG C RATE			0.83		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
354	117.600	23.31	0.00	8.30	0.00	1.15	2.44	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38
355	117.500	23.32	0.00	8.30	0.00	1.15	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41
356	117.400	23.33	0.00	8.30	0.00	1.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41
357	117.300	23.34	0.00	8.30	0.00	1.14	2.14	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
358	117.200	23.35	0.00	8.30	0.00	1.14	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
359	117.100	23.36	0.00	8.30	0.00	1.13	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
360	117.000	23.38	0.00	8.30	0.00	1.13	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
361	116.900	23.39	0.00	8.30	0.00	1.12	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
362	116.800	23.40	0.00	8.30	0.00	1.12	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
363	116.700	23.41	0.00	8.30	0.00	1.12	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
364	116.600	23.42	0.00	8.30	0.00	1.11	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
365	116.500	23.43	0.00	8.30	0.00	1.11	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
366	116.400	23.44	0.00	8.30	0.00	1.10	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
367	116.300	23.45	0.00	8.30	0.00	1.10	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
368	116.200	23.46	0.00	8.30	0.00	1.09	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.45
369	116.100	23.47	0.00	8.30	0.00	1.09	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
370	116.000	23.48	0.00	8.30	0.00	1.08	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
371	115.900	23.49	0.00	8.30	0.00	1.08	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
372	115.800	23.51	0.00	8.30	0.00	1.07	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
373	115.700	23.52	0.00	8.30	0.00	1.07	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
374	115.600	23.53	0.00	8.30	0.00	1.06	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
375	115.500	23.54	0.00	8.30	0.00	1.06	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
376	115.400	23.55	0.00	8.30	0.00	1.05	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
377	115.300	23.56	0.00	8.30	0.00	1.05	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
378	115.200	23.57	0.00	8.30	0.00	1.05	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

379	115.100	23.58	0.00	8.30	0.00	1.04	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
380	115.000	23.59	0.00	8.30	0.00	1.04	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
381	114.900	23.60	0.00	8.30	0.00	1.03	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
382	114.800	23.61	0.00	8.30	0.00	1.03	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
383	114.700	23.62	0.00	8.30	0.00	1.02	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
384	114.600	23.64	0.00	8.30	0.00	1.02	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51
385	114.500	23.65	0.00	8.30	0.00	1.01	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51
386	114.400	23.66	0.00	8.30	0.00	1.01	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
387	114.300	23.67	0.00	8.30	0.00	1.00	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
388	114.200	23.68	0.00	8.30	0.00	1.00	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
389	114.100	23.69	0.00	8.30	0.00	0.99	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53
390	114.000	23.70	0.00	8.30	0.00	0.99	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 14 GLADE CREEK - CUB CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
391	UPR RCH	0.00010	23.70	0.00	8.30	0.00	0.99	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	1.53

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
391	114.00	113.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
392	113.90	113.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
393	113.80	113.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
394	113.70	113.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
395	113.60	113.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
396	113.50	113.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
397	113.40	113.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
398	113.30	113.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
399	113.20	113.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
400	113.10	113.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
401	113.00	112.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
402	112.90	112.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
403	112.80	112.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
404	112.70	112.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
405	112.60	112.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
406	112.50	112.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
407	112.40	112.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
408	112.30	112.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
409	112.20	112.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
410	112.10	112.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
411	112.00	111.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
412	111.90	111.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
413	111.80	111.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
414	111.70	111.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
415	111.60	111.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
416	111.50	111.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000

417	111.40	111.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
418	111.30	111.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
419	111.20	111.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
420	111.10	111.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
421	111.00	110.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
422	110.90	110.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
423	110.80	110.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
424	110.70	110.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
425	110.60	110.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
426	110.50	110.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
427	110.40	110.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
428	110.30	110.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
429	110.20	110.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
430	110.10	110.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
431	110.00	109.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
432	109.90	109.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
433	109.80	109.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
434	109.70	109.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
435	109.60	109.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
436	109.50	109.40	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
437	109.40	109.30	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
438	109.30	109.20	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
439	109.20	109.10	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
440	109.10	109.00	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
441	109.00	108.90	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
442	108.90	108.80	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000
443	108.80	108.70	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	0.000

0.000															
444	108.70	108.60	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	
0.000															
445	108.60	108.50	0.00010	0.00	0.00001	105.69	0.82	11.10	913.19	1110.25	9.13	0.00	0.000	0.000	
0.000															
TOT						5813.16			50225.74	61063.79					
AVG					0.00001		0.82	11.10			9.13				
CUM						38561.79									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
391	113.900	8.46	0.91	0.03	0.05	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
392	113.800	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
393	113.700	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
394	113.600	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
395	113.500	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
396	113.400	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
397	113.300	8.46	0.91	0.03	0.05	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
398	113.200	8.46	0.91	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
399	113.100	8.46	0.91	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
400	113.000	8.46	0.91	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
401	112.900	8.46	0.92	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
402	112.800	8.45	0.92	0.03	0.05	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
403	112.700	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
404	112.600	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
405	112.500	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
406	112.400	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
407	112.300	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.12	0.05																		
408	112.200	8.45	0.92	0.03	0.05	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
409	112.100	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
410	112.000	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
411	111.900	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
412	111.800	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
413	111.700	8.45	0.92	0.03	0.05	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
414	111.600	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
415	111.500	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
416	111.400	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
417	111.300	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
418	111.200	8.44	0.92	0.03	0.05	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
419	111.100	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
420	111.000	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
421	110.900	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
422	110.800	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
423	110.700	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
424	110.600	8.44	0.92	0.03	0.05	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
425	110.500	8.44	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
426	110.400	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
427	110.300	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
428	110.200	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
429	110.100	8.43	0.92	0.03	0.05	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
430	110.000	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
431	109.900	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
432	109.800	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
433	109.700	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.11	0.05																		
434	109.600	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

435	109.500	8.43	0.92	0.03	0.05	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
436	109.400	8.43	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
437	109.300	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
438	109.200	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
439	109.100	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
440	109.000	8.42	0.92	0.03	0.05	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
441	108.900	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
442	108.800	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
443	108.700	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
444	108.600	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
445	108.500	8.42	0.92	0.03	0.05	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
20 DEG C RATE				0.05		0.00	4.20			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.85		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
391	113.900	23.71	0.00	8.30	0.00	1.12	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68
392	113.800	23.71	0.00	8.30	0.00	1.12	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69
393	113.700	23.72	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69
394	113.600	23.72	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
395	113.500	23.73	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
396	113.400	23.73	0.00	8.30	0.00	1.11	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
397	113.300	23.74	0.00	8.30	0.00	1.10	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70

398	113.200	23.74	0.00	8.30	0.00	1.10	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.70																
399	113.100	23.75	0.00	8.30	0.00	1.10	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.70																
400	113.000	23.75	0.00	8.30	0.00	1.10	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.71																
401	112.900	23.76	0.00	8.30	0.00	1.10	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.71																
402	112.800	23.77	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.71																
403	112.700	23.77	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.71																
404	112.600	23.78	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.71																
405	112.500	23.78	0.00	8.30	0.00	1.09	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.72																
406	112.400	23.79	0.00	8.30	0.00	1.08	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.72																
407	112.300	23.79	0.00	8.30	0.00	1.08	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.72																
408	112.200	23.80	0.00	8.30	0.00	1.08	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.72																
409	112.100	23.80	0.00	8.30	0.00	1.08	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.72																
410	112.000	23.81	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
411	111.900	23.81	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
412	111.800	23.82	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
413	111.700	23.83	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
414	111.600	23.83	0.00	8.30	0.00	1.07	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
415	111.500	23.84	0.00	8.30	0.00	1.06	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.74																
416	111.400	23.84	0.00	8.30	0.00	1.06	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.74																
417	111.300	23.85	0.00	8.30	0.00	1.06	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.74																
418	111.200	23.85	0.00	8.30	0.00	1.06	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.74																
419	111.100	23.86	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.75																
420	111.000	23.86	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.75																
421	110.900	23.87	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.75																
422	110.800	23.87	0.00	8.30	0.00	1.05	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.75																
423	110.700	23.88	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.75																
424	110.600	23.89	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.76																

425	110.500	23.89	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.76																
426	110.400	23.90	0.00	8.30	0.00	1.04	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.76																
427	110.300	23.90	0.00	8.30	0.00	1.04	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.76																
428	110.200	23.91	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.76																
429	110.100	23.91	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.77																
430	110.000	23.92	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.77																
431	109.900	23.92	0.00	8.30	0.00	1.03	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.77																
432	109.800	23.93	0.00	8.30	0.00	1.02	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.77																
433	109.700	23.93	0.00	8.30	0.00	1.02	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.77																
434	109.600	23.94	0.00	8.30	0.00	1.02	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.78																
435	109.500	23.95	0.00	8.30	0.00	1.02	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.78																
436	109.400	23.95	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.78																
437	109.300	23.96	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.78																
438	109.200	23.96	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.79																
439	109.100	23.97	0.00	8.30	0.00	1.01	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.79																
440	109.000	23.97	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.79																
441	108.900	23.98	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.79																
442	108.800	23.98	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.79																
443	108.700	23.99	0.00	8.30	0.00	1.00	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.80																
444	108.600	23.99	0.00	8.30	0.00	1.00	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.80																
445	108.500	24.00	0.00	8.30	0.00	0.99	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.80																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 15 CUB CREEK - COW CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
446	UPR RCH	0.00010	24.00	0.00	8.30	0.00	0.99	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	1.80

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
446	108.50	108.40	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
447	108.40	108.30	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
448	108.30	108.20	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
449	108.20	108.10	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
450	108.10	108.00	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
451	108.00	107.90	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
452	107.90	107.80	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
453	107.80	107.70	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
454	107.70	107.60	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
455	107.60	107.50	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
456	107.50	107.40	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
457	107.40	107.30	0.00010	0.00	0.00001	104.41	0.81	11.10	902.09	1110.25	9.02	0.00	0.000	0.000	0.000
TOT						1252.91			10825.11	13323.01					
AVG					0.00001		0.81	11.10			9.02				
CUM						39814.71									

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

ELEM	ENDING	SAT	REAER	CBOD	CBOD	ANBOD	BKGD	FULL	CORR	ORGN	ORGN	NH3	NH3	DENIT	PO4	ALG	MAC	COLI

NCM NO.	NCM DIST	D.O.	RATE	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
446	108.400	8.41	0.93	0.04	0.06	0.00	5.28	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
447	108.300	8.41	0.93	0.04	0.06	0.00	5.29	5.29	5.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
448	108.200	8.41	0.93	0.04	0.06	0.00	5.30	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
449	108.100	8.40	0.93	0.04	0.06	0.00	5.31	5.31	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
450	108.000	8.40	0.93	0.04	0.06	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
451	107.900	8.39	0.93	0.04	0.06	0.00	5.32	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
452	107.800	8.39	0.93	0.04	0.06	0.00	5.33	5.33	5.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
453	107.700	8.39	0.93	0.04	0.06	0.00	5.34	5.34	5.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
454	107.600	8.38	0.93	0.04	0.06	0.00	5.35	5.35	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
455	107.500	8.38	0.93	0.04	0.06	0.00	5.36	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
456	107.400	8.37	0.94	0.04	0.06	0.00	5.37	5.37	5.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
457	107.300	8.37	0.94	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
20 DEG C RATE				0.06		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.86		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NCM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	*
446	108.400	24.02	0.00	8.30	0.00	1.11	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
447	108.300	24.05	0.00	8.30	0.00	1.10	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76
448	108.200	24.08	0.00	8.30	0.00	1.09	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77
449	108.100	24.10	0.00	8.30	0.00	1.08	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

450	108.000	24.12	0.00	8.30	0.00	1.07	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.78
451	107.900	24.15	0.00	8.30	0.00	1.06	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79
452	107.800	24.17	0.00	8.30	0.00	1.05	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80
453	107.700	24.20	0.00	8.30	0.00	1.04	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
454	107.600	24.23	0.00	8.30	0.00	1.03	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82
455	107.500	24.25	0.00	8.30	0.00	1.02	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83
456	107.400	24.27	0.00	8.30	0.00	1.01	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84
457	107.300	24.30	0.00	8.30	0.00	1.00	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85
																	1.86

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 16 COW CREEK - BEAR CREEK BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
458	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.00	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	1.86

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
458	107.30	107.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
459	107.20	107.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
460	107.10	107.00	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	

461	107.00	106.90	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
462	106.90	106.80	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
463	106.80	106.70	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
464	106.70	106.60	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
465	106.60	106.50	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
466	106.50	106.40	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
467	106.40	106.30	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
468	106.30	106.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
469	106.20	106.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
470	106.10	106.00	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
471	106.00	105.90	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
472	105.90	105.80	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
473	105.80	105.70	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
474	105.70	105.60	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
475	105.60	105.50	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
476	105.50	105.40	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
477	105.40	105.30	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
478	105.30	105.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
479	105.20	105.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
480	105.10	105.00	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
481	105.00	104.90	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
482	104.90	104.80	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
483	104.80	104.70	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
484	104.70	104.60	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
485	104.60	104.50	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
486	104.50	104.40	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000
487	104.40	104.30	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	0.000

0.000															
488	104.30	104.20	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	
0.000															
489	104.20	104.10	0.00010	0.00	0.00001	103.12	0.80	11.10	890.99	1110.25	8.91	0.00	0.000	0.000	
0.000															
TOT						3299.96			28511.68	35528.04					
AVG					0.00001		0.80	11.10			8.91				
CUM						43114.71									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
458	107.200	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
459	107.100	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
460	107.000	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
461	106.900	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
462	106.800	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
463	106.700	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
464	106.600	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
465	106.500	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
466	106.400	8.37	0.95	0.04	0.06	0.00	5.38	5.38	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
467	106.300	8.37	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
468	106.200	8.37	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
469	106.100	8.37	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
470	106.000	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
471	105.900	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
472	105.800	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
473	105.700	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
474	105.600	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.11	0.06																			
475	105.500	8.36	0.95	0.04	0.06	0.00	5.39	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
476	105.400	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
477	105.300	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
478	105.200	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
479	105.100	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
480	105.000	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
481	104.900	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
482	104.800	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
483	104.700	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
484	104.600	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
485	104.500	8.36	0.95	0.04	0.06	0.00	5.40	5.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
486	104.400	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
487	104.300	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
488	104.200	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
489	104.100	8.36	0.95	0.04	0.06	0.00	5.41	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.11	0.06																			
20 DEG C RATE				0.06		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00		
0.17																				
AVG 20 DEG C RATE			0.87		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
458	107.200	24.30	0.00	8.30	0.00	1.00	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
459	107.100	24.31	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87
460	107.000	24.31	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87

461	106.900	24.31	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.87																
462	106.800	24.32	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.87																
463	106.700	24.32	0.00	8.30	0.00	1.00	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.87																
464	106.600	24.32	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.87																
465	106.500	24.32	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.87																
466	106.400	24.33	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.88																
467	106.300	24.33	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.88																
468	106.200	24.33	0.00	8.30	0.00	0.99	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.88																
469	106.100	24.34	0.00	8.30	0.00	0.99	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.88																
470	106.000	24.34	0.00	8.30	0.00	0.99	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.88																
471	105.900	24.34	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.88																
472	105.800	24.35	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.88																
473	105.700	24.35	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.89																
474	105.600	24.35	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.89																
475	105.500	24.36	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.89																
476	105.400	24.36	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.89																
477	105.300	24.36	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.89																
478	105.200	24.37	0.00	8.30	0.00	0.98	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.89																
479	105.100	24.37	0.00	8.30	0.00	0.97	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.89																
480	105.000	24.37	0.00	8.30	0.00	0.97	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90																
481	104.900	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90																
482	104.800	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90																
483	104.700	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90																
484	104.600	24.38	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90																
485	104.500	24.39	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90																
486	104.400	24.39	0.00	8.30	0.00	0.97	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.90																
487	104.300	24.39	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.91																

488	104.200	24.40	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91
489	104.100	24.40	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 17 BEAR CREEK BRANCH - BILES BR CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
490	UPR RCH	0.00010	24.40	0.00	8.30	0.00	0.96	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	1.91

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
490	104.10	104.00	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
491	104.00	103.90	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
492	103.90	103.80	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
493	103.80	103.70	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
TOT						403.69			3487.85	4401.00					
AVG					0.00001		0.79	11.00			8.72				
CUM						43518.40									

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

ELEM	ENDING	SAT	REAER	CBOD	CBOD	ANBOD	BKGD	FULL	CORR	ORGN	ORGN	NH3	NH3	DENIT	PO4	ALG	MAC	COLI

NCM NO.	NCM DIST	D.O.	RATE	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
490	104.000	8.35	0.96	0.04	0.06	0.00	5.42	5.42	5.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
491	103.900	8.35	0.96	0.04	0.06	0.00	5.43	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
492	103.800	8.34	0.96	0.04	0.06	0.00	5.43	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
493	103.700	8.34	0.96	0.04	0.06	0.00	5.44	5.44	5.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
20 DEG C RATE				0.07		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.88		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
490	104.000	24.42	0.00	8.30	0.00	0.95	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92
491	103.900	24.45	0.00	8.30	0.00	0.94	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
492	103.800	24.48	0.00	8.30	0.00	0.93	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94
493	103.700	24.50	0.00	8.30	0.00	0.92	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 18 BILES BRANCH - HURRICANE CR CASTOR CREEK SENSITIVITY RUN

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

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

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
494	UPR RCH	0.00010	24.50	0.00	8.30	0.00	0.92	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	1.95

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
494	103.70	103.60	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
495	103.60	103.50	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
496	103.50	103.40	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
497	103.40	103.30	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
498	103.30	103.20	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
499	103.20	103.10	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
500	103.10	103.00	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
501	103.00	102.90	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
502	102.90	102.80	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
503	102.80	102.70	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
504	102.70	102.60	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
505	102.60	102.50	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
506	102.50	102.40	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
507	102.40	102.30	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
508	102.30	102.20	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
509	102.20	102.10	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
510	102.10	102.00	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
511	102.00	101.90	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	0.000
512	101.90	101.80	0.00010	0.00	0.00001	100.92	0.79	11.00	871.96	1100.25	8.72	0.00	0.000	0.000	

0.000

TOT								1917.51				16567.28		20904.77					
AVG							0.00001		0.79	11.00						8.72			
CUM								45435.92											

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
494	103.600	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
495	103.500	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
496	103.400	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
497	103.300	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
498	103.200	8.34	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
499	103.100	8.33	0.96	0.04	0.06	0.00	5.45	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
500	103.000	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
501	102.900	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
502	102.800	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
503	102.700	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
504	102.600	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
505	102.500	8.33	0.96	0.04	0.06	0.00	5.46	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
506	102.400	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
507	102.300	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
508	102.200	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
509	102.100	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
510	102.000	8.33	0.96	0.04	0.06	0.00	5.47	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
511	101.900	8.33	0.96	0.04	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
512	101.800	8.32	0.96	0.04	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.10 0.06

20 DEG C RATE 0.07 0.00 4.10 0.00 0.00 0.00 0.00 0.00 0.00
0.17
AVG 20 DEG C RATE 0.88 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
494	103.600	24.51	0.00	8.30	0.00	0.91	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99
495	103.500	24.51	0.00	8.30	0.00	0.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
496	103.400	24.52	0.00	8.30	0.00	0.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
497	103.300	24.52	0.00	8.30	0.00	0.90	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
498	103.200	24.53	0.00	8.30	0.00	0.90	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
499	103.100	24.53	0.00	8.30	0.00	0.90	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
500	103.000	24.54	0.00	8.30	0.00	0.90	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
501	102.900	24.54	0.00	8.30	0.00	0.89	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
502	102.800	24.55	0.00	8.30	0.00	0.89	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
503	102.700	24.55	0.00	8.30	0.00	0.89	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
504	102.600	24.56	0.00	8.30	0.00	0.89	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
505	102.500	24.56	0.00	8.30	0.00	0.89	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
506	102.400	24.57	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
507	102.300	24.57	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
508	102.200	24.58	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
509	102.100	24.58	0.00	8.30	0.00	0.88	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
510	102.000	24.59	0.00	8.30	0.00	0.87	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
511	101.900	24.59	0.00	8.30	0.00	0.87	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04

512	101.800	24.60	0.00	8.30	0.00	0.87	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 19 HURRICANE CR - INDIAN BRANCH CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
513	UPR RCH	0.00010	24.60	0.00	8.30	0.00	0.87	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	2.04

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
513	101.80	101.70	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
514	101.70	101.60	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
515	101.60	101.50	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
516	101.50	101.40	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
517	101.40	101.30	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
518	101.30	101.20	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
519	101.20	101.10	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
520	101.10	101.00	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
521	101.00	100.90	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
522	100.90	100.80	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000

523	100.80	100.70	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
524	100.70	100.60	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
525	100.60	100.50	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
526	100.50	100.40	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
527	100.40	100.30	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
528	100.30	100.20	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
529	100.20	100.10	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
530	100.10	100.00	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
531	100.00	99.90	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
532	99.90	99.80	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
533	99.80	99.70	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
534	99.70	99.60	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
535	99.60	99.50	0.00010	0.00	0.00001	99.65	0.78	11.00	860.96	1100.25	8.61	0.00	0.000	0.000	0.000
TOT						2291.91			19802.07	25305.78					
AVG					0.00001		0.78	11.00			8.61				
CUM						47727.83									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
513	101.700	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
514	101.600	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
515	101.500	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
516	101.400	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
517	101.300	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
518	101.200	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06

519	101.100	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
520	101.000	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
521	100.900	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
522	100.800	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
523	100.700	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
524	100.600	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
525	100.500	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
526	100.400	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
527	100.300	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
528	100.200	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
529	100.100	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
530	100.000	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
531	99.900	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
532	99.800	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
533	99.700	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
534	99.600	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
535	99.500	8.32	0.98	0.03	0.06	0.00	5.48	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
20 DEG C RATE				0.07		0.00	4.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.89		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
513	101.700	24.60	0.00	8.30	0.00	0.79	6.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
514	101.600	24.60	0.00	8.30	0.00	0.78	6.44	6.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1.73																
515	101.500	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
516	101.400	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
517	101.300	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
518	101.200	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
519	101.100	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
520	101.000	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
521	100.900	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
522	100.800	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
523	100.700	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
524	100.600	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
525	100.500	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
526	100.400	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
527	100.300	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
528	100.200	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
529	100.100	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
530	100.000	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
531	99.900	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
532	99.800	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
533	99.700	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.73																
534	99.600	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.72																
535	99.500	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.72																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 20 INDIAN BRANCH - MOODY CREEK CASTOR CREEK SENSITIVITY RUN

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

****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
536	UPR RCH	0.00010	24.60	0.00	8.30	0.00	0.78	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	1.72

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
536	99.50	99.40	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
537	99.40	99.30	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
538	99.30	99.20	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
539	99.20	99.10	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
540	99.10	99.00	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
541	99.00	98.90	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
542	98.90	98.80	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
543	98.80	98.70	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
544	98.70	98.60	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
545	98.60	98.50	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
546	98.50	98.40	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
547	98.40	98.30	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
548	98.30	98.20	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
549	98.20	98.10	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
550	98.10	98.00	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
551	98.00	97.90	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
552	97.90	97.80	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	

553	97.80	97.70	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
554	97.70	97.60	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
555	97.60	97.50	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
556	97.50	97.40	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
557	97.40	97.30	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
558	97.30	97.20	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
559	97.20	97.10	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
560	97.10	97.00	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
561	97.00	96.90	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
562	96.90	96.80	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
563	96.80	96.70	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
564	96.70	96.60	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
565	96.60	96.50	0.00010	0.00	0.00001	98.37	0.77	11.00	849.96	1100.25	8.50	0.00	0.000	0.000	0.000
TOT						2951.24			25498.71	33007.54					
AVG					0.00001		0.77	11.00			8.50				
CUM						50679.08									

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

ELEM NO.	ENDING NCM DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD 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
536	99.400	8.32	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
537	99.300	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
538	99.200	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
539	99.100	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
540	99.000	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
541	98.900	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

542	98.800	8.33	0.99	0.05	0.06	0.00	4.94	4.94	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
543	98.700	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
544	98.600	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
545	98.500	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
546	98.400	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
547	98.300	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
548	98.200	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
549	98.100	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
550	98.000	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
551	97.900	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
552	97.800	8.33	0.99	0.05	0.06	0.00	4.93	4.93	4.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
553	97.700	8.33	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
554	97.600	8.33	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
555	97.500	8.33	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
556	97.400	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
557	97.300	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
558	97.200	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
559	97.100	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
560	97.000	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
561	96.900	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
562	96.800	8.34	0.99	0.05	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
563	96.700	8.34	0.99	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
564	96.600	8.34	0.99	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
565	96.500	8.34	0.99	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
20 DEG C RATE				0.06		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.16
AVG 20 DEG C RATE			0.91		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
536	99.400	24.60	0.00	8.30	0.00	1.31	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59
537	99.300	24.59	0.00	8.30	0.00	1.32	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
538	99.200	24.59	0.00	8.30	0.00	1.32	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
539	99.100	24.59	0.00	8.30	0.00	1.32	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
540	99.000	24.58	0.00	8.30	0.00	1.32	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
541	98.900	24.58	0.00	8.30	0.00	1.32	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
542	98.800	24.58	0.00	8.30	0.00	1.33	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
543	98.700	24.57	0.00	8.30	0.00	1.33	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
544	98.600	24.57	0.00	8.30	0.00	1.33	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
545	98.500	24.57	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
546	98.400	24.56	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
547	98.300	24.56	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
548	98.200	24.56	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
549	98.100	24.55	0.00	8.30	0.00	1.33	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
550	98.000	24.55	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
551	97.900	24.55	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
552	97.800	24.54	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
553	97.700	24.54	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57
554	97.600	24.54	0.00	8.30	0.00	1.34	6.36	6.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
555	97.500	24.53	0.00	8.30	0.00	1.34	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
556	97.400	24.53	0.00	8.30	0.00	1.34	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56

557	97.300	24.53	0.00	8.30	0.00	1.34	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
558	97.200	24.52	0.00	8.30	0.00	1.35	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
559	97.100	24.52	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
560	97.000	24.52	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
561	96.900	24.51	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
562	96.800	24.51	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
563	96.700	24.51	0.00	8.30	0.00	1.35	6.34	6.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
564	96.600	24.50	0.00	8.30	0.00	1.35	6.33	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
565	96.500	24.50	0.00	8.30	0.00	1.35	6.33	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 21 MOODY CREEK - BULL CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
566	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.35	6.33	6.33	0.00	0.00	0.00	0.00	0.00	0.00	1.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
566	96.50	96.40	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000
567	96.40	96.30	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000	0.000

568	96.30	96.20	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
569	96.20	96.10	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
570	96.10	96.00	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
571	96.00	95.90	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
572	95.90	95.80	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
573	95.80	95.70	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
574	95.70	95.60	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
575	95.60	95.50	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
576	95.50	95.40	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
577	95.40	95.30	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
578	95.30	95.20	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
579	95.20	95.10	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
580	95.10	95.00	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
581	95.00	94.90	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
582	94.90	94.80	0.00010	0.00	0.00001	97.10	0.76	11.00	838.95	1100.25	8.39	0.00	0.000	0.000
0.000														
TOT						1650.72			14262.22	18704.27				
AVG					0.00001		0.76	11.00			8.39			
CUM						52329.81								

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
566	96.400	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
567	96.300	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
568	96.200	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
569	96.100	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

570	96.000	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
571	95.900	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
572	95.800	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
573	95.700	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
574	95.600	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
575	95.500	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
576	95.400	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
577	95.300	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
578	95.200	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
579	95.100	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
580	95.000	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
581	94.900	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
582	94.800	8.34	1.00	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.06		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.16	
AVG 20 DEG C RATE			0.92		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
566	96.400	24.50	0.00	8.30	0.00	1.35	6.45	6.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
567	96.300	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
568	96.200	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
569	96.100	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
570	96.000	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
571	95.900	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

572	95.800	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
573	95.700	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
574	95.600	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
575	95.500	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
576	95.400	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
577	95.300	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
578	95.200	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
579	95.100	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
580	95.000	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
581	94.900	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
582	94.800	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 22 BULL CREEK - SWEETWATER CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
583	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.35	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	1.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

583	94.80	94.70	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
584	94.70	94.60	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
585	94.60	94.50	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
586	94.50	94.40	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
587	94.40	94.30	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
588	94.30	94.20	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
589	94.20	94.10	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
590	94.10	94.00	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
591	94.00	93.90	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
592	93.90	93.80	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
593	93.80	93.70	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
594	93.70	93.60	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
595	93.60	93.50	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
596	93.50	93.40	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
597	93.40	93.30	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
598	93.30	93.20	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
599	93.20	93.10	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
600	93.10	93.00	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
601	93.00	92.90	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
602	92.90	92.80	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
603	92.80	92.70	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
604	92.70	92.60	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
605	92.60	92.50	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
606	92.50	92.40	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
607	92.40	92.30	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
608	92.30	92.20	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000
609	92.20	92.10	0.00010	0.00	0.00001	95.83	0.75	11.00	827.95	1100.25	8.28	0.00	0.000	0.000

0.000
610 92.10 92.00 0.00010 0.00 0.00001 95.83 0.75 11.00 827.95 1100.25 8.28 0.00 0.000 0.000
0.000

TOT 2683.18 23182.65 30807.04
AVG 0.00001 0.75 11.00 8.28
CUM 55013.00

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
583	94.700	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
584	94.600	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
585	94.500	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
586	94.400	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
587	94.300	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
588	94.200	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
589	94.100	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
590	94.000	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
591	93.900	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
592	93.800	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
593	93.700	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
594	93.600	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
595	93.500	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
596	93.400	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
597	93.300	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
598	93.200	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
599	93.100	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
600	93.000	8.34	1.01	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

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0.15  0.06
 601   92.900  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 602   92.800  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 603   92.700  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 604   92.600  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 605   92.500  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 606   92.400  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 607   92.300  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 608   92.200  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 609   92.100  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06
 610   92.000  8.34    1.01   0.05  0.06   0.00  4.91  4.91  4.91   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.06

 20 DEG C RATE                 0.06         0.00  3.70               0.00         0.00  0.00   0.00  0.00               0.00
0.15
 AVG 20 DEG C RATE     0.93         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day


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

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

 583   94.700  24.50  0.00     8.30     0.00   1.44   6.24   6.24   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
1.00
 584   94.600  24.50  0.00     8.30     0.00   1.44   6.21   6.21   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.97
 585   94.500  24.50  0.00     8.30     0.00   1.44   6.21   6.21   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.96
 586   94.400  24.50  0.00     8.30     0.00   1.44   6.21   6.21   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.96
 587   94.300  24.50  0.00     8.30     0.00   1.44   6.20   6.20   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.96
 588   94.200  24.50  0.00     8.30     0.00   1.44   6.20   6.20   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.96
 589   94.100  24.50  0.00     8.30     0.00   1.44   6.20   6.20   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.96
 590   94.000  24.50  0.00     8.30     0.00   1.44   6.20   6.20   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.96
```

591	93.900	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
592	93.800	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
593	93.700	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
594	93.600	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
595	93.500	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
596	93.400	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
597	93.300	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
598	93.200	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
599	93.100	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
600	93.000	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
601	92.900	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
602	92.800	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
603	92.700	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
604	92.600	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
605	92.500	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
606	92.400	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
607	92.300	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
608	92.200	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
609	92.100	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
610	92.000	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m^3

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 23 SWEETWATER CREEK - BRUSHY CREEK CASTOR CREEK SENSITIVITY RUN

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

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

NCM NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL
*															
611	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.44	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00
0.96															

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

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
611	92.00	91.90	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
612	91.90	91.80	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
613	91.80	91.70	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
614	91.70	91.60	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
615	91.60	91.50	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
616	91.50	91.40	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
617	91.40	91.30	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
618	91.30	91.20	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
619	91.20	91.10	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
620	91.10	91.00	0.00010	0.00	0.00001	94.55	0.74	11.00	816.95	1100.25	8.17	0.00	0.000	0.000	0.000
TOT						945.54			8169.50	11002.51					
AVG					0.00001		0.74	11.00			8.17				
CUM						55958.54									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

611	91.900	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
612	91.800	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
613	91.700	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
614	91.600	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
615	91.500	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
616	91.400	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
617	91.300	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
618	91.200	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
619	91.100	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
620	91.000	8.34	1.03	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15 0.06
20 DEG C RATE				0.05		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.15
AVG 20 DEG C RATE			0.94		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
611	91.900	24.50	0.00	8.30	0.00	1.49	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
612	91.800	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
613	91.700	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
614	91.600	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
615	91.500	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
616	91.400	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
617	91.300	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
618	91.200	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
619	91.100	24.50	0.00	8.30	0.00	1.49	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.89
620 91.000 24.50 0.00 8.30 0.00 1.49 6.28 6.28 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0.89

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 24 BRUSHY CREEK - WHITE OAK CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
621	UPR RCH	0.00010	24.50	0.00	8.30	0.00	1.49	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.89

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
621	91.00	90.90	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
622	90.90	90.80	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
623	90.80	90.70	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
624	90.70	90.60	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
625	90.60	90.50	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
626	90.50	90.40	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
627	90.40	90.30	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
628	90.30	90.20	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
629	90.20	90.10	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
630	90.10	90.00	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	

631	90.00	89.90	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
632	89.90	89.80	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
633	89.80	89.70	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
634	89.70	89.60	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
635	89.60	89.50	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
636	89.50	89.40	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
637	89.40	89.30	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
638	89.30	89.20	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
639	89.20	89.10	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
640	89.10	89.00	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
641	89.00	88.90	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
642	88.90	88.80	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
643	88.80	88.70	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
644	88.70	88.60	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
645	88.60	88.50	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
646	88.50	88.40	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
647	88.40	88.30	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
648	88.30	88.20	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
649	88.20	88.10	0.00010	0.00	0.00001	93.28	0.73	11.00	805.95	1100.25	8.06	0.00	0.000	0.000	0.000
TOT						2705.15			23372.47	31907.29					
AVG					0.00001		0.73	11.00			8.06				
CUM						58663.70									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

621	90.900	8.34	1.04	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
622	90.800	8.34	1.04	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
623	90.700	8.34	1.04	0.05	0.06	0.00	4.91	4.91	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
624	90.600	8.34	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
625	90.500	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
626	90.400	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
627	90.300	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
628	90.200	8.35	1.04	0.05	0.06	0.00	4.90	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
629	90.100	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
630	90.000	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
631	89.900	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
632	89.800	8.35	1.04	0.05	0.06	0.00	4.89	4.89	4.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
633	89.700	8.35	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
634	89.600	8.35	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
635	89.500	8.36	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
636	89.400	8.36	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
637	89.300	8.36	1.04	0.05	0.06	0.00	4.88	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
638	89.200	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
639	89.100	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
640	89.000	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
641	88.900	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
642	88.800	8.36	1.04	0.05	0.06	0.00	4.87	4.87	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
643	88.700	8.36	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
644	88.600	8.37	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
645	88.500	8.37	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
646	88.400	8.37	1.04	0.05	0.06	0.00	4.86	4.86	4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
647	88.300	8.37	1.04	0.05	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.15 0.06
648 88.200 8.37 1.04 0.05 0.06 0.00 4.85 4.85 4.85 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0.15 0.06
649 88.100 8.37 1.04 0.05 0.06 0.00 4.85 4.85 4.85 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
0.15 0.06

20 DEG C RATE 0.05 0.00 3.70 0.00 0.00 0.00 0.00 0.00 0.00
0.14
AVG 20 DEG C RATE 0.96 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
621	90.900	24.49	0.00	8.30	0.00	1.51	6.31	6.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
622	90.800	24.49	0.00	8.30	0.00	1.51	6.31	6.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
623	90.700	24.48	0.00	8.30	0.00	1.51	6.30	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
624	90.600	24.47	0.00	8.30	0.00	1.52	6.30	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
625	90.500	24.47	0.00	8.30	0.00	1.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
626	90.400	24.46	0.00	8.30	0.00	1.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
627	90.300	24.45	0.00	8.30	0.00	1.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
628	90.200	24.44	0.00	8.30	0.00	1.53	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
629	90.100	24.44	0.00	8.30	0.00	1.53	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
630	90.000	24.43	0.00	8.30	0.00	1.53	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
631	89.900	24.42	0.00	8.30	0.00	1.54	6.27	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
632	89.800	24.42	0.00	8.30	0.00	1.54	6.27	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
633	89.700	24.41	0.00	8.30	0.00	1.54	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
634	89.600	24.40	0.00	8.30	0.00	1.54	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
635	89.500	24.40	0.00	8.30	0.00	1.55	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
636	89.400	24.39	0.00	8.30	0.00	1.55	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85

637	89.300	24.38	0.00	8.30	0.00	1.55	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
638	89.200	24.38	0.00	8.30	0.00	1.55	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
639	89.100	24.37	0.00	8.30	0.00	1.56	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
640	89.000	24.36	0.00	8.30	0.00	1.56	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
641	88.900	24.36	0.00	8.30	0.00	1.56	6.23	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
642	88.800	24.35	0.00	8.30	0.00	1.56	6.23	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
643	88.700	24.34	0.00	8.30	0.00	1.57	6.23	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
644	88.600	24.33	0.00	8.30	0.00	1.57	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
645	88.500	24.33	0.00	8.30	0.00	1.57	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
646	88.400	24.32	0.00	8.30	0.00	1.58	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
647	88.300	24.31	0.00	8.30	0.00	1.58	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
648	88.200	24.31	0.00	8.30	0.00	1.58	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
649	88.100	24.30	0.00	8.30	0.00	1.58	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 25 WHITE OAK CREEK - BILLS CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
650	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.58	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.84

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

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

VELO	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
650	88.10	88.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
651	88.00	87.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
652	87.90	87.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
653	87.80	87.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
654	87.70	87.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
655	87.60	87.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
656	87.50	87.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
657	87.40	87.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
658	87.30	87.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
659	87.20	87.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
660	87.10	87.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
661	87.00	86.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
662	86.90	86.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
663	86.80	86.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
664	86.70	86.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
665	86.60	86.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
666	86.50	86.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
667	86.40	86.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
668	86.30	86.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
669	86.20	86.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
670	86.10	86.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
671	86.00	85.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
672	85.90	85.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
673	85.80	85.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
674	85.70	85.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000

675	85.60	85.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
676	85.50	85.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
677	85.40	85.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
678	85.30	85.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
679	85.20	85.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
680	85.10	85.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
681	85.00	84.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
682	84.90	84.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
683	84.80	84.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
684	84.70	84.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
685	84.60	84.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
686	84.50	84.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
687	84.40	84.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
688	84.30	84.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
689	84.20	84.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
690	84.10	84.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
691	84.00	83.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
692	83.90	83.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
693	83.80	83.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
694	83.70	83.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
695	83.60	83.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
696	83.50	83.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
697	83.40	83.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
698	83.30	83.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
699	83.20	83.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
700	83.10	83.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
701	83.00	82.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000

702	82.90	82.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
703	82.80	82.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
704	82.70	82.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
705	82.60	82.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
706	82.50	82.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
707	82.40	82.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
708	82.30	82.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
709	82.20	82.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
710	82.10	82.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
711	82.00	81.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
712	81.90	81.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
713	81.80	81.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
714	81.70	81.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
715	81.60	81.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
716	81.50	81.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
717	81.40	81.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
718	81.30	81.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
719	81.20	81.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
720	81.10	81.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
721	81.00	80.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
722	80.90	80.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
723	80.80	80.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
724	80.70	80.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
725	80.60	80.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
726	80.50	80.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
727	80.40	80.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														
728	80.30	80.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000
0.000														

729	80.20	80.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
730	80.10	80.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
731	80.00	79.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
732	79.90	79.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
733	79.80	79.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
734	79.70	79.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
735	79.60	79.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
736	79.50	79.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
737	79.40	79.30	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
738	79.30	79.20	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
739	79.20	79.10	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
740	79.10	79.00	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
741	79.00	78.90	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
742	78.90	78.80	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
743	78.80	78.70	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
744	78.70	78.60	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
745	78.60	78.50	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
746	78.50	78.40	0.00010	0.00	0.00001	89.91	0.71	10.90	776.82	1090.25	7.77	0.00	0.000	0.000	0.000
TOT						8721.20			75351.25	105754.30					
AVG					0.00001		0.71	10.90			7.77				
CUM						67384.91									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
650	88.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

NCM DECAY SETT

1/da 1/da

0.14 0.06

651	87.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
652	87.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
653	87.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
654	87.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
655	87.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
656	87.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
657	87.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
658	87.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
659	87.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
660	87.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
661	86.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
662	86.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
663	86.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
664	86.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
665	86.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
666	86.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
667	86.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
668	86.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
669	86.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
670	86.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
671	85.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
672	85.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
673	85.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
674	85.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
675	85.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
676	85.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
677	85.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

678	85.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
679	85.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
680	85.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
681	84.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
682	84.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
683	84.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
684	84.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
685	84.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
686	84.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
687	84.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
688	84.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
689	84.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
690	84.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
691	83.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
692	83.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
693	83.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
694	83.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
695	83.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
696	83.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
697	83.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
698	83.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
699	83.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
700	83.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
701	82.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
702	82.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
703	82.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
704	82.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

705	82.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
706	82.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
707	82.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
708	82.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
709	82.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
710	82.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
711	81.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
712	81.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
713	81.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
714	81.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
715	81.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
716	81.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
717	81.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
718	81.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
719	81.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
720	81.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
721	80.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
722	80.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
723	80.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
724	80.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
725	80.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
726	80.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
727	80.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
728	80.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
729	80.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
730	80.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
731	79.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

732	79.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
733	79.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
734	79.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
735	79.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
736	79.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
737	79.300	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
738	79.200	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
739	79.100	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
740	79.000	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
741	78.900	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
742	78.800	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
743	78.700	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
744	78.600	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
745	78.500	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
746	78.400	8.37	1.07	0.04	0.06	0.00	4.85	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
20 DEG C RATE				0.04		0.00	3.70			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			0.98		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
650	88.000	24.30	0.00	8.30	0.00	1.64	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
651	87.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
652	87.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
653	87.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.88																
654	87.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
655	87.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
656	87.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
657	87.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
658	87.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
659	87.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
660	87.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
661	86.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
662	86.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
663	86.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
664	86.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
665	86.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
666	86.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
667	86.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
668	86.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
669	86.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
670	86.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
671	85.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
672	85.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
673	85.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
674	85.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
675	85.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
676	85.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
677	85.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
678	85.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
679	85.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
680	85.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

681	84.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
682	84.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
683	84.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
684	84.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
685	84.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
686	84.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
687	84.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
688	84.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
689	84.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
690	84.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
691	83.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
692	83.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
693	83.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
694	83.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
695	83.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
696	83.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
697	83.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
698	83.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
699	83.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700	83.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
701	82.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702	82.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
703	82.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
704	82.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
705	82.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
706	82.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
707	82.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.87																
708	82.200	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
709	82.100	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
710	82.000	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
711	81.900	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
712	81.800	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
713	81.700	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
714	81.600	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
715	81.500	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
716	81.400	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
717	81.300	24.30	0.00	8.30	0.00	1.64	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
718	81.200	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
719	81.100	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
720	81.000	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
721	80.900	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
722	80.800	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
723	80.700	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
724	80.600	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
725	80.500	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
726	80.400	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
727	80.300	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
728	80.200	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
729	80.100	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
730	80.000	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
731	79.900	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
732	79.800	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
733	79.700	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
734	79.600	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

735	79.500	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
736	79.400	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
737	79.300	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
738	79.200	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
739	79.100	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
740	79.000	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
741	78.900	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
742	78.800	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
743	78.700	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
744	78.600	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
745	78.500	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
746	78.400	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 26 BILLS CREEK - LOST CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
747	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.64	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.87

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
747	78.40	78.30	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
748	78.30	78.20	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
749	78.20	78.10	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
750	78.10	78.00	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
751	78.00	77.90	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
752	77.90	77.80	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
753	77.80	77.70	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
754	77.70	77.60	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
755	77.60	77.50	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
756	77.50	77.40	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
757	77.40	77.30	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
758	77.30	77.20	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
759	77.20	77.10	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
760	77.10	77.00	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
761	77.00	76.90	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
762	76.90	76.80	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
763	76.80	76.70	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
764	76.70	76.60	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
765	76.60	76.50	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
766	76.50	76.40	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
767	76.40	76.30	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
768	76.30	76.20	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
769	76.20	76.10	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
770	76.10	76.00	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
771	76.00	75.90	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000
772	75.90	75.80	0.00010	0.00	0.00001	86.12	0.68	10.90	744.11	1090.25	7.44	0.00	0.000	0.000	0.000

```
0.000
  773   75.80   75.70    0.00010   0.00  0.00001    86.12   0.68  10.90    744.11    1090.25    7.44      0.00  0.000     0.000
0.000

  TOT                                                2325.34                20090.95   29436.79
  AVG                                     0.00001            0.68  10.90                          7.44
  CUM                                             69710.28


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

 ELEM  ENDING  SAT    REAER   CBOD  CBOD  ANBOD  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI
NCM   NCM
 NO.     DIST  D.O.    RATE  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

 747   78.300  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 748   78.200  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 749   78.100  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 750   78.000  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 751   77.900  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 752   77.800  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 753   77.700  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 754   77.600  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 755   77.500  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 756   77.400  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 757   77.300  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 758   77.200  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 759   77.100  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 760   77.000  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 761   76.900  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 762   76.800  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 763   76.700  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 764   76.600  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
```

```
0.12  0.06
 765   76.500  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 766   76.400  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 767   76.300  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 768   76.200  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 769   76.100  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 770   76.000  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 771   75.900  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 772   75.800  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 773   75.700  8.37    1.11   0.03  0.06   0.00  4.92  4.92  4.92   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06

 20 DEG C RATE                0.03         0.00  3.75               0.00         0.00  0.00   0.00  0.00                0.00
0.11
 AVG 20 DEG C RATE     1.03         0.05                                  0.00
0.05

 * g/m²/d              ** mg/L/day


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

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

 747   78.300  24.30  0.00     8.30     0.00   1.63   6.42   6.42   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.93
 748   78.200  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
 749   78.100  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
 750   78.000  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
 751   77.900  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
 752   77.800  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
 753   77.700  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
 754   77.600  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
 755   77.500  24.30  0.00     8.30     0.00   1.63   6.43   6.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.94
```

756	77.400	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
757	77.300	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
758	77.200	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
759	77.100	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
760	77.000	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
761	76.900	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
762	76.800	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
763	76.700	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
764	76.600	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
765	76.500	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
766	76.400	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
767	76.300	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
768	76.200	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
769	76.100	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
770	76.000	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
771	75.900	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
772	75.800	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
773	75.700	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 27 LOST CREEK - MESSER CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

774	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.63	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.94

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
774	75.70	75.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
775	75.60	75.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
776	75.50	75.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
777	75.40	75.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
778	75.30	75.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
779	75.20	75.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
780	75.10	75.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
781	75.00	74.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
782	74.90	74.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
783	74.80	74.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
784	74.70	74.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
785	74.60	74.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
786	74.50	74.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
787	74.40	74.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
788	74.30	74.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
789	74.20	74.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
790	74.10	74.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
791	74.00	73.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
792	73.90	73.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
793	73.80	73.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000

794	73.70	73.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
795	73.60	73.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
796	73.50	73.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
797	73.40	73.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
798	73.30	73.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
799	73.20	73.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
800	73.10	73.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
801	73.00	72.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
802	72.90	72.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
803	72.80	72.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
804	72.70	72.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
805	72.60	72.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
806	72.50	72.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
807	72.40	72.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
808	72.30	72.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
809	72.20	72.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
810	72.10	72.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
811	72.00	71.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
812	71.90	71.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
813	71.80	71.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
814	71.70	71.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
815	71.60	71.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
816	71.50	71.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
817	71.40	71.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
818	71.30	71.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
819	71.20	71.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
820	71.10	71.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000

821	71.00	70.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
822	70.90	70.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
823	70.80	70.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
824	70.70	70.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
825	70.60	70.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
826	70.50	70.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
827	70.40	70.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
828	70.30	70.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
829	70.20	70.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
830	70.10	70.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
831	70.00	69.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
832	69.90	69.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
833	69.80	69.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
834	69.70	69.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
835	69.60	69.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
836	69.50	69.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
837	69.40	69.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
838	69.30	69.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
839	69.20	69.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
840	69.10	69.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
841	69.00	68.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
842	68.90	68.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
843	68.80	68.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
844	68.70	68.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
845	68.60	68.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
846	68.50	68.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
847	68.40	68.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000

848	68.30	68.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
849	68.20	68.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
850	68.10	68.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
851	68.00	67.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
852	67.90	67.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
853	67.80	67.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
854	67.70	67.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
855	67.60	67.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
856	67.50	67.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
857	67.40	67.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
858	67.30	67.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
859	67.20	67.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
860	67.10	67.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
861	67.00	66.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
862	66.90	66.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
863	66.80	66.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
864	66.70	66.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
865	66.60	66.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
866	66.50	66.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
867	66.40	66.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
868	66.30	66.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
869	66.20	66.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
870	66.10	66.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
871	66.00	65.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
872	65.90	65.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
873	65.80	65.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000
874	65.70	65.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000

875	65.60	65.50	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
876	65.50	65.40	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
877	65.40	65.30	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
878	65.30	65.20	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
879	65.20	65.10	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
880	65.10	65.00	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
881	65.00	64.90	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
882	64.90	64.80	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
883	64.80	64.70	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
884	64.70	64.60	0.00010	0.00	0.00001	81.58	0.65	10.80	704.88	1080.25	7.05	0.00	0.000	0.000	0.000
TOT						9055.71			78241.22	119907.80					
AVG					0.00001		0.65	10.80			7.05				
CUM						78766.32									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
774	75.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
775	75.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
776	75.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
777	75.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
778	75.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
779	75.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
780	75.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
781	74.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
782	74.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06

783	74.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
784	74.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
785	74.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
786	74.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
787	74.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
788	74.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
789	74.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
790	74.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
791	73.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
792	73.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
793	73.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
794	73.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
795	73.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
796	73.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
797	73.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
798	73.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
799	73.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
800	73.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
801	72.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
802	72.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
803	72.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
804	72.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
805	72.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
806	72.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
807	72.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
808	72.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
809	72.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

810	72.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
811	71.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
812	71.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
813	71.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
814	71.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
815	71.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
816	71.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
817	71.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
818	71.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
819	71.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
820	71.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
821	70.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
822	70.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
823	70.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
824	70.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
825	70.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
826	70.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
827	70.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
828	70.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
829	70.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
830	70.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
831	69.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
832	69.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
833	69.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
834	69.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
835	69.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
836	69.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06

837	69.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
838	69.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
839	69.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
840	69.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
841	68.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
842	68.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
843	68.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
844	68.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
845	68.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
846	68.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
847	68.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
848	68.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
849	68.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
850	68.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
851	67.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
852	67.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
853	67.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
854	67.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
855	67.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
856	67.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
857	67.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
858	67.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
859	67.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
860	67.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
861	66.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
862	66.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
863	66.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

864	66.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
865	66.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
866	66.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
867	66.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
868	66.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
869	66.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
870	66.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
871	65.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
872	65.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
873	65.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
874	65.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
875	65.500	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
876	65.400	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
877	65.300	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
878	65.200	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
879	65.100	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
880	65.000	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
881	64.900	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
882	64.800	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
883	64.700	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
884	64.600	8.37	1.17	0.04	0.06	0.00	4.92	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.06
20 DEG C RATE				0.04		0.00	3.75			0.00		0.00	0.00	0.00	0.00			0.00	0.10	
AVG 20 DEG C RATE			1.07		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
774	75.600	24.30	0.00	8.30	0.00	1.59	4.55	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75
775	75.500	24.30	0.00	8.30	0.00	1.59	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
776	75.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
777	75.300	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
778	75.200	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
779	75.100	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
780	75.000	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
781	74.900	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
782	74.800	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
783	74.700	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
784	74.600	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
785	74.500	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
786	74.400	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
787	74.300	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
788	74.200	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
789	74.100	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
790	74.000	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
791	73.900	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
792	73.800	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
793	73.700	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
794	73.600	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
795	73.500	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
796	73.400	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
797	73.300	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
798	73.200	24.30	0.00	8.30	0.00	1.60	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1.81																
799	73.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
800	73.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
801	72.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
802	72.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
803	72.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
804	72.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
805	72.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
806	72.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
807	72.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
808	72.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
809	72.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
810	72.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
811	71.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
812	71.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
813	71.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
814	71.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
815	71.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
816	71.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
817	71.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
818	71.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
819	71.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
820	71.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
821	70.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
822	70.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
823	70.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
824	70.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
825	70.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

826	70.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
827	70.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
828	70.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
829	70.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
830	70.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
831	69.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
832	69.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
833	69.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
834	69.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
835	69.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
836	69.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
837	69.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
838	69.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
839	69.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
840	69.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
841	68.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
842	68.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
843	68.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
844	68.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
845	68.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
846	68.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
847	68.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
848	68.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
849	68.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
850	68.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
851	67.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
852	67.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1.81																
853	67.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
854	67.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
855	67.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
856	67.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
857	67.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
858	67.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
859	67.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
860	67.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
861	66.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
862	66.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
863	66.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
864	66.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
865	66.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
866	66.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
867	66.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
868	66.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
869	66.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
870	66.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
871	65.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
872	65.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
873	65.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
874	65.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
875	65.500	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
876	65.400	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
877	65.300	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
878	65.200	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.81																
879	65.100	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

880	65.000	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
881	64.900	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
882	64.800	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
883	64.700	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81
884	64.600	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 28 MESSER CREEK - RICHLAND CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
885	UPR RCH	0.00010	24.30	0.00	8.30	0.00	1.59	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	1.81

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
885	64.60	64.50	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
886	64.50	64.40	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
887	64.40	64.30	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
888	64.30	64.20	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
889	64.20	64.10	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	0.000
890	64.10	64.00	0.00010	0.00	0.00001	79.08	0.63	10.80	683.27	1080.25	6.83	0.00	0.000	0.000	

```
0.000
  891   64.00   63.90    0.00010   0.00  0.00001    79.08   0.63  10.80    683.27    1080.25    6.83      0.00  0.000     0.000
0.000
  892   63.90   63.80    0.00010   0.00  0.00001    79.08   0.63  10.80    683.27    1080.25    6.83      0.00  0.000     0.000
0.000

  TOT                                                632.66                5466.17    8642.01
  AVG                                     0.00001            0.63  10.80                          6.83
  CUM                                            79399.01


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

 ELEM  ENDING  SAT    REAER   CBOD  CBOD  ANBOD  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI
NCM   NCM
 NO.     DIST  D.O.    RATE  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

 885   64.500  8.37    1.20   0.05  0.06   0.00  4.07  4.07  4.07   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 886   64.400  8.36    1.20   0.05  0.06   0.00  4.08  4.08  4.08   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 887   64.300  8.35    1.20   0.05  0.06   0.00  4.09  4.09  4.09   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 888   64.200  8.35    1.21   0.05  0.06   0.00  4.10  4.10  4.10   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 889   64.100  8.34    1.21   0.05  0.06   0.00  4.11  4.11  4.11   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 890   64.000  8.34    1.21   0.05  0.06   0.00  4.12  4.12  4.12   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 891   63.900  8.33    1.21   0.05  0.06   0.00  4.13  4.13  4.13   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06
 892   63.800  8.32    1.21   0.05  0.06   0.00  4.14  4.14  4.14   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.12  0.06

 20 DEG C RATE                 0.04         0.00  3.10               0.00         0.00  0.00   0.00  0.00               0.00
0.09
 AVG 20 DEG C RATE     1.11         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day


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

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*
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885	64.500	24.34	0.00	8.30	0.00	2.68	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
886	64.400	24.38	0.00	8.30	0.00	2.68	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
887	64.300	24.41	0.00	8.30	0.00	2.66	5.26	5.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
888	64.200	24.45	0.00	8.30	0.00	2.65	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
889	64.100	24.49	0.00	8.30	0.00	2.63	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
890	64.000	24.52	0.00	8.30	0.00	2.62	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
891	63.900	24.56	0.00	8.30	0.00	2.60	5.23	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
892	63.800	24.60	0.00	8.30	0.00	2.59	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 29 RICHLAND CREEK - PINEY CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
893	UPR RCH	0.00010	24.60	0.00	8.30	0.00	2.59	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	1.02

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
893	63.80	63.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
894	63.70	63.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
895	63.60	63.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000

896	63.50	63.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
897	63.40	63.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
898	63.30	63.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
899	63.20	63.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
900	63.10	63.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
901	63.00	62.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
902	62.90	62.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
903	62.80	62.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
904	62.70	62.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
905	62.60	62.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
906	62.50	62.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
907	62.40	62.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
908	62.30	62.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
909	62.20	62.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
910	62.10	62.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
911	62.00	61.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
912	61.90	61.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
913	61.80	61.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
914	61.70	61.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
915	61.60	61.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
916	61.50	61.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
917	61.40	61.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
918	61.30	61.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
919	61.20	61.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
920	61.10	61.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
921	61.00	60.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000
922	60.90	60.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000

923	60.80	60.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
924	60.70	60.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
925	60.60	60.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
926	60.50	60.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
927	60.40	60.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
928	60.30	60.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
929	60.20	60.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
930	60.10	60.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
931	60.00	59.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
932	59.90	59.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
933	59.80	59.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
934	59.70	59.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
935	59.60	59.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
936	59.50	59.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
937	59.40	59.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
938	59.30	59.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
939	59.20	59.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
940	59.10	59.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
941	59.00	58.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
942	58.90	58.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
943	58.80	58.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
944	58.70	58.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
945	58.60	58.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
946	58.50	58.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
947	58.40	58.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
948	58.30	58.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
949	58.20	58.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000

950	58.10	58.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
951	58.00	57.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
952	57.90	57.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
953	57.80	57.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
954	57.70	57.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
955	57.60	57.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
956	57.50	57.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
957	57.40	57.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
958	57.30	57.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
959	57.20	57.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
960	57.10	57.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
961	57.00	56.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
962	56.90	56.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
963	56.80	56.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
964	56.70	56.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
965	56.60	56.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
966	56.50	56.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
967	56.40	56.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
968	56.30	56.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
969	56.20	56.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
970	56.10	56.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
971	56.00	55.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
972	55.90	55.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
973	55.80	55.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
974	55.70	55.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
975	55.60	55.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
976	55.50	55.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000

977	55.40	55.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
978	55.30	55.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
979	55.20	55.10	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
980	55.10	55.00	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
981	55.00	54.90	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
982	54.90	54.80	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
983	54.80	54.70	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
984	54.70	54.60	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
985	54.60	54.50	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
986	54.50	54.40	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
987	54.40	54.30	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
988	54.30	54.20	0.00010	0.00	0.00002	76.58	0.61	10.80	661.67	1080.25	6.62	0.00	0.000	0.000	0.000
TOT						7351.86			63520.05	103704.05					
AVG					0.00002		0.61	10.80			6.62				
CUM						86750.51									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
893	63.700	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
894	63.600	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
895	63.500	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
896	63.400	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
897	63.300	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
898	63.200	8.32	1.25	0.05	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
899	63.100	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

900	63.000	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
901	62.900	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
902	62.800	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
903	62.700	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
904	62.600	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
905	62.500	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
906	62.400	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
907	62.300	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
908	62.200	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
909	62.100	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
910	62.000	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
911	61.900	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
912	61.800	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
913	61.700	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
914	61.600	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
915	61.500	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
916	61.400	8.32	1.25	0.05	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
917	61.300	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
918	61.200	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
919	61.100	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
920	61.000	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
921	60.900	8.32	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
922	60.800	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
923	60.700	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
924	60.600	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
925	60.500	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
926	60.400	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

927	60.300	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
928	60.200	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
929	60.100	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
930	60.000	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
931	59.900	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
932	59.800	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
933	59.700	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
934	59.600	8.31	1.25	0.05	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
935	59.500	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
936	59.400	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
937	59.300	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
938	59.200	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
939	59.100	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
940	59.000	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
941	58.900	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
942	58.800	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
943	58.700	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
944	58.600	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
945	58.500	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
946	58.400	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
947	58.300	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
948	58.200	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
949	58.100	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
950	58.000	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
951	57.900	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
952	57.800	8.31	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
953	57.700	8.30	1.25	0.05	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

954	57.600	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
955	57.500	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
956	57.400	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
957	57.300	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
958	57.200	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
959	57.100	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
960	57.000	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
961	56.900	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
962	56.800	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
963	56.700	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
964	56.600	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
965	56.500	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
966	56.400	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
967	56.300	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
968	56.200	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
969	56.100	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
970	56.000	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
971	55.900	8.30	1.25	0.05	0.06	0.00	4.18	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
972	55.800	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
973	55.700	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
974	55.600	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
975	55.500	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
976	55.400	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
977	55.300	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
978	55.200	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
979	55.100	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
980	55.000	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

981	54.900	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
982	54.800	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
983	54.700	8.30	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
984	54.600	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
985	54.500	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
986	54.400	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
987	54.300	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
988	54.200	8.29	1.25	0.05	0.06	0.00	4.19	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.04		0.00	3.10			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			1.14		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
893	63.700	24.60	0.00	8.30	0.00	2.55	5.90	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
894	63.600	24.60	0.00	8.30	0.00	2.55	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
895	63.500	24.61	0.00	8.30	0.00	2.55	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
896	63.400	24.61	0.00	8.30	0.00	2.55	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
897	63.300	24.61	0.00	8.30	0.00	2.55	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
898	63.200	24.61	0.00	8.30	0.00	2.55	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
899	63.100	24.61	0.00	8.30	0.00	2.55	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
900	63.000	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
901	62.900	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
902	62.800	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
903	62.700	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.99																
904	62.600	24.62	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
905	62.500	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
906	62.400	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
907	62.300	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
908	62.200	24.63	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
909	62.100	24.64	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
910	62.000	24.64	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
911	61.900	24.64	0.00	8.30	0.00	2.54	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
912	61.800	24.64	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
913	61.700	24.64	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
914	61.600	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
915	61.500	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
916	61.400	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
917	61.300	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
918	61.200	24.65	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
919	61.100	24.66	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
920	61.000	24.66	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
921	60.900	24.66	0.00	8.30	0.00	2.53	5.98	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
922	60.800	24.66	0.00	8.30	0.00	2.53	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
923	60.700	24.66	0.00	8.30	0.00	2.53	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
924	60.600	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
925	60.500	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
926	60.400	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
927	60.300	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
928	60.200	24.67	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
929	60.100	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
930	60.000	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.99																
931	59.900	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
932	59.800	24.68	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
933	59.700	24.69	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
934	59.600	24.69	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
935	59.500	24.69	0.00	8.30	0.00	2.52	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
936	59.400	24.69	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
937	59.300	24.69	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
938	59.200	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
939	59.100	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
940	59.000	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
941	58.900	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
942	58.800	24.70	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
943	58.700	24.71	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
944	58.600	24.71	0.00	8.30	0.00	2.51	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
945	58.500	24.71	0.00	8.30	0.00	2.51	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
946	58.400	24.71	0.00	8.30	0.00	2.51	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
947	58.300	24.71	0.00	8.30	0.00	2.51	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
948	58.200	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
949	58.100	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
950	58.000	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
951	57.900	24.72	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
952	57.800	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
953	57.700	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
954	57.600	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
955	57.500	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
956	57.400	24.73	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
957	57.300	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

958	57.200	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
959	57.100	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
960	57.000	24.74	0.00	8.30	0.00	2.50	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
961	56.900	24.74	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
962	56.800	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
963	56.700	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
964	56.600	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
965	56.500	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
966	56.400	24.75	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
967	56.300	24.76	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
968	56.200	24.76	0.00	8.30	0.00	2.49	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
969	56.100	24.76	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
970	56.000	24.76	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
971	55.900	24.76	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
972	55.800	24.77	0.00	8.30	0.00	2.49	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
973	55.700	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
974	55.600	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
975	55.500	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
976	55.400	24.77	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
977	55.300	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
978	55.200	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
979	55.100	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
980	55.000	24.78	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
981	54.900	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
982	54.800	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
983	54.700	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
984	54.600	24.79	0.00	8.30	0.00	2.48	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

985	54.500	24.79	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
986	54.400	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
987	54.300	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
988	54.200	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 30 PINEY CREEK - BEAUCOUP CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
989	UPR RCH	0.00010	24.80	0.00	8.30	0.00	2.47	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.98

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
989	54.20	54.10	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
990	54.10	54.00	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
991	54.00	53.90	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
992	53.90	53.80	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
993	53.80	53.70	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
994	53.70	53.60	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
995	53.60	53.50	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	

996	53.50	53.40	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
997	53.40	53.30	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
998	53.30	53.20	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
999	53.20	53.10	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1000	53.10	53.00	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1001	53.00	52.90	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1002	52.90	52.80	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1003	52.80	52.70	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1004	52.70	52.60	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1005	52.60	52.50	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1006	52.50	52.40	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1007	52.40	52.30	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1008	52.30	52.20	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1009	52.20	52.10	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1010	52.10	52.00	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1011	52.00	51.90	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1012	51.90	51.80	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1013	51.80	51.70	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1014	51.70	51.60	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1015	51.60	51.50	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1016	51.50	51.40	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1017	51.40	51.30	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
1018	51.30	51.20	0.00010	0.00	0.00002	72.16	0.58	10.70	623.43	1070.25	6.23	0.00	0.000	0.000	0.000
TOT						2164.70			18703.01	32107.54					
AVG					0.00002		0.58	10.70			6.23				
CUM						88915.20									

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

****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
989	54.100	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
990	54.000	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
991	53.900	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
992	53.800	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
993	53.700	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
994	53.600	8.29	1.32	0.04	0.06	0.00	4.20	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
995	53.500	8.29	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
996	53.400	8.29	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
997	53.300	8.28	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
998	53.200	8.28	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
999	53.100	8.28	1.32	0.04	0.06	0.00	4.21	4.21	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1000	53.000	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1001	52.900	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1002	52.800	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1003	52.700	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1004	52.600	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1005	52.500	8.28	1.32	0.04	0.06	0.00	4.22	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1006	52.400	8.28	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1007	52.300	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1008	52.200	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1009	52.100	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1010	52.000	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
1011	51.900	8.27	1.32	0.04	0.06	0.00	4.23	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.18	0.06																			
1012	51.800	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.18	0.06																			
1013	51.700	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.18	0.06																			
1014	51.600	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.18	0.06																			
1015	51.500	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.18	0.06																			
1016	51.400	8.27	1.32	0.04	0.06	0.00	4.24	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.18	0.06																			
1017	51.300	8.26	1.32	0.04	0.06	0.00	4.25	4.25	4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.18	0.06																			
1018	51.200	8.26	1.32	0.04	0.06	0.00	4.25	4.25	4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.18	0.06																			
20 DEG C RATE				0.03		0.00	3.10			0.00		0.00	0.00	0.00	0.00			0.00		
0.13																				
AVG 20 DEG C RATE			1.20		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
989	54.100	24.81	0.00	8.30	0.00	2.47	8.24	8.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
990	54.000	24.81	0.00	8.30	0.00	2.46	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
991	53.900	24.82	0.00	8.30	0.00	2.45	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
992	53.800	24.83	0.00	8.30	0.00	2.45	8.58	8.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
993	53.700	24.83	0.00	8.30	0.00	2.45	8.58	8.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
994	53.600	24.84	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
995	53.500	24.85	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
996	53.400	24.85	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
997	53.300	24.86	0.00	8.30	0.00	2.44	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
998	53.200	24.87	0.00	8.30	0.00	2.43	8.57	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
999	53.100	24.87	0.00	8.30	0.00	2.43	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90

1000	53.000	24.88	0.00	8.30	0.00	2.43	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1001	52.900	24.89	0.00	8.30	0.00	2.43	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1002	52.800	24.89	0.00	8.30	0.00	2.42	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1003	52.700	24.90	0.00	8.30	0.00	2.42	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1004	52.600	24.91	0.00	8.30	0.00	2.42	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1005	52.500	24.91	0.00	8.30	0.00	2.42	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1006	52.400	24.92	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1007	52.300	24.93	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1008	52.200	24.93	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1009	52.100	24.94	0.00	8.30	0.00	2.41	8.55	8.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1010	52.000	24.95	0.00	8.30	0.00	2.40	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1011	51.900	24.95	0.00	8.30	0.00	2.40	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1012	51.800	24.96	0.00	8.30	0.00	2.40	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1013	51.700	24.97	0.00	8.30	0.00	2.39	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1014	51.600	24.97	0.00	8.30	0.00	2.39	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1015	51.500	24.98	0.00	8.30	0.00	2.39	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1016	51.400	24.99	0.00	8.30	0.00	2.39	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1017	51.300	24.99	0.00	8.30	0.00	2.38	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1018	51.200	25.00	0.00	8.30	0.00	2.38	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 31 BEAUCOUP CREEK - BANISTER CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM

*

1019	UPR RCH	0.00010	25.00	0.00	8.30	0.00	2.38	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.90

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1019	51.20	51.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1020	51.10	51.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1021	51.00	50.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1022	50.90	50.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1023	50.80	50.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1024	50.70	50.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1025	50.60	50.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1026	50.50	50.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1027	50.40	50.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1028	50.30	50.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1029	50.20	50.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1030	50.10	50.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1031	50.00	49.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1032	49.90	49.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1033	49.80	49.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1034	49.70	49.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1035	49.60	49.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1036	49.50	49.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000
1037	49.40	49.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000	0.000

1038	49.30	49.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1039	49.20	49.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1040	49.10	49.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1041	49.00	48.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1042	48.90	48.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1043	48.80	48.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1044	48.70	48.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1045	48.60	48.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1046	48.50	48.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1047	48.40	48.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1048	48.30	48.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1049	48.20	48.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1050	48.10	48.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1051	48.00	47.90	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1052	47.90	47.80	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1053	47.80	47.70	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1054	47.70	47.60	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1055	47.60	47.50	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1056	47.50	47.40	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1057	47.40	47.30	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1058	47.30	47.20	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1059	47.20	47.10	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
1060	47.10	47.00	0.00010	0.00	0.00002	70.92	0.57	10.70	612.73	1070.25	6.13	0.00	0.000	0.000
0.000														
TOT						2978.55			25734.74	44950.55				
AVG					0.00002		0.57	10.70			6.13			
CUM						91893.91								

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	NCM																	
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																	
1019	51.100	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1020	51.000	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1021	50.900	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1022	50.800	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1023	50.700	8.26	1.35	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1024	50.600	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1025	50.500	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1026	50.400	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1027	50.300	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1028	50.200	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1029	50.100	8.26	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1030	50.000	8.25	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1031	49.900	8.25	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1032	49.800	8.25	1.35	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1033	49.700	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1034	49.600	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1035	49.500	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1036	49.400	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1037	49.300	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1038	49.200	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1039	49.100	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1040	49.000	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	
1041	48.900	8.25	1.35	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.06																	

1042	48.800	8.25	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1043	48.700	8.25	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1044	48.600	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1045	48.500	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1046	48.400	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1047	48.300	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1048	48.200	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1049	48.100	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1050	48.000	8.24	1.35	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1051	47.900	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1052	47.800	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1053	47.700	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1054	47.600	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1055	47.500	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1056	47.400	8.24	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1057	47.300	8.23	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1058	47.200	8.23	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1059	47.100	8.23	1.35	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
1060	47.000	8.23	1.35	0.04	0.06	0.00	3.75	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.06
20 DEG C RATE				0.03		0.00	2.70			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

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

1019	51.100	25.00	0.00	8.30	0.00	3.06	9.38	9.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1020	51.000	25.01	0.00	8.30	0.00	3.07	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1021	50.900	25.01	0.00	8.30	0.00	3.07	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1022	50.800	25.02	0.00	8.30	0.00	3.06	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1023	50.700	25.02	0.00	8.30	0.00	3.06	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1024	50.600	25.03	0.00	8.30	0.00	3.06	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1025	50.500	25.03	0.00	8.30	0.00	3.06	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1026	50.400	25.04	0.00	8.30	0.00	3.06	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1027	50.300	25.04	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1028	50.200	25.05	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1029	50.100	25.05	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1030	50.000	25.06	0.00	8.30	0.00	3.05	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1031	49.900	25.06	0.00	8.30	0.00	3.05	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1032	49.800	25.07	0.00	8.30	0.00	3.05	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1033	49.700	25.07	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1034	49.600	25.08	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1035	49.500	25.08	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1036	49.400	25.09	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1037	49.300	25.09	0.00	8.30	0.00	3.04	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1038	49.200	25.10	0.00	8.30	0.00	3.04	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1039	49.100	25.10	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1040	49.000	25.10	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1041	48.900	25.11	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1042	48.800	25.11	0.00	8.30	0.00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1043	48.700	25.12	0.00	8.30	0.00E+00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1044	48.600	25.12	0.00	8.30	0.00E+00	3.03	9.47	9.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1045	48.500	25.13	0.00	8.30	0.00E+00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1046	48.400	25.13	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1047	48.300	25.14	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1048	48.200	25.14	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1049	48.100	25.15	0.00	8.30	0.00	3.02	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1050	48.000	25.15	0.00	8.30	0.00	3.01	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1051	47.900	25.16	0.00	8.30	0.00	3.01	9.46	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1052	47.800	25.16	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1053	47.700	25.17	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1054	47.600	25.17	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1055	47.500	25.18	0.00	8.30	0.00	3.01	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1056	47.400	25.18	0.00	8.30	0.00	3.00	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1057	47.300	25.19	0.00	8.30	0.00	3.00	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1058	47.200	25.19	0.00	8.30	0.00	3.00	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1059	47.100	25.20	0.00	8.30	0.00	3.00	9.44	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84
1060	47.000	25.20	0.00	8.28	0.04	3.00	9.44	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 32 BANISTER CREEK - BRUSHY CREEK2 CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1061	UPR RCH	0.00010	25.20	0.00	8.28	0.04	3.00	9.44	9.44	0.00	0.00	0.00	0.00	0.00	0.00	0.84
EACH	INCR	0.0005	25.10	0.00	6.00	4.20	3.06	9.19	9.19	0.00	0.00	0.00	0.00		0.00	0.84

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1061	47.00	46.90	0.00057	0.00	0.00010	12.06	0.56	10.71	594.17	1070.50	5.94	0.00	0.000	0.000	0.000
1062	46.90	46.80	0.00104	0.00	0.00017	6.63	0.56	10.71	595.71	1070.64	5.96	0.00	0.000	0.000	0.000
1063	46.80	46.70	0.00151	0.00	0.00025	4.58	0.56	10.71	596.88	1070.74	5.97	0.00	0.000	0.000	0.000
1064	46.70	46.60	0.00198	0.00	0.00033	3.49	0.56	10.71	597.84	1070.83	5.98	0.00	0.000	0.000	0.000
1065	46.60	46.50	0.00245	0.00	0.00041	2.83	0.56	10.71	598.67	1070.90	5.99	0.00	0.000	0.000	0.000
1066	46.50	46.40	0.00292	0.00	0.00049	2.38	0.56	10.71	599.41	1070.97	5.99	0.00	0.000	0.000	0.000
1067	46.40	46.30	0.00339	0.00	0.00056	2.05	0.56	10.71	600.08	1071.03	6.00	0.00	0.000	0.000	0.001
1068	46.30	46.20	0.00386	0.00	0.00064	1.80	0.56	10.71	600.70	1071.08	6.01	0.00	0.000	0.000	0.001
1069	46.20	46.10	0.00433	0.00	0.00072	1.61	0.56	10.71	601.27	1071.13	6.01	0.00	0.000	0.000	0.001
1070	46.10	46.00	0.00480	0.00	0.00080	1.45	0.56	10.71	601.81	1071.18	6.02	0.00	0.000	0.000	0.001
1071	46.00	45.90	0.00527	0.00	0.00087	1.32	0.56	10.71	602.31	1071.23	6.02	0.00	0.000	0.000	0.001
1072	45.90	45.80	0.00574	0.00	0.00095	1.22	0.56	10.71	602.80	1071.27	6.03	0.00	0.000	0.000	0.001
1073	45.80	45.70	0.00621	0.00	0.00103	1.12	0.56	10.71	603.25	1071.31	6.03	0.00	0.000	0.000	0.001
1074	45.70	45.60	0.00668	0.00	0.00111	1.05	0.56	10.71	603.69	1071.35	6.04	0.00	0.000	0.000	0.001
1075	45.60	45.50	0.00715	0.00	0.00118	0.98	0.56	10.71	604.11	1071.39	6.04	0.00	0.000	0.000	0.001
1076	45.50	45.40	0.00762	0.00	0.00126	0.92	0.56	10.71	604.51	1071.42	6.05	0.00	0.000	0.000	0.001
1077	45.40	45.30	0.00809	0.00	0.00134	0.87	0.56	10.71	604.90	1071.46	6.05	0.00	0.000	0.000	0.001
1078	45.30	45.20	0.00856	0.00	0.00141	0.82	0.56	10.71	605.28	1071.49	6.05	0.00	0.000	0.000	0.001
1079	45.20	45.10	0.00903	0.00	0.00149	0.78	0.57	10.72	605.64	1071.52	6.06	0.00	0.000	0.000	0.001
1080	45.10	45.00	0.00950	0.00	0.00157	0.74	0.57	10.72	605.99	1071.55	6.06	0.00	0.000	0.000	0.002
1081	45.00	44.90	0.00997	0.00	0.00164	0.70	0.57	10.72	606.33	1071.58	6.06	0.00	0.000	0.001	0.002
1082	44.90	44.80	0.01044	0.00	0.00172	0.67	0.57	10.72	606.67	1071.61	6.07	0.00	0.000	0.001	

1083	44.80	44.70	0.01091	0.00	0.00180	0.64	0.57	10.72	606.99	1071.64	6.07	0.00	0.000	0.001	0.002
1084	44.70	44.60	0.01138	0.00	0.00187	0.62	0.57	10.72	607.30	1071.67	6.07	0.00	0.000	0.001	0.002
1085	44.60	44.50	0.01185	0.00	0.00195	0.59	0.57	10.72	607.61	1071.70	6.08	0.00	0.000	0.001	0.002
1086	44.50	44.40	0.01232	0.00	0.00203	0.57	0.57	10.72	607.91	1071.72	6.08	0.00	0.000	0.001	0.002
1087	44.40	44.30	0.01279	0.00	0.00210	0.55	0.57	10.72	608.20	1071.75	6.08	0.00	0.000	0.001	0.002
1088	44.30	44.20	0.01326	0.00	0.00218	0.53	0.57	10.72	608.49	1071.77	6.08	0.00	0.000	0.001	0.002
1089	44.20	44.10	0.01373	0.00	0.00226	0.51	0.57	10.72	608.77	1071.80	6.09	0.00	0.000	0.001	0.002
1090	44.10	44.00	0.01420	0.00	0.00233	0.50	0.57	10.72	609.05	1071.82	6.09	0.00	0.000	0.001	0.002
1091	44.00	43.90	0.01467	0.00	0.00241	0.48	0.57	10.72	609.32	1071.85	6.09	0.00	0.000	0.001	0.002
1092	43.90	43.80	0.01514	0.00	0.00248	0.47	0.57	10.72	609.58	1071.87	6.10	0.00	0.000	0.001	0.002
1093	43.80	43.70	0.01561	0.00	0.00256	0.45	0.57	10.72	609.84	1071.89	6.10	0.00	0.000	0.001	0.003
1094	43.70	43.60	0.01608	0.00	0.00264	0.44	0.57	10.72	610.10	1071.92	6.10	0.00	0.000	0.001	0.003
1095	43.60	43.50	0.01655	0.00	0.00271	0.43	0.57	10.72	610.35	1071.94	6.10	0.00	0.000	0.001	0.003
1096	43.50	43.40	0.01702	0.00	0.00279	0.42	0.57	10.72	610.59	1071.96	6.11	0.00	0.000	0.001	0.003
1097	43.40	43.30	0.01749	0.00	0.00286	0.40	0.57	10.72	610.84	1071.98	6.11	0.00	0.000	0.001	0.003
1098	43.30	43.20	0.01796	0.00	0.00294	0.39	0.57	10.72	611.08	1072.00	6.11	0.00	0.000	0.001	0.003
1099	43.20	43.10	0.01843	0.00	0.00301	0.38	0.57	10.72	611.31	1072.02	6.11	0.00	0.000	0.001	0.003
1100	43.10	43.00	0.01890	0.00	0.00309	0.37	0.57	10.72	611.54	1072.04	6.12	0.00	0.000	0.001	0.003
1101	43.00	42.90	0.01937	0.00	0.00317	0.37	0.57	10.72	611.77	1072.06	6.12	0.00	0.000	0.001	0.003
1102	42.90	42.80	0.01984	0.00	0.00324	0.36	0.57	10.72	611.99	1072.08	6.12	0.00	0.000	0.001	0.003
1103	42.80	42.70	0.02031	0.00	0.00332	0.35	0.57	10.72	612.22	1072.10	6.12	0.00	0.000	0.001	0.003
1104	42.70	42.60	0.02078	0.00	0.00339	0.34	0.57	10.72	612.43	1072.12	6.12	0.00	0.000	0.001	0.003
1105	42.60	42.50	0.02125	0.00	0.00347	0.33	0.57	10.72	612.65	1072.14	6.13	0.00	0.000	0.001	0.003
1106	42.50	42.40	0.02172	0.00	0.00354	0.33	0.57	10.72	612.86	1072.16	6.13	0.00	0.000	0.001	0.004
1107	42.40	42.30	0.02219	0.00	0.00362	0.32	0.57	10.72	613.07	1072.18	6.13	0.00	0.000	0.001	0.004
1108	42.30	42.20	0.02266	0.00	0.00369	0.31	0.57	10.72	613.28	1072.20	6.13	0.00	0.000	0.001	0.004
1109	42.20	42.10	0.02313	0.00	0.00377	0.31	0.57	10.72	613.48	1072.22	6.13	0.00	0.000	0.001	

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0.004
 1110   42.10   42.00    0.02360   0.00  0.00385     0.30   0.57  10.72    613.69    1072.23    6.14      0.00  0.000     0.001
0.004

  TOT                                                 62.12                30338.35   53581.06
  AVG                                       0.00093            0.57  10.72                          6.07
  CUM                                               91956.07


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

 ELEM  ENDING  SAT    REAER   CBOD  CBOD  ANBOD  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI
NCM   NCM
 NO.     DIST  D.O.    RATE  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

1061   46.900  8.23    1.39   0.04  0.06   0.00  3.54  3.54  3.54   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1062   46.800  8.22    1.39   0.04  0.06   0.00  3.55  3.55  3.55   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1063   46.700  8.22    1.39   0.04  0.06   0.00  3.56  3.56  3.56   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1064   46.600  8.21    1.39   0.04  0.06   0.00  3.56  3.56  3.56   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1065   46.500  8.21    1.39   0.04  0.06   0.00  3.57  3.57  3.57   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1066   46.400  8.21    1.39   0.04  0.06   0.00  3.58  3.58  3.58   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1067   46.300  8.20    1.39   0.04  0.06   0.00  3.59  3.59  3.59   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1068   46.200  8.20    1.38   0.04  0.06   0.00  3.59  3.59  3.59   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1069   46.100  8.19    1.38   0.04  0.06   0.00  3.60  3.60  3.60   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1070   46.000  8.19    1.38   0.04  0.06   0.00  3.61  3.61  3.61   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1071   45.900  8.18    1.38   0.04  0.06   0.00  3.61  3.61  3.61   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1072   45.800  8.18    1.38   0.04  0.06   0.00  3.62  3.62  3.62   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1073   45.700  8.17    1.38   0.04  0.06   0.00  3.63  3.63  3.63   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1074   45.600  8.17    1.38   0.04  0.06   0.00  3.63  3.63  3.63   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.20  0.06
1075   45.500  8.17    1.38   0.04  0.06   0.00  3.64  3.64  3.64   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.21  0.06
1076   45.400  8.16    1.38   0.04  0.06   0.00  3.65  3.65  3.65   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.21  0.06
1077   45.300  8.16    1.38   0.04  0.06   0.00  3.65  3.65  3.65   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.21  0.06
1078   45.200  8.15    1.38   0.04  0.06   0.00  3.66  3.66  3.66   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
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0.21	0.06																		
1079	45.100	8.15	1.38	0.04	0.06	0.00	3.67	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1080	45.000	8.14	1.38	0.04	0.06	0.00	3.67	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1081	44.900	8.14	1.38	0.04	0.06	0.00	3.68	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1082	44.800	8.13	1.38	0.04	0.06	0.00	3.69	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1083	44.700	8.13	1.38	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1084	44.600	8.13	1.38	0.04	0.06	0.00	3.70	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1085	44.500	8.12	1.38	0.04	0.06	0.00	3.71	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1086	44.400	8.12	1.38	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1087	44.300	8.11	1.38	0.04	0.06	0.00	3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1088	44.200	8.11	1.38	0.04	0.06	0.00	3.73	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1089	44.100	8.10	1.38	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1090	44.000	8.10	1.38	0.04	0.06	0.00	3.74	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1091	43.900	8.09	1.38	0.04	0.06	0.00	3.75	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1092	43.800	8.09	1.38	0.04	0.06	0.00	3.76	3.76	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1093	43.700	8.09	1.38	0.04	0.06	0.00	3.77	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1094	43.600	8.08	1.38	0.04	0.06	0.00	3.77	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1095	43.500	8.08	1.38	0.04	0.06	0.00	3.78	3.78	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1096	43.400	8.07	1.38	0.04	0.06	0.00	3.79	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1097	43.300	8.07	1.38	0.04	0.06	0.00	3.79	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1098	43.200	8.06	1.38	0.04	0.06	0.00	3.80	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1099	43.100	8.06	1.38	0.04	0.06	0.00	3.81	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1100	43.000	8.05	1.39	0.04	0.06	0.00	3.82	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1101	42.900	8.05	1.39	0.04	0.06	0.00	3.82	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1102	42.800	8.05	1.39	0.04	0.06	0.00	3.83	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1103	42.700	8.04	1.39	0.04	0.06	0.00	3.84	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.21	0.06																		
1104	42.600	8.04	1.39	0.04	0.06	0.00	3.84	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.22	0.06																		
1105	42.500	8.03	1.39	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.22	0.06																		
1106	42.400	8.03	1.39	0.04	0.06	0.00	3.86	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.22	0.06																		
1107	42.300	8.02	1.39	0.04	0.06	0.00	3.87	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.22	0.06																		
1108	42.200	8.02	1.39	0.04	0.06	0.00	3.87	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.22	0.06																		
1109	42.100	8.02	1.39	0.04	0.06	0.00	3.88	3.88	3.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.22	0.06																		
1110	42.000	8.01	1.39	0.04	0.06	0.00	3.89	3.89	3.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.22	0.06																		
20 DEG C RATE				0.03		0.00	2.55			0.00		0.00	0.00	0.00	0.00			0.00	
0.14																			
AVG 20 DEG C RATE			1.24		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1061	46.900	25.23	0.00	6.40	3.46	3.25	9.43	9.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1062	46.800	25.26	0.00	6.22	3.80	3.24	9.41	9.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1063	46.700	25.29	0.00	6.15	3.92	3.23	9.40	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1064	46.600	25.32	0.00	6.12	3.99	3.22	9.39	9.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1065	46.500	25.35	0.00	6.09	4.03	3.21	9.38	9.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1066	46.400	25.38	0.00	6.08	4.06	3.20	9.37	9.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1067	46.300	25.41	0.00	6.07	4.08	3.19	9.36	9.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1068	46.200	25.44	0.00	6.06	4.09	3.18	9.35	9.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1069	46.100	25.47	0.00	6.05	4.10	3.17	9.34	9.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1070	46.000	25.50	0.00	6.05	4.11	3.16	9.34	9.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
1071	45.900	25.53	0.00	6.04	4.12	3.15	9.33	9.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1072	45.800	25.56	0.00	6.04	4.13	3.14	9.32	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
1073	45.700	25.59	0.00	6.04	4.13	3.13	9.31	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85

1074	45.600	25.62	0.00	6.03	4.14	3.12	9.31	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1075	45.500	25.65	0.00	6.03	4.14	3.11	9.30	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1076	45.400	25.68	0.00	6.03	4.14	3.10	9.29	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1077	45.300	25.71	0.00	6.03	4.15	3.09	9.29	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1078	45.200	25.74	0.00	6.03	4.15	3.08	9.28	9.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1079	45.100	25.77	0.00	6.03	4.15	3.07	9.27	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1080	45.000	25.80	0.00	6.02	4.16	3.06	9.27	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1081	44.900	25.83	0.00	6.02	4.16	3.05	9.26	9.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1082	44.800	25.86	0.00	6.02	4.16	3.04	9.25	9.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1083	44.700	25.89	0.00	6.02	4.16	3.03	9.25	9.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1084	44.600	25.92	0.00	6.02	4.16	3.02	9.24	9.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1085	44.500	25.95	0.00	6.02	4.16	3.01	9.23	9.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1086	44.400	25.98	0.00	6.02	4.17	3.00	9.23	9.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1087	44.300	26.01	0.00	6.02	4.17	2.99	9.22	9.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1088	44.200	26.04	0.00	6.02	4.17	2.98	9.22	9.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1089	44.100	26.07	0.00	6.02	4.17	2.97	9.21	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1090	44.000	26.10	0.00	6.02	4.17	2.96	9.21	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1091	43.900	26.13	0.00	6.02	4.17	2.95	9.20	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1092	43.800	26.16	0.00	6.02	4.17	2.94	9.19	9.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1093	43.700	26.19	0.00	6.01	4.17	2.93	9.19	9.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1094	43.600	26.22	0.00	6.01	4.17	2.92	9.18	9.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83																
1095	43.500	26.25	0.00	6.01	4.17	2.91	9.18	9.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.82																
1096	43.400	26.28	0.00	6.01	4.18	2.90	9.17	9.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.82																
1097	43.300	26.31	0.00	6.01	4.18	2.89	9.17	9.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.82																
1098	43.200	26.34	0.00	6.01	4.18	2.88	9.16	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.82																
1099	43.100	26.37	0.00	6.01	4.18	2.87	9.16	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.82																
1100	43.000	26.40	0.00	6.01	4.18	2.86	9.16	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.82																

1101	42.900	26.43	0.00	6.01	4.18	2.85	9.15	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1102	42.800	26.46	0.00	6.01	4.18	2.84	9.15	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1103	42.700	26.49	0.00	6.01	4.18	2.83	9.14	9.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1104	42.600	26.52	0.00	6.01	4.18	2.82	9.14	9.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1105	42.500	26.55	0.00	6.01	4.18	2.81	9.13	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1106	42.400	26.58	0.00	6.01	4.18	2.80	9.13	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1107	42.300	26.61	0.00	6.01	4.18	2.79	9.12	9.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1108	42.200	26.64	0.00	6.01	4.18	2.78	9.12	9.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1109	42.100	26.67	0.00	6.01	4.18	2.77	9.12	9.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1110	42.000	26.70	0.00	6.01	4.18	2.76	9.11	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 33 BRUSHY CREEK2 - MCCLELLEN BR CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1111	UPR RCH	0.02360	26.70	0.00	6.01	4.18	2.76	9.11	9.11	0.00	0.00	0.00	0.00	0.00	0.00	0.81

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1111	42.00	41.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

1112	41.90	41.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1113	41.80	41.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1114	41.70	41.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1115	41.60	41.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1116	41.50	41.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1117	41.40	41.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1118	41.30	41.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1119	41.20	41.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1120	41.10	41.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1121	41.00	40.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1122	40.90	40.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1123	40.80	40.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1124	40.70	40.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1125	40.60	40.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1126	40.50	40.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1127	40.40	40.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1128	40.30	40.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1129	40.20	40.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1130	40.10	40.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1131	40.00	39.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1132	39.90	39.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1133	39.80	39.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1134	39.70	39.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1135	39.60	39.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1136	39.50	39.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1137	39.40	39.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1138	39.30	39.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

1139	39.20	39.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1140	39.10	39.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1141	39.00	38.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1142	38.90	38.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1143	38.80	38.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1144	38.70	38.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1145	38.60	38.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1146	38.50	38.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1147	38.40	38.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1148	38.30	38.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1149	38.20	38.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1150	38.10	38.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1151	38.00	37.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1152	37.90	37.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1153	37.80	37.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1154	37.70	37.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1155	37.60	37.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1156	37.50	37.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1157	37.40	37.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1158	37.30	37.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1159	37.20	37.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1160	37.10	37.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1161	37.00	36.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1162	36.90	36.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1163	36.80	36.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1164	36.70	36.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1165	36.60	36.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

1166	36.50	36.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1167	36.40	36.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1168	36.30	36.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1169	36.20	36.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1170	36.10	36.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1171	36.00	35.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1172	35.90	35.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1173	35.80	35.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1174	35.70	35.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1175	35.60	35.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1176	35.50	35.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1177	35.40	35.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1178	35.30	35.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1179	35.20	35.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1180	35.10	35.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1181	35.00	34.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1182	34.90	34.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1183	34.80	34.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1184	34.70	34.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1185	34.60	34.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1186	34.50	34.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1187	34.40	34.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1188	34.30	34.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1189	34.20	34.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1190	34.10	34.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1191	34.00	33.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1192	33.90	33.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

1193	33.80	33.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1194	33.70	33.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1195	33.60	33.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
TOT						25.58			52163.43	91139.93					
AVG					0.00385		0.57	10.72			6.14				
CUM						91981.97									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
1111	41.900	8.01	1.39	0.04	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
1112	41.800	8.01	1.39	0.04	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06
1113	41.700	8.01	1.39	0.03	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
1114	41.600	8.01	1.39	0.03	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
1115	41.500	8.01	1.39	0.02	0.06	0.00	5.57	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06
1116	41.400	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06
1117	41.300	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06
1118	41.200	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1119	41.100	8.01	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1120	41.000	8.00	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1121	40.900	8.00	1.39	0.02	0.06	0.00	5.58	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1122	40.800	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1123	40.700	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1124	40.600	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1125	40.500	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1126	40.400	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06

1127	40.300	8.00	1.39	0.02	0.06	0.00	5.59	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1128	40.200	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1129	40.100	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1130	40.000	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1131	39.900	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1132	39.800	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1133	39.700	8.00	1.39	0.02	0.06	0.00	5.60	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1134	39.600	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1135	39.500	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1136	39.400	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1137	39.300	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1138	39.200	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1139	39.100	7.99	1.39	0.02	0.06	0.00	5.61	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1140	39.000	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1141	38.900	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1142	38.800	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1143	38.700	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1144	38.600	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1145	38.500	7.99	1.39	0.02	0.06	0.00	5.62	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1146	38.400	7.99	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1147	38.300	7.99	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1148	38.200	7.99	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1149	38.100	7.98	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1150	38.000	7.98	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1151	37.900	7.98	1.39	0.02	0.06	0.00	5.63	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1152	37.800	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1153	37.700	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06

1154	37.600	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1155	37.500	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1156	37.400	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1157	37.300	7.98	1.39	0.02	0.06	0.00	5.64	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1158	37.200	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1159	37.100	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1160	37.000	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1161	36.900	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1162	36.800	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1163	36.700	7.98	1.39	0.02	0.06	0.00	5.65	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1164	36.600	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1165	36.500	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1166	36.400	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1167	36.300	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1168	36.200	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1169	36.100	7.97	1.39	0.02	0.06	0.00	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1170	36.000	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1171	35.900	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1172	35.800	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1173	35.700	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1174	35.600	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1175	35.500	7.97	1.40	0.02	0.06	0.00	5.67	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1176	35.400	7.97	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1177	35.300	7.97	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1178	35.200	7.97	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1179	35.100	7.96	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			
1180	35.000	7.96	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.06																			

1181	34.900	7.96	1.40	0.02	0.06	0.00	5.68	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1182	34.800	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1183	34.700	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1184	34.600	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06
1185	34.500	7.96	1.40	0.02	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1186	34.400	7.96	1.40	0.01	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1187	34.300	7.96	1.40	0.01	0.06	0.00	5.69	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1188	34.200	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1189	34.100	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1190	34.000	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1191	33.900	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1192	33.800	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1193	33.700	7.96	1.40	0.01	0.06	0.00	5.70	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1194	33.600	7.95	1.40	0.01	0.06	0.00	5.71	5.71	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
1195	33.500	7.95	1.40	0.01	0.06	0.00	5.71	5.71	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06
20 DEG C RATE				0.03		0.00	3.65			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1111	41.900	26.70	0.00	6.01	4.18	2.15	9.08	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
1112	41.800	26.71	0.00	6.01	4.18	1.73	9.07	9.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1113	41.700	26.71	0.00	6.01	4.18	1.45	9.07	9.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
1114	41.600	26.72	0.00	6.01	4.18	1.25	9.08	9.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.83																
1115	41.500	26.72	0.00	6.01	4.18	1.12	9.10	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.84																
1116	41.400	26.73	0.00	6.01	4.18	1.03	9.13	9.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85																
1117	41.300	26.73	0.00	6.01	4.18	0.97	9.15	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.86																
1118	41.200	26.74	0.00	6.01	4.18	0.93	9.18	9.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																
1119	41.100	26.74	0.00	6.01	4.18	0.90	9.21	9.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88																
1120	41.000	26.75	0.00	6.01	4.18	0.88	9.23	9.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.89																
1121	40.900	26.75	0.00	6.01	4.18	0.87	9.26	9.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.90																
1122	40.800	26.76	0.00	6.01	4.18	0.86	9.29	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.91																
1123	40.700	26.76	0.00	6.01	4.18	0.85	9.32	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.92																
1124	40.600	26.77	0.00	6.01	4.18	0.84	9.35	9.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.93																
1125	40.500	26.77	0.00	6.01	4.18	0.84	9.37	9.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
1126	40.400	26.78	0.00	6.01	4.18	0.84	9.40	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.95																
1127	40.300	26.78	0.00	6.01	4.18	0.83	9.43	9.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.96																
1128	40.200	26.78	0.00	6.01	4.18	0.83	9.45	9.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.97																
1129	40.100	26.79	0.00	6.01	4.18	0.83	9.48	9.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.98																
1130	40.000	26.79	0.00	6.01	4.18	0.82	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.98																
1131	39.900	26.80	0.00	6.01	4.18	0.82	9.53	9.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.99																
1132	39.800	26.80	0.00	6.01	4.18	0.82	9.55	9.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00																
1133	39.700	26.81	0.00	6.01	4.18	0.82	9.58	9.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.01																
1134	39.600	26.81	0.00	6.01	4.18	0.81	9.60	9.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.01																
1135	39.500	26.82	0.00	6.01	4.18	0.81	9.62	9.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.02																
1136	39.400	26.82	0.00	6.01	4.18	0.81	9.65	9.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.03																
1137	39.300	26.83	0.00	6.01	4.18	0.81	9.67	9.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.04																
1138	39.200	26.83	0.00	6.01	4.18	0.80	9.69	9.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.04																
1139	39.100	26.84	0.00	6.01	4.18	0.80	9.71	9.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.05																
1140	39.000	26.84	0.00	6.01	4.18	0.80	9.73	9.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.06																
1141	38.900	26.85	0.00	6.01	4.18	0.80	9.75	9.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.06																
1142	38.800	26.85	0.00	6.01	4.18	0.79	9.77	9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.07																
1143	38.700	26.86	0.00	6.01	4.18	0.79	9.79	9.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.07																
1144	38.600	26.86	0.00	6.01	4.18	0.79	9.81	9.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.08																
1145	38.500	26.86	0.00	6.01	4.18	0.79	9.83	9.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.09																
1146	38.400	26.87	0.00	6.01	4.18	0.79	9.85	9.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.09																
1147	38.300	26.87	0.00	6.01	4.18	0.78	9.87	9.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.10																
1148	38.200	26.88	0.00	6.01	4.18	0.78	9.89	9.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.10																
1149	38.100	26.88	0.00	6.01	4.18	0.78	9.91	9.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.11																
1150	38.000	26.89	0.00	6.01	4.18	0.78	9.92	9.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.11																
1151	37.900	26.89	0.00	6.01	4.18	0.77	9.94	9.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.12																
1152	37.800	26.90	0.00	6.01	4.18	0.77	9.96	9.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.12																
1153	37.700	26.90	0.00	6.01	4.18	0.77	9.97	9.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.13																
1154	37.600	26.91	0.00	6.01	4.18	0.77	9.99	9.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.13																
1155	37.500	26.91	0.00	6.01	4.18	0.77	10.01	10.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.14																
1156	37.400	26.92	0.00	6.01	4.18	0.76	10.02	10.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.14																
1157	37.300	26.92	0.00	6.01	4.18	0.76	10.04	10.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.14																
1158	37.200	26.93	0.00	6.01	4.18	0.76	10.05	10.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.15																
1159	37.100	26.93	0.00	6.01	4.18	0.76	10.07	10.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.15																
1160	37.000	26.94	0.00	6.01	4.18	0.75	10.08	10.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.16																
1161	36.900	26.94	0.00	6.01	4.18	0.75	10.10	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.16																
1162	36.800	26.94	0.00	6.01	4.18	0.75	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.16																
1163	36.700	26.95	0.00	6.01	4.18	0.75	10.13	10.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
1164	36.600	26.95	0.00	6.01	4.18	0.75	10.14	10.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
1165	36.500	26.96	0.00	6.01	4.18	0.74	10.15	10.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.18																
1166	36.400	26.96	0.00	6.01	4.18	0.74	10.17	10.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.18																
1167	36.300	26.97	0.00	6.01	4.18	0.74	10.18	10.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.18																
1168	36.200	26.97	0.00	6.01	4.18	0.74	10.19	10.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.19																
1169	36.100	26.98	0.00	6.01	4.18	0.74	10.21	10.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.19																
1170	36.000	26.98	0.00	6.01	4.18	0.73	10.22	10.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.19																
1171	35.900	26.99	0.00	6.01	4.18	0.73	10.23	10.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.20																
1172	35.800	26.99	0.00	6.01	4.18	0.73	10.24	10.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.20																
1173	35.700	27.00	0.00	6.01	4.18	0.73	10.26	10.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.20																
1174	35.600	27.00	0.00	6.01	4.18	0.73	10.27	10.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.20																
1175	35.500	27.01	0.00	6.01	4.18	0.72	10.28	10.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.21																
1176	35.400	27.01	0.00	6.01	4.18	0.72	10.29	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.21																
1177	35.300	27.02	0.00	6.01	4.18	0.72	10.30	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.21																
1178	35.200	27.02	0.00	6.01	4.18	0.72	10.31	10.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.22																
1179	35.100	27.02	0.00	6.01	4.18	0.72	10.33	10.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.22																
1180	35.000	27.03	0.00	6.01	4.18	0.71	10.34	10.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.22																
1181	34.900	27.03	0.00	6.01	4.18	0.71	10.35	10.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.22																
1182	34.800	27.04	0.00	6.01	4.18	0.71	10.36	10.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.23																
1183	34.700	27.04	0.00	6.01	4.18	0.71	10.37	10.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.23																
1184	34.600	27.05	0.00	6.01	4.18	0.71	10.38	10.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.23																
1185	34.500	27.05	0.00	6.01	4.18	0.70	10.39	10.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.23																
1186	34.400	27.06	0.00	6.01	4.18	0.70	10.40	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.24																
1187	34.300	27.06	0.00	6.01	4.18	0.70	10.41	10.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.24																
1188	34.200	27.07	0.00	6.01	4.18	0.70	10.42	10.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.24																
1189	34.100	27.07	0.00	6.01	4.18	0.70	10.43	10.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.24																
1190	34.000	27.08	0.00	6.01	4.18	0.69	10.44	10.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.25																
1191	33.900	27.08	0.00	6.01	4.18	0.69	10.45	10.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.25																
1192	33.800	27.09	0.00	6.01	4.18	0.69	10.46	10.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.25																
1193	33.700	27.09	0.00	6.01	4.18	0.69	10.47	10.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.25																
1194	33.600	27.10	0.00	6.01	4.18	0.69	10.47	10.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.25																
1195	33.500	27.10	0.00	6.01	4.18	0.68	10.48	10.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1.26

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 34 MCCLELLEN BR - FLAT CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1196	UPR RCH	0.02360	27.10	0.00	6.01	4.18	0.68	10.48	10.48	0.00	0.00	0.00	0.00	0.00	0.00	1.26

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1196	33.50	33.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1197	33.40	33.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1198	33.30	33.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1199	33.20	33.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1200	33.10	33.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1201	33.00	32.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1202	32.90	32.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1203	32.80	32.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1204	32.70	32.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1205	32.60	32.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1206	32.50	32.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	

0.004															
1207	32.40	32.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	
0.004															
1208	32.30	32.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	
0.004															
1209	32.20	32.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	
0.004															
1210	32.10	32.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	
0.004															
TOT						4.51			9205.31	16083.52					
AVG					0.00385		0.57	10.72			6.14				
CUM						91986.54									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
1196	33.400	7.95	1.40	0.03	0.06	0.00	4.07	4.07	4.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
1197	33.300	7.95	1.40	0.03	0.06	0.00	4.08	4.08	4.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.06
1198	33.200	7.94	1.40	0.04	0.06	0.00	4.09	4.09	4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.06
1199	33.100	7.94	1.40	0.04	0.06	0.00	4.09	4.09	4.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1200	33.000	7.93	1.40	0.04	0.06	0.00	4.10	4.10	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1201	32.900	7.93	1.40	0.04	0.06	0.00	4.11	4.11	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1202	32.800	7.93	1.40	0.04	0.06	0.00	4.11	4.11	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1203	32.700	7.92	1.40	0.04	0.06	0.00	4.12	4.12	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1204	32.600	7.92	1.40	0.04	0.06	0.00	4.13	4.13	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1205	32.500	7.92	1.40	0.04	0.06	0.00	4.13	4.13	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1206	32.400	7.91	1.41	0.04	0.06	0.00	4.14	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1207	32.300	7.91	1.41	0.04	0.06	0.00	4.15	4.15	4.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1208	32.200	7.90	1.41	0.04	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1209	32.100	7.90	1.41	0.04	0.06	0.00	4.16	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1210	32.000	7.90	1.41	0.04	0.06	0.00	4.17	4.17	4.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.10 0.06

20 DEG C RATE 0.03 0.00 2.60 0.00 0.00 0.00 0.00 0.00 0.00
0.06
AVG 20 DEG C RATE 1.22 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1196	33.400	27.13	0.00	6.01	4.18	1.25	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.24
1197	33.300	27.15	0.00	6.01	4.18	1.63	10.57	10.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
1198	33.200	27.18	0.00	6.01	4.18	1.88	10.58	10.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
1199	33.100	27.21	0.00	6.01	4.18	2.04	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
1200	33.000	27.23	0.00	6.01	4.18	2.16	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1201	32.900	27.26	0.00	6.01	4.18	2.24	10.60	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
1202	32.800	27.29	0.00	6.01	4.18	2.29	10.60	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
1203	32.700	27.31	0.00	6.01	4.18	2.32	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1204	32.600	27.34	0.00	6.01	4.18	2.34	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08
1205	32.500	27.37	0.00	6.01	4.18	2.35	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
1206	32.400	27.39	0.00	6.01	4.18	2.36	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
1207	32.300	27.42	0.00	6.01	4.18	2.36	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
1208	32.200	27.45	0.00	6.01	4.18	2.36	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01
1209	32.100	27.47	0.00	6.01	4.18	2.35	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
1210	32.000	27.50	0.00	6.01	4.18	2.35	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 35 FLAT CREEK - SANDY CREEK CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1211	UPR RCH	0.02360	27.50	0.00	6.01	4.18	2.35	10.62	10.62	0.00	0.00	0.00	0.00	0.00	0.00	0.98

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1211	32.00	31.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1212	31.90	31.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1213	31.80	31.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1214	31.70	31.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1215	31.60	31.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1216	31.50	31.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1217	31.40	31.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1218	31.30	31.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1219	31.20	31.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1220	31.10	31.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1221	31.00	30.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1222	30.90	30.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1223	30.80	30.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1224	30.70	30.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004

1225	30.60	30.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1226	30.50	30.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1227	30.40	30.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1228	30.30	30.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1229	30.20	30.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1230	30.10	30.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1231	30.00	29.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1232	29.90	29.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1233	29.80	29.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
TOT						6.92			14114.81	24661.39					
AVG					0.00385		0.57	10.72			6.14				
CUM						91993.55									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
1211	31.900	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1212	31.800	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1213	31.700	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1214	31.600	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1215	31.500	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1216	31.400	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1217	31.300	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1218	31.200	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1219	31.100	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1220	31.000	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06

1221	30.900	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1222	30.800	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1223	30.700	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1224	30.600	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1225	30.500	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1226	30.400	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1227	30.300	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1228	30.200	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1229	30.100	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1230	30.000	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1231	29.900	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1232	29.800	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1233	29.700	7.90	1.41	0.04	0.06	0.00	4.01	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
20 DEG C RATE				0.03		0.00	2.50			0.00		0.00	0.00	0.00	0.00			0.00	0.07	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1211	31.900	27.50	0.00	6.01	4.18	2.40	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
1212	31.800	27.50	0.00	6.01	4.18	2.44	10.61	10.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97
1213	31.700	27.50	0.00	6.01	4.18	2.46	10.60	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
1214	31.600	27.50	0.00	6.01	4.18	2.48	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
1215	31.500	27.50	0.00	6.01	4.18	2.49	10.59	10.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
1216	31.400	27.50	0.00	6.01	4.18	2.50	10.58	10.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1217	31.300	27.50	0.00	6.01	4.18	2.51	10.58	10.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
1218	31.200	27.50	0.00	6.01	4.18	2.52	10.57	10.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
1219	31.100	27.50	0.00	6.01	4.18	2.52	10.57	10.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
1220	31.000	27.50	0.00	6.01	4.18	2.52	10.56	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
1221	30.900	27.50	0.00	6.01	4.18	2.53	10.56	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
1222	30.800	27.50	0.00	6.01	4.18	2.53	10.56	10.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
1223	30.700	27.50	0.00	6.01	4.18	2.53	10.55	10.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1224	30.600	27.50	0.00	6.01	4.18	2.53	10.55	10.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
1225	30.500	27.50	0.00	6.01	4.18	2.53	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
1226	30.400	27.50	0.00	6.01	4.18	2.53	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
1227	30.300	27.50	0.00	6.01	4.18	2.53	10.54	10.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1228	30.200	27.50	0.00	6.01	4.18	2.53	10.53	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1229	30.100	27.50	0.00	6.01	4.18	2.53	10.53	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
1230	30.000	27.50	0.00	6.01	4.18	2.53	10.52	10.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1231	29.900	27.50	0.00	6.01	4.18	2.53	10.52	10.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1232	29.800	27.50	0.00	6.01	4.18	2.53	10.52	10.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
1233	29.700	27.50	0.00	6.01	4.18	2.53	10.51	10.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 36 SANDY CREEK - HWY 124 CASTOR CREEK SENSITIVITY RUN

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1234	UPR RCH	0.02360	27.50	0.00	6.01	4.18	2.53	10.51	10.51	0.00	0.00	0.00	0.00	0.00	0.00	

0.86

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1234	29.70	29.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1235	29.60	29.50	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1236	29.50	29.40	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1237	29.40	29.30	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1238	29.30	29.20	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1239	29.20	29.10	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1240	29.10	29.00	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1241	29.00	28.90	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1242	28.90	28.80	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1243	28.80	28.70	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
1244	28.70	28.60	0.02360	0.00	0.00385	0.30	0.57	10.72	613.69	1072.23	6.14	0.00	0.000	0.001	0.004
TOT						3.31			6750.56	11794.58					
AVG					0.00385		0.57	10.72			6.14				
CUM						91996.90									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
1234	29.600	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1235	29.500	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1236	29.400	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1237	29.300	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1238	29.200	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1239	29.100	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1240	29.000	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1241	28.900	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1242	28.800	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1243	28.700	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1244	28.600	7.90	1.41	0.04	0.06	0.00	3.85	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.03		0.00	2.40			0.00		0.00	0.00	0.00	0.00			0.00	0.09	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1234	29.600	27.50	0.00	6.01	4.18	2.59	10.37	10.37	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.82
1235	29.500	27.50	0.00	6.01	4.18	2.63	10.24	10.24	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.78
1236	29.400	27.50	0.00	6.01	4.18	2.66	10.11	10.11	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.75
1237	29.300	27.50	0.00	6.01	4.18	2.69	9.98	9.98	0.00	0.00	0.01	0.01	0.03	0.00	0.00	0.00	0.72
1238	29.200	27.50	0.00	6.01	4.18	2.71	9.85	9.85	0.00	0.00	0.01	0.01	0.04	0.00	0.00	0.00	0.69
1239	29.100	27.50	0.00	6.01	4.18	2.72	9.73	9.73	0.00	0.00	0.02	0.02	0.05	0.00	0.00	0.00	0.66
1240	29.000	27.50	0.00	6.01	4.18	2.73	9.62	9.62	0.00	0.00	0.02	0.02	0.06	0.00	0.00	0.00	0.63
1241	28.900	27.50	0.00	6.01	4.18	2.75	9.50	9.50	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.61
1242	28.800	27.50	0.00	6.01	4.18	2.75	9.39	9.39	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.59

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1243   28.700  27.50  0.00     6.01     4.18   2.76   9.28   9.28   0.00   0.00   0.03   0.03   0.08   0.00    0.00     0.00
0.56
1244   28.600  27.50  0.00     6.01     4.18   2.77   9.18   9.18   0.00   0.00   0.03   0.03   0.09   0.00    0.00     0.00
0.54

 * CM-I = CHLORIDES                        CM-II = SULFATES                          NCM =
         MG/L                                     MG/L
 ** g/m³


STREAM SUMMARY                                                    CASTOR CREEK WATERSHED MODEL
HEADWATER                                                         CASTOR CREEK SENSITIVITY RUN

 TRAVEL TIME      =       91996.90 DAYS

 MAXIMUM EFFLUENT =           0.00 PERCENT

 FLOW             =   0.00010 TO    0.02360 m³/s
 DISPERSION       =   0.0000  TO    0.0012  m²/s
 VELOCITY         =   0.00001 TO    0.00385 m/s
 DEPTH            =   0.53    TO    0.86    m
 WIDTH            =  10.70    TO   11.90    m

 BOD DECAY        =    0.01   TO    0.05    per day
 NH3 DECAY        =    0.00   TO    0.00    per day
 SDMNT OXYGEN DMND=    3.54   TO    5.71    g/m²/d
 NH3 SOURCE       =    0.00   TO    0.00    g/m²/d
 REAERATION       =    0.86   TO    1.41    per day
 BOD SETTLING     =    0.05   TO    0.06    per day
 ORGN DECAY       =    0.00   TO    0.00    per day
 ORGN SETTLING    =    0.00   TO    0.00    per day

 TEMPERATURE      =   22.70   TO   27.50    deg C
 DISSOLVED OXYGEN =    0.68   TO    3.25    mg/L



     .....BEGIN SENSITIVITY RUN  1 ON PARAMETER SET  1 AND COLUMN  1
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED



     .....BEGIN SENSITIVITY RUN  2 ON PARAMETER SET  1 AND COLUMN  2
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
     .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
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    .....BEGIN SENSITIVITY RUN  3 ON PARAMETER SET  2 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN  4 ON PARAMETER SET  2 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN  5 ON PARAMETER SET  3 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  12 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
***** WARNING:  NEGATIVE CONCENTRATIONS SET TO ZERO FOR Dissolved Oxygen



    .....BEGIN SENSITIVITY RUN  6 ON PARAMETER SET  3 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  12 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN  7 ON PARAMETER SET  4 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN  8 ON PARAMETER SET  4 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
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    .....BEGIN SENSITIVITY RUN  9 ON PARAMETER SET  5 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 10 ON PARAMETER SET  5 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 11 ON PARAMETER SET  6 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  12 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 12 ON PARAMETER SET  6 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  12 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
***** WARNING:  NEGATIVE CONCENTRATIONS SET TO ZERO FOR Dissolved Oxygen



    .....BEGIN SENSITIVITY RUN 13 ON PARAMETER SET  7 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN   9 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 14 ON PARAMETER SET  7 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  11 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
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    .....BEGIN SENSITIVITY RUN 15 ON PARAMETER SET  8 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 16 ON PARAMETER SET  8 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
***** WARNING:  NEGATIVE CONCENTRATIONS SET TO ZERO FOR Dissolved Oxygen



    .....BEGIN SENSITIVITY RUN 17 ON PARAMETER SET  9 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 18 ON PARAMETER SET  9 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 19 ON PARAMETER SET 10 AND COLUMN  1
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED



    .....BEGIN SENSITIVITY RUN 20 ON PARAMETER SET 10 AND COLUMN  2
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
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```
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 21 ON PARAMETER SET 11 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 22 ON PARAMETER SET 11 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 23 ON PARAMETER SET 12 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 24 ON PARAMETER SET 12 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 25 ON PARAMETER SET 13 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 26 ON PARAMETER SET 13 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
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.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 27 ON PARAMETER SET 14 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 28 ON PARAMETER SET 14 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 29 ON PARAMETER SET 15 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 30 ON PARAMETER SET 15 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 31 ON PARAMETER SET 16 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 32 ON PARAMETER SET 16 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
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.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 33 ON PARAMETER SET 17 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 34 ON PARAMETER SET 17 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 35 ON PARAMETER SET 18 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 36 ON PARAMETER SET 18 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 37 ON PARAMETER SET 19 AND COLUMN  1
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED



.....BEGIN SENSITIVITY RUN 38 ON PARAMETER SET 19 AND COLUMN  2
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN  10 ITERATIONS
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.....CONSTITUENT CALCULATIONS COMPLETED


.....EXECUTION COMPLETED
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Wasteload Flow	-30.	1.20	0.0	30.	1.20	0.0
Wasteload Temperature	-2.	1.20	0.0	2.	1.20	0.0
Wasteload DO	-30.	1.20	0.0	30.	1.20	0.0
Wasteload BOD	-30.	1.20	0.0	30.	1.20	0.0
Wasteload Nonconservative	-30.	1.20	0.0	30.	1.20	0.0

SENSITIVITY ANALYSIS SUMMARY

Segments 12-19
CASTOR CREEK SENSITIVITY RUN

Plot 3 Base Model Minimum DO = 0.78

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Stream Baseflow	-30.	0.78	0.0	30.	0.78	0.0
Stream Depth	-30.	0.78	0.0	30.	0.78	0.0
Stream Reaeration	-30.	0.00	-100.0	30.	2.38	206.4
BOD Decay Rate	-30.	0.81	5.0	30.	0.75	-3.8
BOD Settling Rate	-30.	0.74	-5.2	30.	0.80	3.7
Benthal Demand	-30.	2.74	253.5	30.	0.00	-100.0
Nonconservative Decay	-30.	0.79	2.3	30.	0.76	-1.5
Initial Temperature	-2.	1.56	100.6	2.	0.10	-87.6
Nonconservative Settling	-30.	0.76	-2.1	30.	0.79	1.7
Headwater Flow	-30.	0.78	0.0	30.	0.78	0.0
Headwater Temperature	-2.	0.78	0.0	2.	0.78	0.0
Headwater DO	-30.	0.78	0.0	30.	0.78	0.0
Headwater BOD	-30.	0.78	0.0	30.	0.78	0.0
Headwater Nonconservative	-30.	0.78	0.0	30.	0.78	0.0
Wasteload Flow	-30.	0.78	0.0	30.	0.78	0.0
Wasteload Temperature	-2.	0.78	0.0	2.	0.78	0.0
Wasteload DO	-30.	0.78	0.0	30.	0.78	0.0
Wasteload BOD	-30.	0.78	0.0	30.	0.78	0.0
Wasteload Nonconservative	-30.	0.78	0.0	30.	0.78	0.0

SENSITIVITY ANALYSIS SUMMARY

Segments 19-28
CASTOR CREEK SENSITIVITY RUN

Plot 4 Base Model Minimum DO = 0.78

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Stream Baseflow	-30.	0.78	0.0	30.	0.78	0.0
Stream Depth	-30.	0.78	0.0	30.	0.78	0.0
Stream Reaeration	-30.	0.00	-100.0	30.	2.38	206.4
BOD Decay Rate	-30.	0.81	5.0	30.	0.75	-3.8
BOD Settling Rate	-30.	0.74	-5.2	30.	0.80	3.7
Benthal Demand	-30.	2.74	253.5	30.	0.00	-100.0

Nonconservative Decay	-30.	0.79	2.3	30.	0.76	-1.5
Initial Temperature	-2.	1.56	100.6	2.	0.10	-87.6
Nonconservative Settling	-30.	0.76	-2.1	30.	0.79	1.7
Headwater Flow	-30.	0.78	0.0	30.	0.78	0.0
Headwater Temperature	-2.	0.78	0.0	2.	0.78	0.0
Headwater DO	-30.	0.78	0.0	30.	0.78	0.0
Headwater BOD	-30.	0.78	0.0	30.	0.78	0.0
Headwater Nonconservative	-30.	0.78	0.0	30.	0.78	0.0
Wasteload Flow	-30.	0.78	0.0	30.	0.78	0.0
Wasteload Temperature	-2.	0.78	0.0	2.	0.78	0.0
Wasteload DO	-30.	0.78	0.0	30.	0.78	0.0
Wasteload BOD	-30.	0.78	0.0	30.	0.78	0.0
Wasteload Nonconservative	-30.	0.78	0.0	30.	0.78	0.0

SENSITIVITY ANALYSIS SUMMARY

Segments 26-33
CASTOR CREEK SENSITIVITY RUN

Plot 5 Base Model Minimum DO = 0.68

Parameter	%Param Chg	Min D.O.	%D.O. Chg	%Param Chg	Min D.O.	%D.O. Chg
Stream Baseflow	-30.	0.68	-0.5	30.	0.69	0.5
Stream Depth	-30.	0.69	0.9	30.	0.68	-0.3
Stream Reaeration	-30.	0.00	-100.0	30.	2.24	227.8
BOD Decay Rate	-30.	0.71	3.6	30.	0.66	-3.1
BOD Settling Rate	-30.	0.66	-3.4	30.	0.70	2.5
Benthal Demand	-30.	2.67	290.1	30.	0.00	-100.0
Nonconservative Decay	-30.	0.69	0.6	30.	0.68	-0.5
Initial Temperature	-2.	1.49	117.2	2.	0.00	-100.0
Nonconservative Settling	-30.	0.68	-0.7	30.	0.69	0.5
Headwater Flow	-30.	0.68	0.0	30.	0.68	0.0
Headwater Temperature	-2.	0.68	0.0	2.	0.68	0.0
Headwater DO	-30.	0.68	0.0	30.	0.68	0.0
Headwater BOD	-30.	0.68	0.0	30.	0.68	0.0
Headwater Nonconservative	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Flow	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Temperature	-2.	0.68	0.0	2.	0.68	0.0
Wasteload DO	-30.	0.68	0.0	30.	0.68	0.0
Wasteload BOD	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Nonconservative	-30.	0.68	0.0	30.	0.68	0.0

SENSITIVITY ANALYSIS SUMMARY

Segments 31-36
CASTOR CREEK SENSITIVITY RUN

Plot 6 Base Model Minimum DO = 0.68

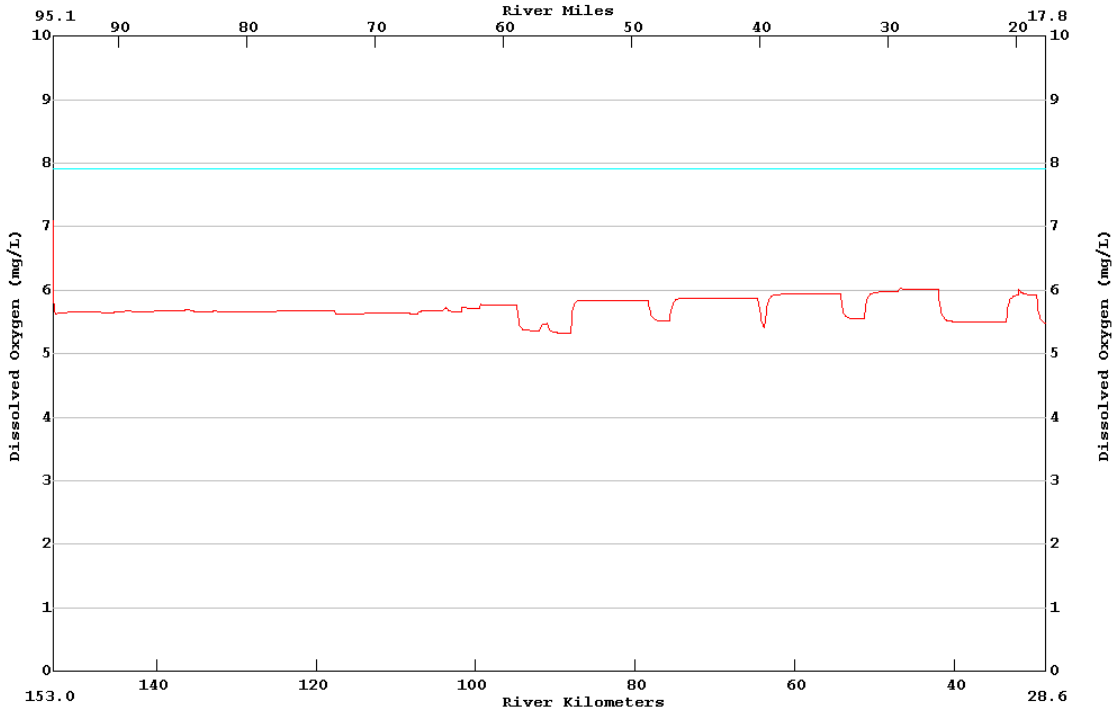
Parameter	%Param	Min	%D.O.	%Param	Min	%D.O.

	Chg	D.O.	Chg	Chg	D.O.	Chg
Stream Baseflow	-30.	0.68	-0.5	30.	0.69	0.5
Stream Depth	-30.	0.69	0.9	30.	0.68	-0.3
Stream Reaeration	-30.	0.00	-100.0	30.	2.24	227.8
BOD Decay Rate	-30.	0.71	3.6	30.	0.66	-3.1
BOD Settling Rate	-30.	0.66	-3.4	30.	0.70	2.5
Benthal Demand	-30.	2.67	290.1	30.	0.00	-100.0
Nonconservative Decay	-30.	0.69	0.6	30.	0.68	-0.5
Initial Temperature	-2.	1.49	117.2	2.	0.00	-100.0
Nonconservative Settling	-30.	0.68	-0.7	30.	0.69	0.5
Headwater Flow	-30.	0.68	0.0	30.	0.68	0.0
Headwater Temperature	-2.	0.68	0.0	2.	0.68	0.0
Headwater DO	-30.	0.68	0.0	30.	0.68	0.0
Headwater BOD	-30.	0.68	0.0	30.	0.68	0.0
Headwater Nonconservative	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Flow	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Temperature	-2.	0.68	0.0	2.	0.68	0.0
Wasteload DO	-30.	0.68	0.0	30.	0.68	0.0
Wasteload BOD	-30.	0.68	0.0	30.	0.68	0.0
Wasteload Nonconservative	-30.	0.68	0.0	30.	0.68	0.0

APPENDIX B - Projection Model Development

APPENDIX B1 - Current summer projection model input/output

LA-QUAL Version 5.02 Run at 11:34 on 02/22/2002 File D:\Castor\Input Files\castorsum5140.txt
CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND min= 5.33 max= 7.10
CASTOR CREEK WATERSHED MODEL



```
LA-QUAL Version 5.02
Louisiana Department of Environmental Quality

Input file is D:\Castor\Input Files\castorsum5140.txt
Output produced at 11:34 on 02/22/2002

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

CARD TYPE       CONTROL TITLES

TITLE01         CASTOR CREEK WATERSHED MODEL
TITLE02         CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND
CNTROL04  YES   METRIC UNITS
CNTROL05  YES   OXYGEN DEPENDENT RATES
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = SULFATES                   IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   NITROGEN
MODOPT08   NO   PHOSPHORUS
MODOPT09   NO   CHLOROPHYLL A
MODOPT10   NO   MACROPHYTES
MODOPT11   NO   COLIFORM
MODOPT12  YES   NONCONSERVATIVE MATERIAL
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         MAXIMUM ITERATION LIMIT            =      1000.00000
PROGRAM         PLOT TYPE                          =         4.00000
PROGRAM         FINAL REPORT TYPE                  =         1.00000
PROGRAM         SPECIAL REPORT TYPE                =         3.00000
PROGRAM         KL MINIMUM                         =         0.70000 meters/day
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
PROGRAM         INHIBITION CONTROL VALUE           =         3.00000
PROGRAM         NH3 OXYGEN UPTAKE RATE             =         4.30000 mg O/mg N
PROGRAM         K2 MAXIMUM                         =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS                =         2.00000 (per day)
PROGRAM         OCEAN EXCHANGE RATIO               =         0.00000
```

ENDATA03

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

CARD TYPE RATE CODE THETA VALUE

ENDATA04

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA05

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA06

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA07

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	CC	HEADWATER CC - MCDOWELL BRANCH	153.00	TO	147.10	0.1000	5.90	59	1	59
REACH ID	2	CC	MCDOWELL BRANCH - HORSE CREEK	147.10	TO	145.50	0.1000	1.60	16	60	75
REACH ID	3	CC	HORSE CREEK - GUICE BRANCH	145.50	TO	144.60	0.1000	0.90	9	76	84
REACH ID	4	CC	GUICE BRANCH - CURR CREEK	144.60	TO	143.30	0.1000	1.30	13	85	97
REACH ID	5	CC	CURR CREEK - POPLAR BRANCH	143.30	TO	140.50	0.1000	2.80	28	98	125
REACH ID	6	CC	POPLAR BRANCH - WHITE BRANCH	140.50	TO	140.40	0.1000	0.10	1	126	126
REACH ID	7	CC	WHITE BRANCH - COLSTON CREEK	140.40	TO	136.60	0.1000	3.80	38	127	164
REACH ID	8	CC	COLSTON CREEK - FOURMILE CREEK	136.60	TO	136.10	0.1000	0.50	5	165	169
REACH ID	9	CC	FOURMILE CREEK - POOL BRANCH	136.10	TO	133.00	0.1000	3.10	31	170	200
REACH ID	10	CC	POOL BRANCH - GINNEY BRANCH	133.00	TO	132.80	0.1000	0.20	2	201	202
REACH ID	11	CC	GINNEY BRANCH - EDWARDS BRANCH	132.80	TO	125.10	0.1000	7.70	77	203	279
REACH ID	12	CC	EDWARDS BRANCH - LITTLE FLAT	125.10	TO	117.70	0.1000	7.40	74	280	353
REACH ID	13	CC	LITTLE FLAT - GLADE CREEK	117.70	TO	114.00	0.1000	3.70	37	354	390
REACH ID	14	CC	GLADE CREEK - CUB CREEK	114.00	TO	108.50	0.1000	5.50	55	391	445
REACH ID	15	CC	CUB CREEK - COW CREEK	108.50	TO	107.30	0.1000	1.20	12	446	457
REACH ID	16	CC	COW CREEK - BEAR CREEK BRANCH	107.30	TO	104.10	0.1000	3.20	32	458	489
REACH ID	17	CC	BEAR CREEK BRANCH - BILES BR	104.10	TO	103.70	0.1000	0.40	4	490	493
REACH ID	18	CC	BILES BRANCH - HURRICANE CR	103.70	TO	101.80	0.1000	1.90	19	494	512
REACH ID	19	CC	HURRICANE CR - INDIAN BRANCH	101.80	TO	99.50	0.1000	2.30	23	513	535

REACH ID	20	CC	INDIAN BRANCH - MOODY CREEK	99.50	TO	96.50	0.1000	3.00	30	536	565
REACH ID	21	CC	MOODY CREEK - BULL CREEK	96.50	TO	94.80	0.1000	1.70	17	566	582
REACH ID	22	CC	BULL CREEK - SWEETWATER CREEK	94.80	TO	92.00	0.1000	2.80	28	583	610
REACH ID	23	CC	SWEETWATER CREEK - BRUSHY CREEK	92.00	TO	91.00	0.1000	1.00	10	611	620
REACH ID	24	CC	BRUSHY CREEK - WHITE OAK CREEK	91.00	TO	88.10	0.1000	2.90	29	621	649
REACH ID	25	CC	WHITE OAK CREEK - BILLS CREEK	88.10	TO	78.40	0.1000	9.70	97	650	746
REACH ID	26	CC	BILLS CREEK - LOST CREEK	78.40	TO	75.70	0.1000	2.70	27	747	773
REACH ID	27	CC	LOST CREEK - MESSER CREEK	75.70	TO	64.60	0.1000	11.10	111	774	884
REACH ID	28	CC	MESSER CREEK - RICHLAND CREEK	64.60	TO	63.80	0.1000	0.80	8	885	892
REACH ID	29	CC	RICHLAND CREEK - PINEY CREEK	63.80	TO	54.20	0.1000	9.60	96	893	988
REACH ID	30	CC	PINEY CREEK - BEAUCOUP CREEK	54.20	TO	51.20	0.1000	3.00	30	989	1018
REACH ID	31	CC	BEAUCOUP CREEK - BANISTER CREEK	51.20	TO	47.00	0.1000	4.20	42	1019	1060
REACH ID	32	CC	BANISTER CREEK - BRUSHY CREEK2	47.00	TO	42.00	0.1000	5.00	50	1061	1110
REACH ID	33	CC	BRUSHY CREEK2 - MCCLELLEN BR	42.00	TO	33.50	0.1000	8.50	85	1111	1195
REACH ID	34	CC	MCCLELLEN BR - FLAT CREEK	33.50	TO	32.00	0.1000	1.50	15	1196	1210
REACH ID	35	CC	FLAT CREEK - SANDY CREEK	32.00	TO	29.70	0.1000	2.30	23	1211	1233
REACH ID	36	CC	SANDY CREEK - HWY 124	29.70	TO	28.60	0.1000	1.10	11	1234	1244

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	2	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	3	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	4	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	5	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	6	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	7	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	8	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	9	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	10	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	11	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	12	CC	0.100	0.400	11.200	0.100	0.400	0.860	0.00000	0.027
HYDR-1	13	CC	0.100	0.400	11.100	0.100	0.400	0.840	0.00000	0.027
HYDR-1	14	CC	0.100	0.400	11.100	0.100	0.400	0.820	0.00000	0.027
HYDR-1	15	CC	0.100	0.400	11.100	0.100	0.400	0.810	0.00000	0.027
HYDR-1	16	CC	0.100	0.400	11.100	0.100	0.400	0.800	0.00000	0.027
HYDR-1	17	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	18	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	19	CC	0.100	0.400	11.000	0.100	0.400	0.780	0.00000	0.027
HYDR-1	20	CC	0.100	0.400	11.000	0.100	0.400	0.770	0.00000	0.027
HYDR-1	21	CC	0.100	0.400	11.000	0.100	0.400	0.760	0.00000	0.027
HYDR-1	22	CC	0.100	0.400	11.000	0.100	0.400	0.750	0.00000	0.027
HYDR-1	23	CC	0.100	0.400	11.000	0.100	0.400	0.740	0.00000	0.027
HYDR-1	24	CC	0.100	0.400	11.000	0.100	0.400	0.730	0.00000	0.027
HYDR-1	25	CC	0.100	0.400	10.900	0.100	0.400	0.710	0.00000	0.027
HYDR-1	26	CC	0.100	0.400	10.900	0.100	0.400	0.680	0.00000	0.027

HYDR-1	27	CC	0.100	0.400	10.800	0.100	0.400	0.650	0.00000	0.027
HYDR-1	28	CC	0.100	0.400	10.800	0.100	0.400	0.630	0.00000	0.027
HYDR-1	29	CC	0.100	0.400	10.800	0.100	0.400	0.610	0.00000	0.027
HYDR-1	30	CC	0.100	0.400	10.700	0.100	0.400	0.580	0.00000	0.027
HYDR-1	31	CC	0.100	0.400	10.700	0.100	0.400	0.570	0.00000	0.027
HYDR-1	32	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	33	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	34	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	35	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	36	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	2	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	3	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	4	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	5	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	8	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	9	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	10	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	11	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	12	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	13	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	14	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	15	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	16	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	17	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	18	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	19	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	20	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	22	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	23	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	24	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	25	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	26	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	27	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00

INITIAL	28	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	29	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	30	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	31	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	32	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	33	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	34	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	35	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	36	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00

ENDATA11

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

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	AEROB BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD DECAY
COEF-1	1	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	2	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	3	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	4	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	5	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	6	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	7	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	8	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	9	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	10	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	11	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	12	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.030	0.050	0.000	0.000
COEF-1	13	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	14	CC	20 K2=a/D	0.700	0.000	0.000	1.100	0.050	0.050	0.000	0.000
COEF-1	15	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.060	0.050	0.000	0.000
COEF-1	16	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.060	0.050	0.000	0.000
COEF-1	17	CC	20 K2=a/D	0.700	0.000	0.000	1.100	0.070	0.050	0.000	0.000
COEF-1	18	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.070	0.050	0.000	0.000
COEF-1	19	CC	20 K2=a/D	0.700	0.000	0.000	1.040	0.070	0.050	0.000	0.000
COEF-1	20	CC	20 K2=a/D	0.700	0.000	0.000	1.000	0.060	0.050	0.000	0.000
COEF-1	21	CC	20 K2=a/D	0.700	0.000	0.000	1.000	0.060	0.050	0.000	0.000
COEF-1	22	CC	20 K2=a/D	0.700	0.000	0.000	1.040	0.060	0.050	0.000	0.000
COEF-1	23	CC	20 K2=a/D	0.700	0.000	0.000	1.060	0.050	0.050	0.000	0.000
COEF-1	24	CC	20 K2=a/D	0.700	0.000	0.000	1.070	0.050	0.050	0.000	0.000
COEF-1	25	CC	20 K2=a/D	0.700	0.000	0.000	1.040	0.040	0.050	0.000	0.000
COEF-1	26	CC	20 K2=a/D	0.700	0.000	0.000	1.030	0.030	0.050	0.000	0.000
COEF-1	27	CC	20 K2=a/D	0.700	0.000	0.000	1.010	0.040	0.050	0.000	0.000
COEF-1	28	CC	20 K2=a/D	0.700	0.000	0.000	0.970	0.040	0.050	0.000	0.000
COEF-1	29	CC	20 K2=a/D	0.700	0.000	0.000	0.960	0.040	0.050	0.000	0.000
COEF-1	30	CC	20 K2=a/D	0.700	0.000	0.000	1.050	0.030	0.050	0.000	0.000
COEF-1	31	CC	20 K2=a/D	0.700	0.000	0.000	0.950	0.030	0.050	0.000	0.000
COEF-1	32	CC	20 K2=a/D	0.700	0.000	0.000	0.940	0.030	0.050	0.000	0.000
COEF-1	33	CC	20 K2=a/D	0.700	0.000	0.000	1.170	0.030	0.050	0.000	0.000

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COEF-1      34   CC  20 K2=a/D           0.700     0.000     0.000     0.950     0.030     0.050     0.000     0.000
COEF-1      35   CC  20 K2=a/D           0.700     0.000     0.000     0.940     0.030     0.050     0.000     0.000
COEF-1      36   CC  20 K2=a/D           0.700     0.000     0.000     1.170     0.030     0.050     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

ENDATA13

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

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

ENDATA14

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

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

COEF-4           1   CC        0.00      0.04      0.05      0.00
COEF-4           2   CC        0.00      0.04      0.05      0.00
COEF-4           3   CC        0.00      0.04      0.05      0.00
COEF-4           4   CC        0.00      0.04      0.05      0.00
COEF-4           5   CC        0.00      0.04      0.05      0.00
COEF-4           6   CC        0.00      0.04      0.05      0.00
COEF-4           7   CC        0.00      0.04      0.05      0.00
COEF-4           8   CC        0.00      0.04      0.05      0.00
COEF-4           9   CC        0.00      0.04      0.05      0.00
COEF-4          10   CC        0.00      0.04      0.05      0.00
COEF-4          11   CC        0.00      0.04      0.05      0.00
COEF-4          12   CC        0.00      0.18      0.05      0.00
COEF-4          13   CC        0.00      0.18      0.05      0.00
COEF-4          14   CC        0.00      0.17      0.05      0.00
COEF-4          15   CC        0.00      0.17      0.05      0.00
COEF-4          16   CC        0.00      0.17      0.05      0.00
COEF-4          17   CC        0.00      0.17      0.05      0.00
COEF-4          18   CC        0.00      0.17      0.05      0.00
COEF-4          19   CC        0.00      0.17      0.05      0.00
COEF-4          20   CC        0.00      0.16      0.05      0.00
COEF-4          21   CC        0.00      0.16      0.05      0.00
COEF-4          22   CC        0.00      0.15      0.05      0.00
COEF-4          23   CC        0.00      0.15      0.05      0.00
COEF-4          24   CC        0.00      0.14      0.05      0.00
COEF-4          25   CC        0.00      0.13      0.05      0.00
COEF-4          26   CC        0.00      0.11      0.05      0.00
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COEF-4           27   CC        0.00      0.10      0.05      0.00
COEF-4           28   CC        0.00      0.09      0.05      0.00
COEF-4           29   CC        0.00      0.11      0.05      0.00
COEF-4           30   CC        0.00      0.13      0.05      0.00
COEF-4           31   CC        0.00      0.14      0.05      0.00
COEF-4           32   CC        0.00      0.14      0.05      0.00
COEF-4           33   CC        0.00      0.06      0.05      0.00
COEF-4           34   CC        0.00      0.06      0.05      0.00
COEF-4           35   CC        0.00      0.07      0.05      0.00
COEF-4           36   CC        0.00      0.09      0.05      0.00
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           32   CC       0.00000     0.02350     27.40      0.00      6.00      4.20   0.00470   0.00000
ENDATA16

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

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

INCR-2           32   CC        7.10      3.32      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           32   CC        0.00      0.00      0.00      0.13
ENDATA18

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

CARD TYPE      REACH  ID         BOD     ORG-N      COLI       NCM        DO

NONPOINT          1   CC        6.00      0.00      0.00      1.00      0.00
NONPOINT          2   CC        2.00      0.00      0.00      0.00      0.00
NONPOINT          3   CC        1.00      0.00      0.00      0.00      0.00
NONPOINT          4   CC        1.00      0.00      0.00      0.00      0.00
NONPOINT          5   CC        3.00      0.00      0.00      0.00      0.00
NONPOINT          6   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT          7   CC        3.00      0.00      0.00      0.00      0.00
NONPOINT          8   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT          9   CC        3.00      0.00      0.00      0.00      0.00
NONPOINT         10   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT         11   CC        7.00      0.00      0.00      1.00      0.00
NONPOINT         12   CC        7.00      0.00      0.00      2.00      0.00
NONPOINT         13   CC        2.00      0.00      0.00      2.00      0.00
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NONPOINT         14   CC        2.00      0.00      0.00      4.00      0.00
NONPOINT         15   CC        1.00      0.00      0.00      1.00      0.00
NONPOINT         16   CC        1.00      0.00      0.00      2.00      0.00
NONPOINT         17   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT         18   CC        1.00      0.00      0.00      1.00      0.00
NONPOINT         19   CC        3.00      0.00      0.00      1.00      0.00
NONPOINT         20   CC        5.00      0.00      0.00      2.00      0.00
NONPOINT         21   CC        3.00      0.00      0.00      1.00      0.00
NONPOINT         22   CC       15.00      0.00      0.00      4.00      0.00
NONPOINT         23   CC        4.00      0.00      0.00      1.00      0.00
NONPOINT         24   CC       16.00      0.00      0.00      4.00      0.00
NONPOINT         25   CC        1.00      0.00      0.00      0.00      0.00
NONPOINT         26   CC       13.00      0.00      0.00      4.00      0.00
NONPOINT         27   CC        3.00      0.00      0.00      2.00      0.00
NONPOINT         28   CC        6.00      0.00      0.00      2.00      0.00
NONPOINT         29   CC        8.00      0.00      0.00      3.00      0.00
NONPOINT         30   CC       12.00      0.00      0.00      3.00      0.00
NONPOINT         31   CC        3.00      0.00      0.00      1.00      0.00
NONPOINT         32   CC        5.00      0.00      0.00      1.00      0.00
NONPOINT         33   CC       15.00      0.00      0.00      2.00      0.00
NONPOINT         34   CC        4.00      0.00      0.00      0.00      0.00
NONPOINT         35   CC        6.00      0.00      0.00      1.00      0.00
NONPOINT         36   CC        2.00      0.00      0.00      0.00      0.00
ENDATA19

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

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

HDWTR-1           1     HEADWATER               0   0.00280    0.099   27.40     0.00     8.300     0.000
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO       BOD     ORG-N       NH3     NO3+2

HDWTR-2           1     HEADWATER                   7.10      3.32      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM

HDWTR-3           1     HEADWATER                    0.00      0.00      0.00      0.13
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
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             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     1211      32.00  FLAT CREEK             0.00280    0.09887    0.064   27.40     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    NITRIF     NO3+2

WSTLD-2        1211     FLAT CREEK                  7.10      2.08      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

WSTLD-3        1211     FLAT CREEK                  0.00      0.00      0.00      0.13
ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                       =     27.400 deg C
LOWER BC     SALINITY                          =      0.000 ppt
LOWER BC     CONSERVATIVE MATERIAL I           =     10.400 MG/L
LOWER BC     CONSERVATIVE MATERIAL II          =      5.000 MG/L
LOWER BC     DISSOLVED OXYGEN                  =      7.100 mg/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND         =      9.580 mg/L
LOWER BC     ORGANIC NITROGEN                  =      0.000 mg/L
LOWER BC     AMMONIA NITROGEN                  =      0.000 mg/L
LOWER BC     NITRATE + NITRITE                 =      0.030 mg/L
LOWER BC     PHOSPHORUS                        =      0.090 mg/L
LOWER BC     CHLOROPHYLL A                     =      0.000 µg/L
LOWER BC     COLIFORM                          =      0.000 #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL          =      0.620
ENDATA27

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

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

ENDATA28
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$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$

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

ENDATA29

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


NUMBER OF PLOTS =  6
NUMBER OF REACHES IN PLOT 1 =  36
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
         25 26 27 28 29 30 31 32 33 34 35 36
NUMBER OF REACHES IN PLOT 2 =  12
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12
NUMBER OF REACHES IN PLOT 3 =   9
PLOT RCH 12 13 14 15 16 17 18 19 20
NUMBER OF REACHES IN PLOT 4 =  10
PLOT RCH 19 20 21 22 23 24 25 26 27 28
NUMBER OF REACHES IN PLOT 5 =   8
PLOT RCH 26 27 28 29 30 31 32 33
NUMBER OF REACHES IN PLOT 6 =   6
PLOT RCH 31 32 33 34 35 36
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   1 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
     .....GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
     .....GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14
     .....GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 15
     .....GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 16


FINAL REPORT    HEADWATER                                       CASTOR CREEK WATERSHED MODEL
REACH NO.  1    HEADWATER CC - MCDOWELL BRANCH                  CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND
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********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1	HDWTR	0.00280	27.40	0.00	8.30	0.00	7.10	3.32	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.13

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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	153.00	152.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
2	152.90	152.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
3	152.80	152.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
4	152.70	152.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
5	152.60	152.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
6	152.50	152.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
7	152.40	152.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
8	152.30	152.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
9	152.20	152.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
10	152.10	152.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
11	152.00	151.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
12	151.90	151.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
13	151.80	151.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
14	151.70	151.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
15	151.60	151.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
16	151.50	151.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
17	151.40	151.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
18	151.30	151.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
19	151.20	151.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
20	151.10	151.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
21	151.00	150.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
22	150.90	150.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
23	150.80	150.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
24	150.70	150.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
25	150.60	150.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
26	150.50	150.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
27	150.40	150.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
28	150.30	150.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
29	150.20	150.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
30	150.10	150.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
31	150.00	149.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
32	149.90	149.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
33	149.80	149.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
34	149.70	149.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
35	149.60	149.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
36	149.50	149.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

37	149.40	149.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
38	149.30	149.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
39	149.20	149.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
40	149.10	149.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
41	149.00	148.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
42	148.90	148.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
43	148.80	148.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
44	148.70	148.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
45	148.60	148.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
46	148.50	148.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
47	148.40	148.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
48	148.30	148.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
49	148.20	148.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
50	148.10	148.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
51	148.00	147.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
52	147.90	147.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
53	147.80	147.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
54	147.70	147.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
55	147.60	147.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
56	147.50	147.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
57	147.40	147.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
58	147.30	147.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
59	147.20	147.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						156.71			37910.36	70266.22					
AVG					0.00044		0.54	11.91			6.43				
CUM						156.71									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	152.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
2	152.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
3	152.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
4	152.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
5	152.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
6	152.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

7	152.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
8	152.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
9	152.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
10	152.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
11	151.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
12	151.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
13	151.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
14	151.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
15	151.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
16	151.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
17	151.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
18	151.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
19	151.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20	151.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
21	150.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
22	150.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
23	150.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
24	150.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
25	150.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
26	150.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
27	150.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
28	150.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
29	150.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
30	150.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
31	149.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

32	149.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
33	149.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
34	149.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
35	149.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
36	149.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
37	149.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
38	149.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
39	149.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
40	149.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
41	148.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
42	148.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
43	148.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
44	148.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
45	148.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
46	148.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
47	148.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
48	148.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
49	148.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
50	148.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
51	147.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
52	147.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
53	147.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
54	147.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
55	147.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
56	147.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

57	147.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
58	147.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
59	147.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1	152.900	27.40	0.00	8.30	0.00	5.90	2.86	2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
2	152.800	27.40	0.00	8.30	0.00	5.67	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
3	152.700	27.40	0.00	8.30	0.00	5.63	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
4	152.600	27.40	0.00	8.30	0.00	5.63	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
5	152.500	27.40	0.00	8.30	0.00	5.63	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
6	152.400	27.40	0.00	8.30	0.00	5.64	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
7	152.300	27.40	0.00	8.30	0.00	5.64	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
8	152.200	27.40	0.00	8.30	0.00	5.64	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
9	152.100	27.40	0.00	8.30	0.00	5.64	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
10	152.000	27.40	0.00	8.30	0.00	5.65	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
11	151.900	27.40	0.00	8.30	0.00	5.65	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
12	151.800	27.40	0.00	8.30	0.00	5.65	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
13	151.700	27.40	0.00	8.30	0.00	5.65	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
14	151.600	27.40	0.00	8.30	0.00	5.65	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
15	151.500	27.40	0.00	8.30	0.00	5.65	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
16	151.400	27.40	0.00	8.30	0.00	5.65	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
17	151.300	27.40	0.00	8.30	0.00	5.65	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
18	151.200	27.40	0.00	8.30	0.00	5.65	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
19	151.100	27.40	0.00	8.30	0.00	5.65	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
20	151.000	27.40	0.00	8.30	0.00	5.65	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
21	150.900	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
22	150.800	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
23	150.700	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
24	150.600	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
25	150.500	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
26	150.400	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
27	150.300	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
28	150.200	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
29	150.100	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
30	150.000	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
31	149.900	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

32	149.800	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
33	149.700	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
34	149.600	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
35	149.500	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
36	149.400	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
37	149.300	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
38	149.200	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
39	149.100	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
40	149.000	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
41	148.900	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
42	148.800	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
43	148.700	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
44	148.600	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
45	148.500	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
46	148.400	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
47	148.300	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
48	148.200	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
49	148.100	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
50	148.000	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
51	147.900	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
52	147.800	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
53	147.700	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
54	147.600	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
55	147.500	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
56	147.400	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
57	147.300	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
58	147.200	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
59	147.100	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 2 MCDOWELL BRANCH - HORSE CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
60	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.65	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.21

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
60	147.10	147.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
61	147.00	146.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
62	146.90	146.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
63	146.80	146.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
64	146.70	146.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
65	146.60	146.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
66	146.50	146.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
67	146.40	146.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
68	146.30	146.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
69	146.20	146.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
70	146.10	146.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
71	146.00	145.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
72	145.90	145.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
73	145.80	145.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
74	145.70	145.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
75	145.60	145.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						42.50			10280.78	19055.24					
AVG					0.00044		0.54	11.91			6.43				
CUM						199.20									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
60	147.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
61	146.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
62	146.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
63	146.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
64	146.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
65	146.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
66	146.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
67	146.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
68	146.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	

0.06																				
69	146.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
70	146.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
71	145.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
72	145.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
73	145.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
74	145.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
75	145.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
60	147.000	27.40	0.00	8.30	0.00	5.65	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
61	146.900	27.40	0.00	8.30	0.00	5.65	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
62	146.800	27.40	0.00	8.30	0.00	5.65	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
63	146.700	27.40	0.00	8.30	0.00	5.65	1.57	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
64	146.600	27.40	0.00	8.30	0.00	5.65	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
65	146.500	27.40	0.00	8.30	0.00	5.65	1.62	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
66	146.400	27.40	0.00	8.30	0.00	5.65	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
67	146.300	27.40	0.00	8.30	0.00	5.65	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
68	146.200	27.40	0.00	8.30	0.00	5.65	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
69	146.100	27.40	0.00	8.30	0.00	5.65	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
70	146.000	27.40	0.00	8.30	0.00	5.65	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
71	145.900	27.40	0.00	8.30	0.00	5.65	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
72	145.800	27.40	0.00	8.30	0.00	5.65	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	145.700	27.40	0.00	8.30	0.00	5.65	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	145.600	27.40	0.00	8.30	0.00	5.65	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	145.500	27.40	0.00	8.30	0.00	5.65	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 3 HORSE CREEK - GUICE BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
76	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.65	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
76	145.50	145.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
77	145.40	145.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
78	145.30	145.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
79	145.20	145.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
80	145.10	145.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
81	145.00	144.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
82	144.90	144.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
83	144.80	144.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
84	144.70	144.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						23.90			5782.94	10718.57					
AVG					0.00044		0.54	11.91			6.43				
CUM						223.11									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
76	145.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
77	145.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
78	145.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
79	145.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

80	145.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
81	144.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
82	144.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
83	144.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
84	144.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
76	145.400	27.40	0.00	8.30	0.00	5.65	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	145.300	27.40	0.00	8.30	0.00	5.65	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	145.200	27.40	0.00	8.30	0.00	5.65	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	145.100	27.40	0.00	8.30	0.00	5.65	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	145.000	27.40	0.00	8.30	0.00	5.65	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	144.900	27.40	0.00	8.30	0.00	5.65	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	144.800	27.40	0.00	8.30	0.00	5.66	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	144.700	27.40	0.00	8.30	0.00	5.66	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	144.600	27.40	0.00	8.30	0.00	5.66	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 4 GUICE BRANCH - CURR CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
85	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.66	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
85	144.60	144.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
86	144.50	144.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
87	144.40	144.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
88	144.30	144.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
89	144.20	144.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
90	144.10	144.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
91	144.00	143.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
92	143.90	143.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
93	143.80	143.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
94	143.70	143.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
95	143.60	143.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
96	143.50	143.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
97	143.40	143.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						34.53			8353.13	15482.38					
AVG					0.00044		0.54	11.91			6.43				
CUM						257.64									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
85	144.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
86	144.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
87	144.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
88	144.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
89	144.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
90	144.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
91	143.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
92	143.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

93	143.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
94	143.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
95	143.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
96	143.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
97	143.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
85	144.500	27.40	0.00	8.30	0.00	5.66	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	144.400	27.40	0.00	8.30	0.00	5.66	1.31	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	144.300	27.40	0.00	8.30	0.00	5.66	1.25	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	144.200	27.40	0.00	8.30	0.00	5.67	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	144.100	27.40	0.00	8.30	0.00	5.67	1.16	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	144.000	27.40	0.00	8.30	0.00	5.67	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	143.900	27.40	0.00	8.30	0.00	5.67	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	143.800	27.40	0.00	8.30	0.00	5.67	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	143.700	27.40	0.00	8.30	0.00	5.67	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	143.600	27.40	0.00	8.30	0.00	5.67	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	143.500	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	143.400	27.40	0.00	8.30	0.00	5.67	1.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	143.300	27.40	0.00	8.30	0.00	5.67	1.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 5 CURR CREEK - POPLAR BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

98	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.67	1.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
98	143.30	143.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
99	143.20	143.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
100	143.10	143.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
101	143.00	142.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
102	142.90	142.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
103	142.80	142.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
104	142.70	142.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
105	142.60	142.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
106	142.50	142.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
107	142.40	142.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
108	142.30	142.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
109	142.20	142.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
110	142.10	142.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
111	142.00	141.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
112	141.90	141.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
113	141.80	141.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
114	141.70	141.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
115	141.60	141.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
116	141.50	141.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
117	141.40	141.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
118	141.30	141.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
119	141.20	141.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
120	141.10	141.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
121	141.00	140.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
122	140.90	140.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
123	140.80	140.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
124	140.70	140.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
125	140.60	140.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						74.37			17991.37	33346.68					
AVG					0.00044		0.54	11.91			6.43				
CUM						332.00									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
98	143.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
99	143.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
100	143.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
101	142.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
102	142.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
103	142.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
104	142.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
105	142.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
106	142.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
107	142.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
108	142.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
109	142.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
110	142.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
111	141.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
112	141.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
113	141.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
114	141.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
115	141.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
116	141.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
117	141.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
118	141.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
119	141.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
120	141.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
121	140.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	

0.06																				
122	140.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
123	140.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
124	140.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
125	140.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
98	143.200	27.40	0.00	8.30	0.00	5.67	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	143.100	27.40	0.00	8.30	0.00	5.67	1.21	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	143.000	27.40	0.00	8.30	0.00	5.67	1.26	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
101	142.900	27.40	0.00	8.30	0.00	5.66	1.31	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102	142.800	27.40	0.00	8.30	0.00	5.66	1.34	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103	142.700	27.40	0.00	8.30	0.00	5.66	1.36	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104	142.600	27.40	0.00	8.30	0.00	5.66	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	142.500	27.40	0.00	8.30	0.00	5.66	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
106	142.400	27.40	0.00	8.30	0.00	5.66	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107	142.300	27.40	0.00	8.30	0.00	5.66	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108	142.200	27.40	0.00	8.30	0.00	5.66	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109	142.100	27.40	0.00	8.30	0.00	5.66	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	142.000	27.40	0.00	8.30	0.00	5.66	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
111	141.900	27.40	0.00	8.30	0.00	5.66	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112	141.800	27.40	0.00	8.30	0.00	5.66	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113	141.700	27.40	0.00	8.30	0.00	5.66	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
114	141.600	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	141.500	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
116	141.400	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117	141.300	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	141.200	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	141.100	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	141.000	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	140.900	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122	140.800	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	140.700	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
124	140.600	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	140.500	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 6 POPLAR BRANCH - WHITE BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
126	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.66	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
126	140.50	140.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						2.66			642.55	1190.95					
AVG					0.00044		0.54	11.91			6.43				
CUM						334.66									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
126	140.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	0.05
AVG 20 DEG C RATE			1.30		0.05						0.00									

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
126	140.400	27.40	0.00	8.30	0.00	5.67	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 7 WHITE BRANCH - COLSTON CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
127	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.67	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
127	140.40	140.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
128	140.30	140.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
129	140.20	140.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
130	140.10	140.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
131	140.00	139.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
132	139.90	139.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
133	139.80	139.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
134	139.70	139.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
135	139.60	139.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
136	139.50	139.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
137	139.40	139.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
138	139.30	139.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
139	139.20	139.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
140	139.10	139.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
141	139.00	138.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
142	138.90	138.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
143	138.80	138.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
144	138.70	138.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
145	138.60	138.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
146	138.50	138.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

147	138.40	138.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
148	138.30	138.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
149	138.20	138.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
150	138.10	138.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
151	138.00	137.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
152	137.90	137.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
153	137.80	137.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
154	137.70	137.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
155	137.60	137.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
156	137.50	137.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
157	137.40	137.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
158	137.30	137.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
159	137.20	137.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
160	137.10	137.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
161	137.00	136.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
162	136.90	136.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
163	136.80	136.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
164	136.70	136.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						100.93			24416.85	45256.21					
AVG					0.00044		0.54	11.91			6.43				
CUM						435.59									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
127	140.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
128	140.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
129	140.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
130	140.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
131	139.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
132	139.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
133	139.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
134	139.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
135	139.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	

136	139.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
137	139.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
138	139.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
139	139.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
140	139.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
141	138.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
142	138.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
143	138.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
144	138.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
145	138.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
146	138.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
147	138.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
148	138.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
149	138.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
150	138.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
151	137.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
152	137.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
153	137.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
154	137.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
155	137.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
156	137.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
157	137.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
158	137.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
159	137.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
160	137.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	

0.06																				
161	136.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
162	136.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
163	136.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
164	136.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	
0.06																				
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
127	140.300	27.40	0.00	8.30	0.00	5.67	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	140.200	27.40	0.00	8.30	0.00	5.67	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	140.100	27.40	0.00	8.30	0.00	5.67	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	140.000	27.40	0.00	8.30	0.00	5.67	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131	139.900	27.40	0.00	8.30	0.00	5.67	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132	139.800	27.40	0.00	8.30	0.00	5.67	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133	139.700	27.40	0.00	8.30	0.00	5.67	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
134	139.600	27.40	0.00	8.30	0.00	5.67	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	139.500	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	139.400	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137	139.300	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
138	139.200	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139	139.100	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	139.000	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	138.900	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142	138.800	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
143	138.700	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
144	138.600	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	138.500	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	138.400	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147	138.300	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148	138.200	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149	138.100	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	138.000	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
151	137.900	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152	137.800	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153	137.700	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154	137.600	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

155	137.500	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
156	137.400	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157	137.300	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
158	137.200	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	137.100	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	137.000	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
161	136.900	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162	136.800	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163	136.700	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164	136.600	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 8 COLSTON CREEK - FOURMILE CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
165	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
165	136.60	136.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
166	136.50	136.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
167	136.40	136.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
168	136.30	136.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
169	136.20	136.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						13.28			3212.74	5954.76					
AVG					0.00044		0.54	11.91			6.43				
CUM						448.87									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
165	136.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
166	136.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
167	136.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
168	136.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
169	136.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
165	136.500	27.40	0.00	8.30	0.00	5.68	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	136.400	27.40	0.00	8.30	0.00	5.69	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167	136.300	27.40	0.00	8.30	0.00	5.69	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168	136.200	27.40	0.00	8.30	0.00	5.70	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
169	136.100	27.40	0.00	8.30	0.00	5.70	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 9 FOURMILE CREEK - POOL BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
170	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.70	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
170	136.10	136.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
171	136.00	135.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
172	135.90	135.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
173	135.80	135.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
174	135.70	135.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
175	135.60	135.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
176	135.50	135.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
177	135.40	135.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
178	135.30	135.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
179	135.20	135.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
180	135.10	135.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
181	135.00	134.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
182	134.90	134.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
183	134.80	134.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
184	134.70	134.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
185	134.60	134.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
186	134.50	134.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
187	134.40	134.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
188	134.30	134.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
189	134.20	134.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
190	134.10	134.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
191	134.00	133.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
192	133.90	133.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
193	133.80	133.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
194	133.70	133.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
195	133.60	133.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
196	133.50	133.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
197	133.40	133.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
198	133.30	133.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
199	133.20	133.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
200	133.10	133.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						82.34			19919.01	36919.54					
AVG					0.00044		0.54	11.91			6.43				
CUM						531.21									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

170	136.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
171	135.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
172	135.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
173	135.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
174	135.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
175	135.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
176	135.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
177	135.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
178	135.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
179	135.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
180	135.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
181	134.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
182	134.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
183	134.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
184	134.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
185	134.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
186	134.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
187	134.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
188	134.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
189	134.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
190	134.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
191	133.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
192	133.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
193	133.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			

194	133.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
195	133.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
196	133.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
197	133.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
198	133.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
199	133.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
200	133.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
170	136.000	27.40	0.00	8.30	0.00	5.69	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
171	135.900	27.40	0.00	8.30	0.00	5.69	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	135.800	27.40	0.00	8.30	0.00	5.68	0.84	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173	135.700	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
174	135.600	27.40	0.00	8.30	0.00	5.67	1.03	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	135.500	27.40	0.00	8.30	0.00	5.67	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
176	135.400	27.40	0.00	8.30	0.00	5.67	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	135.300	27.40	0.00	8.30	0.00	5.67	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	135.200	27.40	0.00	8.30	0.00	5.67	1.21	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	135.100	27.40	0.00	8.30	0.00	5.67	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	135.000	27.40	0.00	8.30	0.00	5.67	1.25	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	134.900	27.40	0.00	8.30	0.00	5.67	1.26	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
182	134.800	27.40	0.00	8.30	0.00	5.66	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183	134.700	27.40	0.00	8.30	0.00	5.66	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
184	134.600	27.40	0.00	8.30	0.00	5.66	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
185	134.500	27.40	0.00	8.30	0.00	5.66	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
186	134.400	27.40	0.00	8.30	0.00	5.66	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187	134.300	27.40	0.00	8.30	0.00	5.66	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188	134.200	27.40	0.00	8.30	0.00	5.66	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
189	134.100	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
190	134.000	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191	133.900	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192	133.800	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

193	133.700	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	133.600	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	133.500	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
196	133.400	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	133.300	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	133.200	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
199	133.100	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	133.000	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 10 POOL BRANCH - GINNEY BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
201	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.66	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
201	133.00	132.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
202	132.90	132.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						5.31			1285.10	2381.91					
AVG					0.00044		0.54	11.91			6.43				
CUM						536.52									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
201	132.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	

0.06
202 132.800 7.91 1.49 0.06 0.06 0.00 1.77 1.77 1.77 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07
0.06

20 DEG C RATE 0.04 0.00 1.11 0.00 0.00 0.00 0.00 0.00 0.00
AVG 20 DEG C RATE 1.30 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
201	132.900	27.40	0.00	8.30	0.00	5.67	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	132.800	27.40	0.00	8.30	0.00	5.68	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 11 GINNEY BRANCH - EDWARDS BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
203	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.68	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
203	132.80	132.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
204	132.70	132.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
205	132.60	132.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
206	132.50	132.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
207	132.40	132.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
208	132.30	132.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
209	132.20	132.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
210	132.10	132.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

211	132.00	131.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
212	131.90	131.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
213	131.80	131.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
214	131.70	131.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
215	131.60	131.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
216	131.50	131.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
217	131.40	131.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
218	131.30	131.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
219	131.20	131.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
220	131.10	131.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
221	131.00	130.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
222	130.90	130.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
223	130.80	130.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
224	130.70	130.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
225	130.60	130.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
226	130.50	130.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
227	130.40	130.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
228	130.30	130.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
229	130.20	130.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
230	130.10	130.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
231	130.00	129.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
232	129.90	129.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
233	129.80	129.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
234	129.70	129.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
235	129.60	129.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
236	129.50	129.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
237	129.40	129.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
238	129.30	129.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
239	129.20	129.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
240	129.10	129.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
241	129.00	128.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
242	128.90	128.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
243	128.80	128.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
244	128.70	128.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
245	128.60	128.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
246	128.50	128.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
247	128.40	128.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
248	128.30	128.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
249	128.20	128.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
250	128.10	128.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
251	128.00	127.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
252	127.90	127.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
253	127.80	127.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
254	127.70	127.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
255	127.60	127.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
256	127.50	127.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
257	127.40	127.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
258	127.30	127.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
259	127.20	127.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
260	127.10	127.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

261	127.00	126.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
262	126.90	126.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
263	126.80	126.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
264	126.70	126.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
265	126.60	126.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
266	126.50	126.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
267	126.40	126.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
268	126.30	126.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
269	126.20	126.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
270	126.10	126.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
271	126.00	125.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
272	125.90	125.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
273	125.80	125.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
274	125.70	125.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
275	125.60	125.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
276	125.50	125.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
277	125.40	125.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
278	125.30	125.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
279	125.20	125.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						204.51			49476.21	91703.38					
AVG					0.00044		0.54	11.91			6.43				
CUM						741.04									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
203	132.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
204	132.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
205	132.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
206	132.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
207	132.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
208	132.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
209	132.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
210	132.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

211	131.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
212	131.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
213	131.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
214	131.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
215	131.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
216	131.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
217	131.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
218	131.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
219	131.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
220	131.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
221	130.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
222	130.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
223	130.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
224	130.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
225	130.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
226	130.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
227	130.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
228	130.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
229	130.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
230	130.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
231	129.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
232	129.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
233	129.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
234	129.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
235	129.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

236	129.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
237	129.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
238	129.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
239	129.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
240	129.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
241	128.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
242	128.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
243	128.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
244	128.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
245	128.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
246	128.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
247	128.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
248	128.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
249	128.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
250	128.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
251	127.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
252	127.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
253	127.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
254	127.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
255	127.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
256	127.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
257	127.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
258	127.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
259	127.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
260	127.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

261	126.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
262	126.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
263	126.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
264	126.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
265	126.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
266	126.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
267	126.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
268	126.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
269	126.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
270	126.000	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
271	125.900	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
272	125.800	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
273	125.700	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
274	125.600	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
275	125.500	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
276	125.400	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
277	125.300	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
278	125.200	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
279	125.100	7.91	1.49	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

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

203	132.700	27.40	0.00	8.30	0.00	5.68	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
204	132.600	27.40	0.00	8.30	0.00	5.67	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
205	132.500	27.40	0.00	8.30	0.00	5.67	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
206	132.400	27.40	0.00	8.30	0.00	5.67	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
207	132.300	27.40	0.00	8.30	0.00	5.67	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
208	132.200	27.40	0.00	8.30	0.00	5.66	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
209	132.100	27.40	0.00	8.30	0.00	5.66	1.15	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
210	132.000	27.40	0.00	8.30	0.00	5.66	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
211	131.900	27.40	0.00	8.30	0.00	5.66	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
212	131.800	27.40	0.00	8.30	0.00	5.66	1.19	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
213	131.700	27.40	0.00	8.30	0.00	5.66	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
214	131.600	27.40	0.00	8.30	0.00	5.66	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
215	131.500	27.40	0.00	8.30	0.00	5.66	1.21	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
216	131.400	27.40	0.00	8.30	0.00	5.66	1.21	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
217	131.300	27.40	0.00	8.30	0.00	5.66	1.21	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
218	131.200	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
219	131.100	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
220	131.000	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
221	130.900	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
222	130.800	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
223	130.700	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
224	130.600	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
225	130.500	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
226	130.400	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
227	130.300	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
228	130.200	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
229	130.100	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
230	130.000	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
231	129.900	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
232	129.800	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
233	129.700	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
234	129.600	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
235	129.500	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
236	129.400	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
237	129.300	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
238	129.200	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
239	129.100	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
240	129.000	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
241	128.900	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
242	128.800	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
243	128.700	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
244	128.600	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
245	128.500	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
246	128.400	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
247	128.300	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
248	128.200	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
249	128.100	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
250	128.000	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
251	127.900	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

252	127.800	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
253	127.700	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
254	127.600	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
255	127.500	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
256	127.400	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
257	127.300	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
258	127.200	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
259	127.100	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
260	127.000	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
261	126.900	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
262	126.800	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
263	126.700	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
264	126.600	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
265	126.500	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
266	126.400	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
267	126.300	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
268	126.200	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
269	126.100	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
270	126.000	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
271	125.900	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
272	125.800	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
273	125.700	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
274	125.600	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
275	125.500	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
276	125.400	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
277	125.300	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
278	125.200	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
279	125.100	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 12 EDWARDS BRANCH - LITTLE FLAT CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
280	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.66	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.16

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
280	125.10	125.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
281	125.00	124.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
282	124.90	124.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
283	124.80	124.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
284	124.70	124.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
285	124.60	124.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
286	124.50	124.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
287	124.40	124.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
288	124.30	124.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
289	124.20	124.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
290	124.10	124.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
291	124.00	123.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
292	123.90	123.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
293	123.80	123.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
294	123.70	123.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
295	123.60	123.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
296	123.50	123.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
297	123.40	123.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
298	123.30	123.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
299	123.20	123.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
300	123.10	123.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
301	123.00	122.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
302	122.90	122.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
303	122.80	122.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
304	122.70	122.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
305	122.60	122.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
306	122.50	122.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
307	122.40	122.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
308	122.30	122.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
309	122.20	122.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
310	122.10	122.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
311	122.00	121.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
312	121.90	121.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
313	121.80	121.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
314	121.70	121.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
315	121.60	121.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
316	121.50	121.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
317	121.40	121.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
318	121.30	121.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
319	121.20	121.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
320	121.10	121.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
321	121.00	120.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
322	120.90	120.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
323	120.80	120.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
324	120.70	120.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
325	120.60	120.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
326	120.50	120.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
327	120.40	120.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000

328	120.30	120.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
329	120.20	120.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
330	120.10	120.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
331	120.00	119.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
332	119.90	119.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
333	119.80	119.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
334	119.70	119.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
335	119.60	119.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
336	119.50	119.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
337	119.40	119.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
338	119.30	119.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
339	119.20	119.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
340	119.10	119.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
341	119.00	118.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
342	118.90	118.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
343	118.80	118.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
344	118.70	118.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
345	118.60	118.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
346	118.50	118.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
347	118.40	118.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
348	118.30	118.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
349	118.20	118.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
350	118.10	118.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
351	118.00	117.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
352	117.90	117.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
353	117.80	117.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
TOT						298.15			72127.47	82950.52					
AVG					0.00029		0.87	11.21			9.75				
CUM						1039.18									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
280	125.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
281	124.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
282	124.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
283	124.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
284	124.600	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	

285	124.500	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
286	124.400	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
287	124.300	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
288	124.200	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
289	124.100	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
290	124.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
291	123.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
292	123.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
293	123.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
294	123.600	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
295	123.500	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
296	123.400	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
297	123.300	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
298	123.200	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
299	123.100	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
300	123.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
301	122.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
302	122.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
303	122.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
304	122.600	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
305	122.500	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
306	122.400	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
307	122.300	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
308	122.200	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
309	122.100	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	

0.06																			
310	122.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
311	121.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
312	121.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
313	121.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
314	121.600	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
315	121.500	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
316	121.400	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
317	121.300	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
318	121.200	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
319	121.100	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
320	121.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
321	120.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
322	120.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
323	120.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
324	120.600	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
325	120.500	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
326	120.400	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
327	120.300	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
328	120.200	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
329	120.100	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
330	120.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
331	119.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
332	119.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
333	119.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
334	119.600	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30

335	119.500	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
336	119.400	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
337	119.300	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
338	119.200	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
339	119.100	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
340	119.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
341	118.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
342	118.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
343	118.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
344	118.600	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
345	118.500	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
346	118.400	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
347	118.300	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
348	118.200	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
349	118.100	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
350	118.000	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
351	117.900	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
352	117.800	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
353	117.700	7.91	0.93	0.04	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
20 DEG C RATE				0.03		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.18	
AVG 20 DEG C RATE			0.81		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM	ENDING	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	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	µg/L	**	#/100mL	*
280	125.000	27.40	0.00	8.30	0.00	5.66	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
281	124.900	27.40	0.00	8.30	0.00	5.67	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
282	124.800	27.40	0.00	8.30	0.00	5.68	1.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
283	124.700	27.40	0.00	8.30	0.00	5.68	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
284	124.600	27.40	0.00	8.30	0.00	5.68	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
285	124.500	27.40	0.00	8.30	0.00	5.68	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
286	124.400	27.40	0.00	8.30	0.00	5.68	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
287	124.300	27.40	0.00	8.30	0.00	5.68	0.97	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
288	124.200	27.40	0.00	8.30	0.00	5.68	0.97	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
289	124.100	27.40	0.00	8.30	0.00	5.68	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
290	124.000	27.40	0.00	8.30	0.00	5.68	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
291	123.900	27.40	0.00	8.30	0.00	5.68	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
292	123.800	27.40	0.00	8.30	0.00	5.68	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
293	123.700	27.40	0.00	8.30	0.00	5.68	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
294	123.600	27.40	0.00	8.30	0.00	5.68	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
295	123.500	27.40	0.00	8.30	0.00	5.68	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
296	123.400	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
297	123.300	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
298	123.200	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
299	123.100	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
300	123.000	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
301	122.900	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
302	122.800	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
303	122.700	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
304	122.600	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
305	122.500	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
306	122.400	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
307	122.300	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
308	122.200	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
309	122.100	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
310	122.000	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
311	121.900	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
312	121.800	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
313	121.700	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
314	121.600	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
315	121.500	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
316	121.400	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
317	121.300	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
318	121.200	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
319	121.100	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
320	121.000	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
321	120.900	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
322	120.800	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
323	120.700	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
324	120.600	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
325	120.500	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
326	120.400	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
327	120.300	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08

328	120.200	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
329	120.100	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
330	120.000	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
331	119.900	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
332	119.800	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
333	119.700	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
334	119.600	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
335	119.500	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
336	119.400	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
337	119.300	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
338	119.200	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
339	119.100	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
340	119.000	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
341	118.900	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
342	118.800	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
343	118.700	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
344	118.600	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
345	118.500	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
346	118.400	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
347	118.300	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
348	118.200	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
349	118.100	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
350	118.000	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
351	117.900	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
352	117.800	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
353	117.700	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 13 LITTLE FLAT - GLADE CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
354	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.68	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.08

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

354	117.70	117.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
355	117.60	117.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
356	117.50	117.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
357	117.40	117.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
358	117.30	117.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
359	117.20	117.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
360	117.10	117.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
361	117.00	116.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
362	116.90	116.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
363	116.80	116.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
364	116.70	116.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
365	116.60	116.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
366	116.50	116.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
367	116.40	116.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
368	116.30	116.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
369	116.20	116.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
370	116.10	116.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
371	116.00	115.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
372	115.90	115.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
373	115.80	115.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
374	115.70	115.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
375	115.60	115.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
376	115.50	115.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
377	115.40	115.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
378	115.30	115.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
379	115.20	115.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
380	115.10	115.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
381	115.00	114.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
382	114.90	114.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
383	114.80	114.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
384	114.70	114.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
385	114.60	114.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
386	114.50	114.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
387	114.40	114.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
388	114.30	114.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
389	114.20	114.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
390	114.10	114.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
TOT						144.34			34919.92	41105.25					
AVG					0.00030		0.85	11.11			9.44				
CUM						1183.53									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

354	117.600	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
355	117.500	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
356	117.400	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
357	117.300	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
358	117.200	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
359	117.100	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
360	117.000	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
361	116.900	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
362	116.800	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
363	116.700	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
364	116.600	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
365	116.500	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
366	116.400	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
367	116.300	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
368	116.200	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
369	116.100	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
370	116.000	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
371	115.900	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
372	115.800	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
373	115.700	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
374	115.600	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
375	115.500	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
376	115.400	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
377	115.300	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			

378	115.200	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
379	115.100	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
380	115.000	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
381	114.900	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
382	114.800	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
383	114.700	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
384	114.600	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
385	114.500	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
386	114.400	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
387	114.300	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
388	114.200	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
389	114.100	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
390	114.000	7.91	0.95	0.06	0.06	0.00	1.77	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.18	
AVG 20 DEG C RATE			0.82		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
354	117.600	27.40	0.00	8.30	0.00	5.64	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
355	117.500	27.40	0.00	8.30	0.00	5.63	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
356	117.400	27.40	0.00	8.30	0.00	5.63	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
357	117.300	27.40	0.00	8.30	0.00	5.63	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
358	117.200	27.40	0.00	8.30	0.00	5.63	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
359	117.100	27.40	0.00	8.30	0.00	5.63	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
360	117.000	27.40	0.00	8.30	0.00	5.63	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
361	116.900	27.40	0.00	8.30	0.00	5.63	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
362	116.800	27.40	0.00	8.30	0.00	5.63	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
363	116.700	27.40	0.00	8.30	0.00	5.63	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
364	116.600	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

365	116.500	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
366	116.400	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
367	116.300	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
368	116.200	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
369	116.100	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
370	116.000	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
371	115.900	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
372	115.800	27.40	0.00	8.30	0.00	5.63	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
373	115.700	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
374	115.600	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
375	115.500	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
376	115.400	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
377	115.300	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
378	115.200	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
379	115.100	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
380	115.000	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
381	114.900	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
382	114.800	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
383	114.700	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
384	114.600	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
385	114.500	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
386	114.400	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
387	114.300	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
388	114.200	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
389	114.100	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
390	114.000	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 14 GLADE CREEK - CUB CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
391	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.63	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.16

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

391	114.00	113.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
392	113.90	113.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
393	113.80	113.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
394	113.70	113.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
395	113.60	113.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
396	113.50	113.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
397	113.40	113.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
398	113.30	113.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
399	113.20	113.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
400	113.10	113.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
401	113.00	112.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
402	112.90	112.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
403	112.80	112.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
404	112.70	112.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
405	112.60	112.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
406	112.50	112.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
407	112.40	112.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
408	112.30	112.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
409	112.20	112.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
410	112.10	112.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
411	112.00	111.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
412	111.90	111.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
413	111.80	111.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
414	111.70	111.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
415	111.60	111.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
416	111.50	111.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
417	111.40	111.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
418	111.30	111.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
419	111.20	111.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
420	111.10	111.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
421	111.00	110.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
422	110.90	110.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
423	110.80	110.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
424	110.70	110.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
425	110.60	110.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
426	110.50	110.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
427	110.40	110.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
428	110.30	110.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
429	110.20	110.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
430	110.10	110.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
431	110.00	109.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
432	109.90	109.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
433	109.80	109.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
434	109.70	109.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
435	109.60	109.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
436	109.50	109.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
437	109.40	109.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
438	109.30	109.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
439	109.20	109.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
440	109.10	109.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000

441	109.00	108.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
442	108.90	108.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
443	108.80	108.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
444	108.70	108.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
445	108.60	108.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
TOT						209.52			50685.94	61102.41					
AVG					0.00030		0.83	11.11			9.22				
CUM						1393.04									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
391	113.900	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
392	113.800	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
393	113.700	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
394	113.600	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
395	113.500	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
396	113.400	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
397	113.300	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
398	113.200	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
399	113.100	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
400	113.000	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
401	112.900	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
402	112.800	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
403	112.700	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
404	112.600	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
405	112.500	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06

406	112.400	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
407	112.300	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
408	112.200	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
409	112.100	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
410	112.000	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
411	111.900	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
412	111.800	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
413	111.700	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
414	111.600	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
415	111.500	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
416	111.400	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
417	111.300	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
418	111.200	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
419	111.100	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
420	111.000	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
421	110.900	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
422	110.800	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
423	110.700	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
424	110.600	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
425	110.500	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
426	110.400	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
427	110.300	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
428	110.200	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
429	110.100	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
430	110.000	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06

431	109.900	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
432	109.800	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
433	109.700	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
434	109.600	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
435	109.500	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
436	109.400	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
437	109.300	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
438	109.200	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
439	109.100	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
440	109.000	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
441	108.900	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
442	108.800	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
443	108.700	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
444	108.600	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
445	108.500	7.91	0.97	0.07	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
20 DEG C RATE				0.05		0.00	1.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.84		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
391	113.900	27.40	0.00	8.30	0.00	5.64	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
392	113.800	27.40	0.00	8.30	0.00	5.64	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
393	113.700	27.40	0.00	8.30	0.00	5.64	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
394	113.600	27.40	0.00	8.30	0.00	5.64	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
395	113.500	27.40	0.00	8.30	0.00	5.64	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
396	113.400	27.40	0.00	8.30	0.00	5.64	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
397	113.300	27.40	0.00	8.30	0.00	5.64	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23

398	113.200	27.40	0.00	8.30	0.00	5.64	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
399	113.100	27.40	0.00	8.30	0.00	5.64	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
400	113.000	27.40	0.00	8.30	0.00	5.64	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
401	112.900	27.40	0.00	8.30	0.00	5.64	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
402	112.800	27.40	0.00	8.30	0.00	5.64	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
403	112.700	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
404	112.600	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
405	112.500	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
406	112.400	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
407	112.300	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
408	112.200	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
409	112.100	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
410	112.000	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
411	111.900	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
412	111.800	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
413	111.700	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
414	111.600	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
415	111.500	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
416	111.400	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
417	111.300	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
418	111.200	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
419	111.100	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
420	111.000	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
421	110.900	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
422	110.800	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
423	110.700	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
424	110.600	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
425	110.500	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
426	110.400	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
427	110.300	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
428	110.200	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
429	110.100	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
430	110.000	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
431	109.900	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
432	109.800	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
433	109.700	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
434	109.600	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
435	109.500	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
436	109.400	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
437	109.300	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
438	109.200	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
439	109.100	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
440	109.000	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
441	108.900	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
442	108.800	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
443	108.700	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
444	108.600	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
445	108.500	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23

* CM-I = CHLORIDES CM-II = SULFATES NCM =

MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 15 CUB CREEK - COW CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
446	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.64	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.23

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
446	108.50	108.40	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
447	108.40	108.30	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
448	108.30	108.20	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
449	108.20	108.10	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
450	108.10	108.00	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
451	108.00	107.90	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
452	107.90	107.80	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
453	107.80	107.70	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
454	107.70	107.60	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
455	107.60	107.50	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
456	107.50	107.40	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
457	107.40	107.30	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
TOT						45.16			10925.44	13331.43					
AVG					0.00031		0.82	11.11			9.10				
CUM						1438.20									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
446	108.400	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	

0.06																				
447	108.300	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
448	108.200	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
449	108.100	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
450	108.000	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
451	107.900	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
452	107.800	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
453	107.700	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
454	107.600	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
455	107.500	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
456	107.400	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
457	107.300	7.91	0.98	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	
0.06																				
20 DEG C RATE				0.06		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.85		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
446	108.400	27.40	0.00	8.30	0.00	5.64	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
447	108.300	27.40	0.00	8.30	0.00	5.64	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
448	108.200	27.40	0.00	8.30	0.00	5.63	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
449	108.100	27.40	0.00	8.30	0.00	5.63	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
450	108.000	27.40	0.00	8.30	0.00	5.62	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
451	107.900	27.40	0.00	8.30	0.00	5.62	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
452	107.800	27.40	0.00	8.30	0.00	5.62	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
453	107.700	27.40	0.00	8.30	0.00	5.62	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
454	107.600	27.40	0.00	8.30	0.00	5.62	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
455	107.500	27.40	0.00	8.30	0.00	5.62	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
456	107.400	27.40	0.00	8.30	0.00	5.62	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
457	107.300	27.40	0.00	8.30	0.00	5.62	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27

* CM-I = CHLORIDES CM-II = SULFATES NCM =

MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 16 COW CREEK - BEAR CREEK BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
458	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.62	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.27

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
458	107.30	107.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
459	107.20	107.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
460	107.10	107.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
461	107.00	106.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
462	106.90	106.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
463	106.80	106.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
464	106.70	106.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
465	106.60	106.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
466	106.50	106.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
467	106.40	106.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
468	106.30	106.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
469	106.20	106.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
470	106.10	106.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
471	106.00	105.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
472	105.90	105.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
473	105.80	105.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
474	105.70	105.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
475	105.60	105.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
476	105.50	105.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
477	105.40	105.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
478	105.30	105.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
479	105.20	105.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
480	105.10	105.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
481	105.00	104.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
482	104.90	104.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
483	104.80	104.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
484	104.70	104.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
485	104.60	104.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000

486	104.50	104.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
487	104.40	104.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
488	104.30	104.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
489	104.20	104.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
TOT						118.96			28779.00	35550.49					
AVG					0.00031		0.81	11.11			8.99				
CUM						1557.16									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
458	107.200	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
459	107.100	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
460	107.000	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
461	106.900	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
462	106.800	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
463	106.700	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
464	106.600	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
465	106.500	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
466	106.400	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
467	106.300	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
468	106.200	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
469	106.100	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
470	106.000	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
471	105.900	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
472	105.800	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
473	105.700	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	

474	105.600	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
475	105.500	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
476	105.400	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
477	105.300	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
478	105.200	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
479	105.100	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
480	105.000	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
481	104.900	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
482	104.800	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
483	104.700	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
484	104.600	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
485	104.500	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
486	104.400	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
487	104.300	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
488	104.200	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
489	104.100	7.91	0.99	0.08	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
20 DEG C RATE				0.06		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.86		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
458	107.200	27.40	0.00	8.30	0.00	5.64	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
459	107.100	27.40	0.00	8.30	0.00	5.65	0.41	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
460	107.000	27.40	0.00	8.30	0.00	5.66	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
461	106.900	27.40	0.00	8.30	0.00	5.67	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

462	106.800	27.40	0.00	8.30	0.00	5.67	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
463	106.700	27.40	0.00	8.30	0.00	5.67	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
464	106.600	27.40	0.00	8.30	0.00	5.67	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
465	106.500	27.40	0.00	8.30	0.00	5.67	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
466	106.400	27.40	0.00	8.30	0.00	5.67	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
467	106.300	27.40	0.00	8.30	0.00	5.67	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
468	106.200	27.40	0.00	8.30	0.00	5.67	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
469	106.100	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
470	106.000	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
471	105.900	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
472	105.800	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
473	105.700	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
474	105.600	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
475	105.500	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
476	105.400	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
477	105.300	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
478	105.200	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
479	105.100	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
480	105.000	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
481	104.900	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
482	104.800	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
483	104.700	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
484	104.600	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
485	104.500	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
486	104.400	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
487	104.300	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
488	104.200	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
489	104.100	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 17 BEAR CREEK BRANCH - BILES BR CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
490	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.67	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.20

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
490	104.10	104.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
491	104.00	103.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
492	103.90	103.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
493	103.80	103.70	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
TOT						14.55			3520.96	4403.81					
AVG					0.00032		0.80	11.01			8.80				
CUM						1571.72									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
490	104.000	7.91	1.01	0.10	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
491	103.900	7.91	1.01	0.10	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
492	103.800	7.91	1.01	0.10	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
493	103.700	7.91	1.01	0.10	0.06	0.00	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
20 DEG C RATE				0.07		0.00	1.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.88		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
490	104.000	27.40	0.00	8.30	0.00	5.69	0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
491	103.900	27.40	0.00	8.30	0.00	5.71	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
492	103.800	27.40	0.00	8.30	0.00	5.72	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
493	103.700	27.40	0.00	8.30	0.00	5.72	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 18 BILES BRANCH - HURRICANE CR CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
494	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.72	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
494	103.70	103.60	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
495	103.60	103.50	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
496	103.50	103.40	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
497	103.40	103.30	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
498	103.30	103.20	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
499	103.20	103.10	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
500	103.10	103.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
501	103.00	102.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
502	102.90	102.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
503	102.80	102.70	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
504	102.70	102.60	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
505	102.60	102.50	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
506	102.50	102.40	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
507	102.40	102.30	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
508	102.30	102.20	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
509	102.20	102.10	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
510	102.10	102.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
511	102.00	101.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
512	101.90	101.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
TOT						69.13			16724.54	20918.10					
AVG					0.00032		0.80	11.01			8.80				
CUM						1640.85									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
494	103.600	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
495	103.500	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
496	103.400	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
497	103.300	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
498	103.200	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
499	103.100	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
500	103.000	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
501	102.900	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
502	102.800	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
503	102.700	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
504	102.600	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
505	102.500	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
506	102.400	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
507	102.300	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
508	102.200	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
509	102.100	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
510	102.000	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
511	101.900	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
512	101.800	7.91	1.01	0.10	0.06	0.00	1.74	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
20 DEG C RATE				0.07		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.88		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
494	103.600	27.40	0.00	8.30	0.00	5.71	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
495	103.500	27.40	0.00	8.30	0.00	5.69	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
496	103.400	27.40	0.00	8.30	0.00	5.68	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
497	103.300	27.40	0.00	8.30	0.00	5.68	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
498	103.200	27.40	0.00	8.30	0.00	5.67	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
499	103.100	27.40	0.00	8.30	0.00	5.67	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
500	103.000	27.40	0.00	8.30	0.00	5.67	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
501	102.900	27.40	0.00	8.30	0.00	5.67	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
502	102.800	27.40	0.00	8.30	0.00	5.67	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
503	102.700	27.40	0.00	8.30	0.00	5.67	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
504	102.600	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
505	102.500	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
506	102.400	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
507	102.300	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
508	102.200	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
509	102.100	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
510	102.000	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
511	101.900	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
512	101.800	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 19 HURRICANE CR - INDIAN BRANCH CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
513	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.67	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.18

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
513	101.80	101.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
514	101.70	101.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000

515	101.60	101.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
516	101.50	101.40	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
517	101.40	101.30	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
518	101.30	101.20	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
519	101.20	101.10	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
520	101.10	101.00	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
521	101.00	100.90	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
522	100.90	100.80	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
523	100.80	100.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
524	100.70	100.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
525	100.60	100.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
526	100.50	100.40	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
527	100.40	100.30	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
528	100.30	100.20	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
529	100.20	100.10	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
530	100.10	100.00	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
531	100.00	99.90	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
532	99.90	99.80	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
533	99.80	99.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
534	99.70	99.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
535	99.60	99.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
TOT						82.64			19992.27	25321.91					
AVG					0.00032		0.79	11.01			8.69				
CUM						1723.49									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
513	101.700	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
514	101.600	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
515	101.500	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
516	101.400	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
517	101.300	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
518	101.200	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
519	101.100	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06

520	101.000	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
521	100.900	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
522	100.800	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
523	100.700	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
524	100.600	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
525	100.500	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
526	100.400	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
527	100.300	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
528	100.200	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
529	100.100	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
530	100.000	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
531	99.900	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
532	99.800	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
533	99.700	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
534	99.600	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
535	99.500	7.91	1.02	0.10	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
20 DEG C RATE				0.07		0.00	1.04			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.89		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
513	101.700	27.40	0.00	8.30	0.00	5.73	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
514	101.600	27.40	0.00	8.30	0.00	5.74	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
515	101.500	27.40	0.00	8.30	0.00	5.73	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
516	101.400	27.40	0.00	8.30	0.00	5.73	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
517	101.300	27.40	0.00	8.30	0.00	5.73	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15

518	101.200	27.40	0.00	8.30	0.00	5.72	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
519	101.100	27.40	0.00	8.30	0.00	5.72	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
520	101.000	27.40	0.00	8.30	0.00	5.72	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
521	100.900	27.40	0.00	8.30	0.00	5.72	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
522	100.800	27.40	0.00	8.30	0.00	5.72	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
523	100.700	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
524	100.600	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
525	100.500	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
526	100.400	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
527	100.300	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
528	100.200	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
529	100.100	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
530	100.000	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
531	99.900	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
532	99.800	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
533	99.700	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
534	99.600	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
535	99.500	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 20 INDIAN BRANCH - MOODY CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
536	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.72	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.15

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
536	99.50	99.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
537	99.40	99.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
538	99.30	99.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
539	99.20	99.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
540	99.10	99.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
541	99.00	98.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
542	98.90	98.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
543	98.80	98.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000

544	98.70	98.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
545	98.60	98.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
546	98.50	98.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
547	98.40	98.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
548	98.30	98.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
549	98.20	98.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
550	98.10	98.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
551	98.00	97.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
552	97.90	97.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
553	97.80	97.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
554	97.70	97.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
555	97.60	97.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
556	97.50	97.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
557	97.40	97.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
558	97.30	97.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
559	97.20	97.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
560	97.10	97.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
561	97.00	96.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
562	96.90	96.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
563	96.80	96.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
564	96.70	96.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
565	96.60	96.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
TOT						106.43			25746.60	33028.58					
AVG					0.00033		0.78	11.01			8.58				
CUM						1829.91									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
536	99.400	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
537	99.300	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
538	99.200	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
539	99.100	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
540	99.000	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
541	98.900	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
542	98.800	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	

543	98.700	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
544	98.600	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
545	98.500	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
546	98.400	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
547	98.300	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
548	98.200	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
549	98.100	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
550	98.000	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
551	97.900	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
552	97.800	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
553	97.700	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
554	97.600	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
555	97.500	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
556	97.400	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
557	97.300	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
558	97.200	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
559	97.100	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
560	97.000	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
561	96.900	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
562	96.800	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
563	96.700	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
564	96.600	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
565	96.500	7.91	1.03	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
20 DEG C RATE				0.06		0.00	1.00			0.00		0.00	0.00	0.00	0.00			0.00	0.16
AVG 20 DEG C RATE			0.90		0.05						0.00								

0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
536	99.400	27.40	0.00	8.30	0.00	5.78	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
537	99.300	27.40	0.00	8.30	0.00	5.78	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
538	99.200	27.40	0.00	8.30	0.00	5.77	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
539	99.100	27.40	0.00	8.30	0.00	5.77	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
540	99.000	27.40	0.00	8.30	0.00	5.76	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
541	98.900	27.40	0.00	8.30	0.00	5.76	1.32	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
542	98.800	27.40	0.00	8.30	0.00	5.76	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
543	98.700	27.40	0.00	8.30	0.00	5.76	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
544	98.600	27.40	0.00	8.30	0.00	5.76	1.34	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
545	98.500	27.40	0.00	8.30	0.00	5.76	1.34	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
546	98.400	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
547	98.300	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
548	98.200	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
549	98.100	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
550	98.000	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
551	97.900	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
552	97.800	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
553	97.700	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
554	97.600	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
555	97.500	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
556	97.400	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
557	97.300	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
558	97.200	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
559	97.100	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
560	97.000	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
561	96.900	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
562	96.800	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
563	96.700	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
564	96.600	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
565	96.500	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER
REACH NO. 21 MOODY CREEK - BULL CREEK

CASTOR CREEK WATERSHED MODEL
CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
566	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.76	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.24

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
566	96.50	96.40	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
567	96.40	96.30	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
568	96.30	96.20	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
569	96.20	96.10	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
570	96.10	96.00	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
571	96.00	95.90	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
572	95.90	95.80	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
573	95.80	95.70	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
574	95.70	95.60	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
575	95.60	95.50	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
576	95.50	95.40	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
577	95.40	95.30	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
578	95.30	95.20	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
579	95.20	95.10	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
580	95.10	95.00	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
581	95.00	94.90	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
582	94.90	94.80	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
TOT						59.53			14402.57	18716.19					
AVG					0.00033		0.77	11.01			8.47				
CUM						1889.45									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
566	96.400	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
567	96.300	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06

568	96.200	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
569	96.100	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
570	96.000	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
571	95.900	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
572	95.800	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
573	95.700	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
574	95.600	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
575	95.500	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
576	95.400	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
577	95.300	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
578	95.200	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
579	95.100	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
580	95.000	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
581	94.900	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
582	94.800	7.91	1.05	0.08	0.06	0.00	1.59	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
20 DEG C RATE				0.06		0.00	1.00			0.00		0.00	0.00	0.00	0.00			0.00	0.16	
AVG 20 DEG C RATE			0.91		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
566	96.400	27.40	0.00	8.30	0.00	5.76	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
567	96.300	27.40	0.00	8.30	0.00	5.76	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
568	96.200	27.40	0.00	8.30	0.00	5.76	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
569	96.100	27.40	0.00	8.30	0.00	5.76	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
570	96.000	27.40	0.00	8.30	0.00	5.76	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
571	95.900	27.40	0.00	8.30	0.00	5.76	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
572	95.800	27.40	0.00	8.30	0.00	5.76	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

573	95.700	27.40	0.00	8.30	0.00	5.76	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
574	95.600	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
575	95.500	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
576	95.400	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
577	95.300	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
578	95.200	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
579	95.100	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
580	95.000	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
581	94.900	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
582	94.800	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 22 BULL CREEK - SWEETWATER CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
583	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.76	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.21

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
583	94.80	94.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
584	94.70	94.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
585	94.60	94.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
586	94.50	94.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
587	94.40	94.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
588	94.30	94.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
589	94.20	94.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
590	94.10	94.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
591	94.00	93.90	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
592	93.90	93.80	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
593	93.80	93.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
594	93.70	93.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
595	93.60	93.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
596	93.50	93.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
597	93.40	93.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
598	93.30	93.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000

599	93.20	93.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
600	93.10	93.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
601	93.00	92.90	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
602	92.90	92.80	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
603	92.80	92.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
604	92.70	92.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
605	92.60	92.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
606	92.50	92.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
607	92.40	92.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
608	92.30	92.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
609	92.20	92.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
610	92.10	92.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
TOT						96.78			23413.63	30826.68					
AVG					0.00033		0.76	11.01			8.36				
CUM						1986.23									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
583	94.700	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
584	94.600	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
585	94.500	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
586	94.400	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
587	94.300	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
588	94.200	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
589	94.100	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
590	94.000	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
591	93.900	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
592	93.800	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
593	93.700	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
594	93.600	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	

595	93.500	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
596	93.400	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
597	93.300	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
598	93.200	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
599	93.100	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
600	93.000	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
601	92.900	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
602	92.800	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
603	92.700	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
604	92.600	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
605	92.500	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
606	92.400	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
607	92.300	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
608	92.200	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
609	92.100	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
610	92.000	7.91	1.06	0.08	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
20 DEG C RATE				0.06		0.00	1.04			0.00		0.00	0.00	0.00	0.00			0.00	0.15	
AVG 20 DEG C RATE			0.92		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
583	94.700	27.40	0.00	8.30	0.00	5.61	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
584	94.600	27.40	0.00	8.30	0.00	5.52	3.11	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
585	94.500	27.40	0.00	8.30	0.00	5.46	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
586	94.400	27.40	0.00	8.30	0.00	5.43	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54

587	94.300	27.40	0.00	8.30	0.00	5.41	4.05	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
588	94.200	27.40	0.00	8.30	0.00	5.39	4.19	4.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
589	94.100	27.40	0.00	8.30	0.00	5.38	4.27	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
590	94.000	27.40	0.00	8.30	0.00	5.38	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
591	93.900	27.40	0.00	8.30	0.00	5.37	4.37	4.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
592	93.800	27.40	0.00	8.30	0.00	5.37	4.40	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
593	93.700	27.40	0.00	8.30	0.00	5.37	4.42	4.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
594	93.600	27.40	0.00	8.30	0.00	5.37	4.43	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
595	93.500	27.40	0.00	8.30	0.00	5.37	4.44	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
596	93.400	27.40	0.00	8.30	0.00	5.37	4.44	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
597	93.300	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
598	93.200	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
599	93.100	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
600	93.000	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
601	92.900	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
602	92.800	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
603	92.700	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
604	92.600	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
605	92.500	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
606	92.400	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
607	92.300	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
608	92.200	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
609	92.100	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
610	92.000	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 23 SWEETWATER CREEK - BRUSHY CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
611	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.37	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.56

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
611	92.00	91.90	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
612	91.90	91.80	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000

613	91.80	91.70	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
614	91.70	91.60	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
615	91.60	91.50	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
616	91.50	91.40	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
617	91.40	91.30	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
618	91.30	91.20	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
619	91.20	91.10	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
620	91.10	91.00	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
TOT						34.11			8251.91	11009.52					
AVG					0.00034		0.75	11.01			8.25				
CUM						2020.34									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
611	91.900	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
612	91.800	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
613	91.700	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
614	91.600	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
615	91.500	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
616	91.400	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
617	91.300	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
618	91.200	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
619	91.100	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
620	91.000	7.91	1.07	0.07	0.06	0.00	1.69	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
20 DEG C RATE				0.05		0.00	1.06			0.00		0.00	0.00	0.00	0.00			0.00	0.15	
AVG 20 DEG C RATE			0.93		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
611	91.900	27.40	0.00	8.30	0.00	5.41	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
612	91.800	27.40	0.00	8.30	0.00	5.44	4.08	4.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
613	91.700	27.40	0.00	8.30	0.00	5.45	3.97	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
614	91.600	27.40	0.00	8.30	0.00	5.46	3.90	3.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
615	91.500	27.40	0.00	8.30	0.00	5.47	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
616	91.400	27.40	0.00	8.30	0.00	5.47	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
617	91.300	27.40	0.00	8.30	0.00	5.47	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
618	91.200	27.40	0.00	8.30	0.00	5.47	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
619	91.100	27.40	0.00	8.30	0.00	5.47	3.76	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
620	91.000	27.40	0.00	8.30	0.00	5.47	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 24 BRUSHY CREEK - WHITE OAK CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
621	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.47	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.39

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
621	91.00	90.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
622	90.90	90.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
623	90.80	90.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
624	90.70	90.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
625	90.60	90.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
626	90.50	90.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
627	90.40	90.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
628	90.30	90.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
629	90.20	90.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
630	90.10	90.00	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000

631	90.00	89.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
632	89.90	89.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
633	89.80	89.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
634	89.70	89.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
635	89.60	89.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
636	89.50	89.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
637	89.40	89.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
638	89.30	89.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
639	89.20	89.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
640	89.10	89.00	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
641	89.00	88.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
642	88.90	88.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
643	88.80	88.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
644	88.70	88.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
645	88.60	88.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
646	88.50	88.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
647	88.40	88.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
648	88.30	88.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
649	88.20	88.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
TOT						97.60			23611.27	31927.63					
AVG					0.00034		0.74	11.01			8.14				
CUM						2117.94									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
621	90.900	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
622	90.800	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
623	90.700	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
624	90.600	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
625	90.500	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
626	90.400	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
627	90.300	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
628	90.200	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06

629	90.100	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
630	90.000	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
631	89.900	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
632	89.800	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
633	89.700	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
634	89.600	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
635	89.500	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
636	89.400	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
637	89.300	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
638	89.200	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
639	89.100	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
640	89.000	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
641	88.900	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
642	88.800	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
643	88.700	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
644	88.600	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
645	88.500	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
646	88.400	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
647	88.300	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
648	88.200	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
649	88.100	7.91	1.09	0.07	0.06	0.00	1.71	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
20 DEG C RATE				0.05		0.00	1.07			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			0.95		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
621	90.900	27.40	0.00	8.30	0.00	5.43	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
622	90.800	27.40	0.00	8.30	0.00	5.40	4.51	4.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
623	90.700	27.40	0.00	8.30	0.00	5.37	4.72	4.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
624	90.600	27.40	0.00	8.30	0.00	5.36	4.88	4.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
625	90.500	27.40	0.00	8.30	0.00	5.35	4.98	4.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
626	90.400	27.40	0.00	8.30	0.00	5.34	5.05	5.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
627	90.300	27.40	0.00	8.30	0.00	5.34	5.10	5.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
628	90.200	27.40	0.00	8.30	0.00	5.34	5.14	5.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
629	90.100	27.40	0.00	8.30	0.00	5.34	5.16	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
630	90.000	27.40	0.00	8.30	0.00	5.33	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
631	89.900	27.40	0.00	8.30	0.00	5.33	5.19	5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
632	89.800	27.40	0.00	8.30	0.00	5.33	5.20	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
633	89.700	27.40	0.00	8.30	0.00	5.33	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
634	89.600	27.40	0.00	8.30	0.00	5.33	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
635	89.500	27.40	0.00	8.30	0.00	5.33	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
636	89.400	27.40	0.00	8.30	0.00	5.33	5.21	5.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
637	89.300	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
638	89.200	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
639	89.100	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
640	89.000	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
641	88.900	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
642	88.800	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
643	88.700	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
644	88.600	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
645	88.500	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
646	88.400	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
647	88.300	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
648	88.200	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
649	88.100	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 25 WHITE OAK CREEK - BILLS CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
650	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.33	5.22	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
650	88.10	88.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
651	88.00	87.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
652	87.90	87.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
653	87.80	87.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
654	87.70	87.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
655	87.60	87.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
656	87.50	87.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
657	87.40	87.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
658	87.30	87.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
659	87.20	87.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
660	87.10	87.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
661	87.00	86.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
662	86.90	86.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
663	86.80	86.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
664	86.70	86.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
665	86.60	86.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
666	86.50	86.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
667	86.40	86.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
668	86.30	86.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
669	86.20	86.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
670	86.10	86.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
671	86.00	85.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
672	85.90	85.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
673	85.80	85.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
674	85.70	85.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
675	85.60	85.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
676	85.50	85.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
677	85.40	85.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
678	85.30	85.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
679	85.20	85.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
680	85.10	85.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
681	85.00	84.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
682	84.90	84.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
683	84.80	84.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
684	84.70	84.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
685	84.60	84.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
686	84.50	84.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
687	84.40	84.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
688	84.30	84.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
689	84.20	84.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
690	84.10	84.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
691	84.00	83.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000

692	83.90	83.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
693	83.80	83.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
694	83.70	83.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
695	83.60	83.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
696	83.50	83.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
697	83.40	83.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
698	83.30	83.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
699	83.20	83.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
700	83.10	83.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
701	83.00	82.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
702	82.90	82.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
703	82.80	82.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
704	82.70	82.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
705	82.60	82.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
706	82.50	82.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
707	82.40	82.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
708	82.30	82.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
709	82.20	82.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
710	82.10	82.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
711	82.00	81.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
712	81.90	81.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
713	81.80	81.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
714	81.70	81.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
715	81.60	81.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
716	81.50	81.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
717	81.40	81.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
718	81.30	81.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
719	81.20	81.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
720	81.10	81.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
721	81.00	80.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
722	80.90	80.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
723	80.80	80.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
724	80.70	80.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
725	80.60	80.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
726	80.50	80.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
727	80.40	80.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
728	80.30	80.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
729	80.20	80.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
730	80.10	80.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
731	80.00	79.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
732	79.90	79.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
733	79.80	79.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
734	79.70	79.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
735	79.60	79.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
736	79.50	79.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
737	79.40	79.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
738	79.30	79.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
739	79.20	79.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
740	79.10	79.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
741	79.00	78.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000

742	78.90	78.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
743	78.80	78.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
744	78.70	78.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
745	78.60	78.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
746	78.50	78.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
TOT						314.74			76141.91	105822.44					
AVG					0.00036		0.72	10.91			7.85				
CUM						2432.67									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
650	88.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
651	87.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
652	87.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
653	87.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
654	87.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
655	87.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
656	87.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
657	87.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
658	87.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
659	87.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
660	87.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
661	86.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
662	86.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
663	86.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
664	86.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06

665	86.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
666	86.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
667	86.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
668	86.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
669	86.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
670	86.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
671	85.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
672	85.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
673	85.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
674	85.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
675	85.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
676	85.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
677	85.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
678	85.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
679	85.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
680	85.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
681	84.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
682	84.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
683	84.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
684	84.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
685	84.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
686	84.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
687	84.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
688	84.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
689	84.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06

690	84.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
691	83.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
692	83.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
693	83.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
694	83.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
695	83.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
696	83.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
697	83.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
698	83.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
699	83.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
700	83.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
701	82.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
702	82.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
703	82.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
704	82.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
705	82.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
706	82.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
707	82.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
708	82.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
709	82.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
710	82.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
711	81.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
712	81.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
713	81.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
714	81.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06

715	81.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
716	81.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
717	81.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
718	81.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
719	81.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
720	81.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
721	80.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
722	80.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
723	80.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
724	80.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
725	80.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
726	80.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
727	80.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
728	80.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
729	80.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
730	80.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
731	79.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
732	79.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
733	79.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
734	79.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
735	79.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
736	79.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
737	79.300	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
738	79.200	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
739	79.100	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06

740	79.000	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
741	78.900	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
742	78.800	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
743	78.700	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
744	78.600	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
745	78.500	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
746	78.400	7.91	1.12	0.06	0.06	0.00	1.66	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
20 DEG C RATE				0.04		0.00	1.04			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			0.97		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
650	88.000	27.40	0.00	8.30	0.00	5.54	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
651	87.900	27.40	0.00	8.30	0.00	5.65	2.81	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
652	87.800	27.40	0.00	8.30	0.00	5.71	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
653	87.700	27.40	0.00	8.30	0.00	5.75	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
654	87.600	27.40	0.00	8.30	0.00	5.78	1.15	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
655	87.500	27.40	0.00	8.30	0.00	5.80	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
656	87.400	27.40	0.00	8.30	0.00	5.81	0.66	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
657	87.300	27.40	0.00	8.30	0.00	5.82	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
658	87.200	27.40	0.00	8.30	0.00	5.83	0.40	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
659	87.100	27.40	0.00	8.30	0.00	5.83	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
660	87.000	27.40	0.00	8.30	0.00	5.84	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
661	86.900	27.40	0.00	8.30	0.00	5.84	0.22	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
662	86.800	27.40	0.00	8.30	0.00	5.84	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
663	86.700	27.40	0.00	8.30	0.00	5.84	0.17	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
664	86.600	27.40	0.00	8.30	0.00	5.84	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
665	86.500	27.40	0.00	8.30	0.00	5.84	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
666	86.400	27.40	0.00	8.30	0.00	5.84	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
667	86.300	27.40	0.00	8.30	0.00	5.84	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
668	86.200	27.40	0.00	8.30	0.00	5.84	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
669	86.100	27.40	0.00	8.30	0.00	5.84	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
670	86.000	27.40	0.00	8.30	0.00	5.85	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
671	85.900	27.40	0.00	8.30	0.00	5.85	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
672	85.800	27.40	0.00	8.30	0.00	5.85	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

673	85.700	27.40	0.00	8.30	0.00	5.85	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
674	85.600	27.40	0.00	8.30	0.00	5.85	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
675	85.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
676	85.400	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
677	85.300	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
678	85.200	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
679	85.100	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
680	85.000	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
681	84.900	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
682	84.800	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
683	84.700	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
684	84.600	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
685	84.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
686	84.400	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
687	84.300	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
688	84.200	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
689	84.100	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
690	84.000	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
691	83.900	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
692	83.800	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
693	83.700	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
694	83.600	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
695	83.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
696	83.400	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
697	83.300	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
698	83.200	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
699	83.100	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700	83.000	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
701	82.900	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702	82.800	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
703	82.700	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
704	82.600	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
705	82.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
706	82.400	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
707	82.300	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
708	82.200	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
709	82.100	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
710	82.000	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
711	81.900	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
712	81.800	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
713	81.700	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
714	81.600	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
715	81.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
716	81.400	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
717	81.300	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
718	81.200	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
719	81.100	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
720	81.000	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
721	80.900	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
722	80.800	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

723	80.700	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
724	80.600	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
725	80.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
726	80.400	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
727	80.300	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
728	80.200	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
729	80.100	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
730	80.000	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
731	79.900	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
732	79.800	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
733	79.700	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
734	79.600	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
735	79.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
736	79.400	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
737	79.300	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
738	79.200	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
739	79.100	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
740	79.000	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
741	78.900	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
742	78.800	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
743	78.700	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
744	78.600	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
745	78.500	27.40	0.00	8.30	0.00	5.85	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
746	78.400	27.40	0.00	8.30	0.00	5.85	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 26 BILLS CREEK - LOST CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
747	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.85	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
747	78.40	78.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
748	78.30	78.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000

749	78.20	78.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
750	78.10	78.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
751	78.00	77.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
752	77.90	77.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
753	77.80	77.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
754	77.70	77.60	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
755	77.60	77.50	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
756	77.50	77.40	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
757	77.40	77.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
758	77.30	77.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
759	77.20	77.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
760	77.10	77.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
761	77.00	76.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
762	76.90	76.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
763	76.80	76.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
764	76.70	76.60	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
765	76.60	76.50	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
766	76.50	76.40	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
767	76.40	76.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
768	76.30	76.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
769	76.20	76.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
770	76.10	76.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
771	76.00	75.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
772	75.90	75.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
773	75.80	75.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
TOT						83.96			20310.45	29455.72					
AVG					0.00037		0.69	10.91			7.52				
CUM						2516.62									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
747	78.300	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
748	78.200	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
749	78.100	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
750	78.000	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
751	77.900	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06

752	77.800	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
753	77.700	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
754	77.600	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
755	77.500	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
756	77.400	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
757	77.300	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
758	77.200	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
759	77.100	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
760	77.000	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
761	76.900	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
762	76.800	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
763	76.700	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
764	76.600	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
765	76.500	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
766	76.400	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
767	76.300	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
768	76.200	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
769	76.100	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
770	76.000	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
771	75.900	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
772	75.800	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
773	75.700	7.91	1.17	0.04	0.06	0.00	1.64	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
20 DEG C RATE				0.03		0.00	1.03			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			1.02		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
747	78.300	27.40	0.00	8.30	0.00	5.78	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
748	78.200	27.40	0.00	8.30	0.00	5.71	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
749	78.100	27.40	0.00	8.30	0.00	5.65	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
750	78.000	27.40	0.00	8.30	0.00	5.62	4.23	4.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
751	77.900	27.40	0.00	8.30	0.00	5.59	4.73	4.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
752	77.800	27.40	0.00	8.30	0.00	5.57	5.10	5.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
753	77.700	27.40	0.00	8.30	0.00	5.56	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80
754	77.600	27.40	0.00	8.30	0.00	5.55	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
755	77.500	27.40	0.00	8.30	0.00	5.54	5.77	5.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
756	77.400	27.40	0.00	8.30	0.00	5.53	5.90	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
757	77.300	27.40	0.00	8.30	0.00	5.53	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
758	77.200	27.40	0.00	8.30	0.00	5.53	6.06	6.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
759	77.100	27.40	0.00	8.30	0.00	5.52	6.12	6.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
760	77.000	27.40	0.00	8.30	0.00	5.52	6.16	6.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
761	76.900	27.40	0.00	8.30	0.00	5.52	6.19	6.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
762	76.800	27.40	0.00	8.30	0.00	5.52	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
763	76.700	27.40	0.00	8.30	0.00	5.52	6.23	6.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
764	76.600	27.40	0.00	8.30	0.00	5.52	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
765	76.500	27.40	0.00	8.30	0.00	5.52	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
766	76.400	27.40	0.00	8.30	0.00	5.52	6.27	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
767	76.300	27.40	0.00	8.30	0.00	5.52	6.27	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
768	76.200	27.40	0.00	8.30	0.00	5.52	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
769	76.100	27.40	0.00	8.30	0.00	5.52	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
770	76.000	27.40	0.00	8.30	0.00	5.52	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
771	75.900	27.40	0.00	8.30	0.00	5.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
772	75.800	27.40	0.00	8.30	0.00	5.52	6.29	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
773	75.700	27.40	0.00	8.30	0.00	5.52	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 27 LOST CREEK - MESSER CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
774	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.52	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.82

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
774	75.70	75.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
775	75.60	75.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
776	75.50	75.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
777	75.40	75.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
778	75.30	75.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
779	75.20	75.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
780	75.10	75.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
781	75.00	74.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
782	74.90	74.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
783	74.80	74.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
784	74.70	74.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
785	74.60	74.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
786	74.50	74.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
787	74.40	74.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
788	74.30	74.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
789	74.20	74.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
790	74.10	74.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
791	74.00	73.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
792	73.90	73.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
793	73.80	73.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
794	73.70	73.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
795	73.60	73.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
796	73.50	73.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
797	73.40	73.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
798	73.30	73.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
799	73.20	73.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
800	73.10	73.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
801	73.00	72.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
802	72.90	72.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
803	72.80	72.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
804	72.70	72.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
805	72.60	72.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
806	72.50	72.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
807	72.40	72.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
808	72.30	72.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
809	72.20	72.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
810	72.10	72.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
811	72.00	71.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
812	71.90	71.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
813	71.80	71.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
814	71.70	71.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
815	71.60	71.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000

816	71.50	71.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
817	71.40	71.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
818	71.30	71.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
819	71.20	71.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
820	71.10	71.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
821	71.00	70.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
822	70.90	70.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
823	70.80	70.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
824	70.70	70.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
825	70.60	70.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
826	70.50	70.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
827	70.40	70.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
828	70.30	70.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
829	70.20	70.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
830	70.10	70.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
831	70.00	69.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
832	69.90	69.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
833	69.80	69.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
834	69.70	69.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
835	69.60	69.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
836	69.50	69.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
837	69.40	69.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
838	69.30	69.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
839	69.20	69.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
840	69.10	69.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
841	69.00	68.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
842	68.90	68.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
843	68.80	68.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
844	68.70	68.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
845	68.60	68.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
846	68.50	68.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
847	68.40	68.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
848	68.30	68.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
849	68.20	68.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
850	68.10	68.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
851	68.00	67.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
852	67.90	67.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
853	67.80	67.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
854	67.70	67.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
855	67.60	67.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
856	67.50	67.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
857	67.40	67.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
858	67.30	67.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
859	67.20	67.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
860	67.10	67.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
861	67.00	66.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
862	66.90	66.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
863	66.80	66.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
864	66.70	66.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
865	66.60	66.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000

866	66.50	66.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
867	66.40	66.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
868	66.30	66.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
869	66.20	66.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
870	66.10	66.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
871	66.00	65.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
872	65.90	65.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
873	65.80	65.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
874	65.70	65.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
875	65.60	65.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
876	65.50	65.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
877	65.40	65.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
878	65.30	65.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
879	65.20	65.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
880	65.10	65.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
881	65.00	64.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
882	64.90	64.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
883	64.80	64.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
884	64.70	64.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
TOT						327.11			79133.53	119985.78					
AVG					0.00039		0.66	10.81			7.13				
CUM						2843.74									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
774	75.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
775	75.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
776	75.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
777	75.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
778	75.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
779	75.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
780	75.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
781	74.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06

782	74.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
783	74.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
784	74.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
785	74.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
786	74.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
787	74.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
788	74.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
789	74.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
790	74.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
791	73.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
792	73.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
793	73.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
794	73.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
795	73.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
796	73.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
797	73.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
798	73.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
799	73.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
800	73.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
801	72.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
802	72.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
803	72.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
804	72.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
805	72.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
806	72.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06

807	72.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
808	72.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
809	72.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
810	72.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
811	71.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
812	71.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
813	71.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
814	71.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
815	71.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
816	71.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
817	71.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
818	71.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
819	71.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
820	71.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
821	70.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
822	70.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
823	70.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
824	70.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
825	70.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
826	70.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
827	70.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
828	70.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
829	70.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
830	70.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
831	69.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06

832	69.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
833	69.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
834	69.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
835	69.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
836	69.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
837	69.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
838	69.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
839	69.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
840	69.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
841	68.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
842	68.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
843	68.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
844	68.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
845	68.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
846	68.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
847	68.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
848	68.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
849	68.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
850	68.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
851	67.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
852	67.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
853	67.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
854	67.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
855	67.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
856	67.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06

857	67.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
858	67.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
859	67.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
860	67.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
861	66.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
862	66.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
863	66.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
864	66.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
865	66.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
866	66.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
867	66.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
868	66.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
869	66.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
870	66.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
871	65.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
872	65.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
873	65.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
874	65.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
875	65.500	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
876	65.400	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
877	65.300	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
878	65.200	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
879	65.100	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
880	65.000	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
881	64.900	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06

882	64.800	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
883	64.700	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
884	64.600	7.91	1.22	0.06	0.06	0.00	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
20 DEG C RATE				0.04		0.00	1.01			0.00		0.00	0.00	0.00	0.00			0.00	0.10	
AVG 20 DEG C RATE			1.06		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
774	75.600	27.40	0.00	8.30	0.00	5.60	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
775	75.500	27.40	0.00	8.30	0.00	5.67	3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
776	75.400	27.40	0.00	8.30	0.00	5.73	2.80	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
777	75.300	27.40	0.00	8.30	0.00	5.77	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
778	75.200	27.40	0.00	8.30	0.00	5.80	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
779	75.100	27.40	0.00	8.30	0.00	5.82	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
780	75.000	27.40	0.00	8.30	0.00	5.84	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
781	74.900	27.40	0.00	8.30	0.00	5.85	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
782	74.800	27.40	0.00	8.30	0.00	5.86	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
783	74.700	27.40	0.00	8.30	0.00	5.86	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
784	74.600	27.40	0.00	8.30	0.00	5.87	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
785	74.500	27.40	0.00	8.30	0.00	5.87	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
786	74.400	27.40	0.00	8.30	0.00	5.87	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
787	74.300	27.40	0.00	8.30	0.00	5.88	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
788	74.200	27.40	0.00	8.30	0.00	5.88	0.40	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
789	74.100	27.40	0.00	8.30	0.00	5.88	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
790	74.000	27.40	0.00	8.30	0.00	5.88	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
791	73.900	27.40	0.00	8.30	0.00	5.88	0.36	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
792	73.800	27.40	0.00	8.30	0.00	5.88	0.35	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
793	73.700	27.40	0.00	8.30	0.00	5.88	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
794	73.600	27.40	0.00	8.30	0.00	5.88	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
795	73.500	27.40	0.00	8.30	0.00	5.88	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
796	73.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
797	73.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
798	73.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
799	73.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
800	73.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
801	72.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
802	72.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
803	72.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
804	72.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

805	72.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
806	72.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
807	72.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
808	72.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
809	72.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
810	72.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
811	71.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
812	71.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
813	71.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
814	71.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
815	71.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
816	71.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
817	71.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
818	71.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
819	71.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
820	71.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
821	70.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
822	70.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
823	70.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
824	70.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
825	70.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
826	70.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
827	70.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
828	70.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
829	70.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
830	70.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
831	69.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
832	69.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
833	69.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
834	69.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
835	69.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
836	69.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
837	69.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
838	69.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
839	69.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
840	69.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
841	68.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
842	68.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
843	68.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
844	68.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
845	68.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
846	68.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
847	68.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
848	68.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
849	68.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
850	68.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
851	67.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
852	67.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
853	67.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
854	67.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

855	67.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
856	67.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
857	67.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
858	67.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
859	67.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
860	67.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
861	66.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
862	66.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
863	66.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
864	66.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
865	66.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
866	66.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
867	66.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
868	66.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
869	66.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
870	66.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
871	65.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
872	65.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
873	65.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
874	65.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
875	65.500	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
876	65.400	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
877	65.300	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
878	65.200	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
879	65.100	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
880	65.000	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
881	64.900	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
882	64.800	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
883	64.700	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
884	64.600	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 28 MESSER CREEK - RICHLAND CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
885	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.88	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.11

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
885	64.60	64.50	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
886	64.50	64.40	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
887	64.40	64.30	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
888	64.30	64.20	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
889	64.20	64.10	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
890	64.10	64.00	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
891	64.00	63.90	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
892	63.90	63.80	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
TOT						22.86			5530.37	8647.62					
AVG					0.00041		0.64	10.81			6.91				
CUM						2866.60									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
885	64.500	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
886	64.400	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
887	64.300	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
888	64.200	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
889	64.100	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
890	64.000	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
891	63.900	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
892	63.800	7.91	1.26	0.06	0.06	0.00	1.55	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.04		0.00	0.97			0.00		0.00	0.00	0.00	0.00			0.00	0.09	
AVG 20 DEG C RATE			1.09		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
885	64.500	27.40	0.00	8.30	0.00	5.81	2.58	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
886	64.400	27.40	0.00	8.30	0.00	5.70	4.27	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
887	64.300	27.40	0.00	8.30	0.00	5.61	5.53	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34
888	64.200	27.40	0.00	8.30	0.00	5.54	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49
889	64.100	27.40	0.00	8.30	0.00	5.49	7.20	7.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
890	64.000	27.40	0.00	8.30	0.00	5.46	7.74	7.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64
891	63.900	27.40	0.00	8.30	0.00	5.44	8.15	8.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68
892	63.800	27.40	0.00	8.30	0.00	5.42	8.45	8.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 29 RICHLAND CREEK - PINEY CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
893	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.42	8.45	8.45	0.00	0.00	0.00	0.00	0.00	0.00	1.70

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
893	63.80	63.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
894	63.70	63.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
895	63.60	63.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
896	63.50	63.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
897	63.40	63.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
898	63.30	63.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
899	63.20	63.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
900	63.10	63.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
901	63.00	62.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
902	62.90	62.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
903	62.80	62.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
904	62.70	62.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

905	62.60	62.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
906	62.50	62.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
907	62.40	62.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
908	62.30	62.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
909	62.20	62.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
910	62.10	62.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
911	62.00	61.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
912	61.90	61.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
913	61.80	61.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
914	61.70	61.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
915	61.60	61.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
916	61.50	61.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
917	61.40	61.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
918	61.30	61.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
919	61.20	61.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
920	61.10	61.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
921	61.00	60.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
922	60.90	60.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
923	60.80	60.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
924	60.70	60.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
925	60.60	60.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
926	60.50	60.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
927	60.40	60.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
928	60.30	60.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
929	60.20	60.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
930	60.10	60.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
931	60.00	59.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
932	59.90	59.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
933	59.80	59.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
934	59.70	59.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
935	59.60	59.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
936	59.50	59.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
937	59.40	59.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
938	59.30	59.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
939	59.20	59.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
940	59.10	59.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
941	59.00	58.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
942	58.90	58.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
943	58.80	58.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
944	58.70	58.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
945	58.60	58.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
946	58.50	58.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
947	58.40	58.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
948	58.30	58.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
949	58.20	58.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
950	58.10	58.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
951	58.00	57.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
952	57.90	57.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
953	57.80	57.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
954	57.70	57.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

955	57.60	57.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
956	57.50	57.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
957	57.40	57.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
958	57.30	57.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
959	57.20	57.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
960	57.10	57.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
961	57.00	56.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
962	56.90	56.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
963	56.80	56.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
964	56.70	56.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
965	56.60	56.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
966	56.50	56.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
967	56.40	56.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
968	56.30	56.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
969	56.20	56.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
970	56.10	56.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
971	56.00	55.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
972	55.90	55.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
973	55.80	55.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
974	55.70	55.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
975	55.60	55.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
976	55.50	55.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
977	55.40	55.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
978	55.30	55.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
979	55.20	55.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
980	55.10	55.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
981	55.00	54.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
982	54.90	54.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
983	54.80	54.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
984	54.70	54.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
985	54.60	54.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
986	54.50	54.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
987	54.40	54.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
988	54.30	54.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
TOT						265.74			64288.95	103771.48					
AVG					0.00042		0.62	10.81			6.70				
CUM						3132.34									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
893	63.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	

894	63.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
895	63.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
896	63.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
897	63.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
898	63.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
899	63.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
900	63.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
901	62.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
902	62.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
903	62.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
904	62.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
905	62.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
906	62.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
907	62.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
908	62.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
909	62.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
910	62.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
911	61.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
912	61.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
913	61.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
914	61.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
915	61.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
916	61.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
917	61.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
918	61.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18

919	61.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
920	61.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
921	60.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
922	60.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
923	60.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
924	60.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
925	60.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
926	60.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
927	60.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
928	60.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
929	60.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
930	60.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
931	59.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
932	59.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
933	59.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
934	59.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
935	59.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
936	59.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
937	59.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
938	59.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
939	59.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
940	59.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
941	58.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
942	58.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
943	58.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18

0.06																			
944	58.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
945	58.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
946	58.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
947	58.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
948	58.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
949	58.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
950	58.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
951	57.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
952	57.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
953	57.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
954	57.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
955	57.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
956	57.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
957	57.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
958	57.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
959	57.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
960	57.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
961	56.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
962	56.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
963	56.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
964	56.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
965	56.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
966	56.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
967	56.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
0.06																			
968	56.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18

969	56.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
970	56.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
971	55.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
972	55.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
973	55.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
974	55.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
975	55.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
976	55.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
977	55.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
978	55.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
979	55.100	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
980	55.000	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
981	54.900	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
982	54.800	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
983	54.700	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
984	54.600	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
985	54.500	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
986	54.400	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
987	54.300	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
988	54.200	7.91	1.30	0.06	0.06	0.00	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
20 DEG C RATE				0.04		0.00	0.96			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			1.13		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
893	63.700	27.40	0.00	8.30	0.00	5.54	6.66	6.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
894	63.600	27.40	0.00	8.30	0.00	5.65	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
895	63.500	27.40	0.00	8.30	0.00	5.73	4.28	4.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
896	63.400	27.40	0.00	8.30	0.00	5.79	3.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
897	63.300	27.40	0.00	8.30	0.00	5.83	2.91	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
898	63.200	27.40	0.00	8.30	0.00	5.86	2.47	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
899	63.100	27.40	0.00	8.30	0.00	5.88	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
900	63.000	27.40	0.00	8.30	0.00	5.89	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
901	62.900	27.40	0.00	8.30	0.00	5.90	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
902	62.800	27.40	0.00	8.30	0.00	5.91	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
903	62.700	27.40	0.00	8.30	0.00	5.92	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
904	62.600	27.40	0.00	8.30	0.00	5.92	1.34	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
905	62.500	27.40	0.00	8.30	0.00	5.93	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
906	62.400	27.40	0.00	8.30	0.00	5.93	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
907	62.300	27.40	0.00	8.30	0.00	5.93	1.19	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
908	62.200	27.40	0.00	8.30	0.00	5.93	1.16	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
909	62.100	27.40	0.00	8.30	0.00	5.93	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
910	62.000	27.40	0.00	8.30	0.00	5.93	1.12	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
911	61.900	27.40	0.00	8.30	0.00	5.93	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
912	61.800	27.40	0.00	8.30	0.00	5.93	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
913	61.700	27.40	0.00	8.30	0.00	5.94	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
914	61.600	27.40	0.00	8.30	0.00	5.94	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
915	61.500	27.40	0.00	8.30	0.00	5.94	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
916	61.400	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
917	61.300	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
918	61.200	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
919	61.100	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
920	61.000	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
921	60.900	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
922	60.800	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
923	60.700	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
924	60.600	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
925	60.500	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
926	60.400	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
927	60.300	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
928	60.200	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
929	60.100	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
930	60.000	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
931	59.900	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
932	59.800	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
933	59.700	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
934	59.600	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
935	59.500	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
936	59.400	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
937	59.300	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
938	59.200	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19

939	59.100	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
940	59.000	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
941	58.900	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
942	58.800	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
943	58.700	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
944	58.600	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
945	58.500	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
946	58.400	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
947	58.300	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
948	58.200	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
949	58.100	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
950	58.000	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
951	57.900	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
952	57.800	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
953	57.700	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
954	57.600	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
955	57.500	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
956	57.400	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
957	57.300	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
958	57.200	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
959	57.100	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
960	57.000	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
961	56.900	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
962	56.800	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
963	56.700	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
964	56.600	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
965	56.500	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
966	56.400	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
967	56.300	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
968	56.200	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
969	56.100	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
970	56.000	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
971	55.900	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
972	55.800	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
973	55.700	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
974	55.600	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
975	55.500	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
976	55.400	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
977	55.300	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
978	55.200	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
979	55.100	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
980	55.000	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
981	54.900	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
982	54.800	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
983	54.700	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
984	54.600	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
985	54.500	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
986	54.400	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
987	54.300	27.40	0.00	8.30	0.00	5.94	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
988	54.200	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 30 PINEY CREEK - BEAUCOUP CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
989	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.94	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.19

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
989	54.20	54.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
990	54.10	54.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
991	54.00	53.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
992	53.90	53.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
993	53.80	53.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
994	53.70	53.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
995	53.60	53.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
996	53.50	53.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
997	53.40	53.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
998	53.30	53.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
999	53.20	53.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1000	53.10	53.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1001	53.00	52.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1002	52.90	52.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1003	52.80	52.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1004	52.70	52.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1005	52.60	52.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1006	52.50	52.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1007	52.40	52.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1008	52.30	52.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1009	52.20	52.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1010	52.10	52.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1011	52.00	51.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1012	51.90	51.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1013	51.80	51.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1014	51.70	51.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000

1015	51.60	51.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1016	51.50	51.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1017	51.40	51.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1018	51.30	51.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
TOT						78.29			18940.60	32128.58					
AVG					0.00044		0.59	10.71			6.31				
CUM						3210.63									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
989	54.100	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
990	54.000	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
991	53.900	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
992	53.800	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
993	53.700	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
994	53.600	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
995	53.500	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
996	53.400	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
997	53.300	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
998	53.200	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
999	53.100	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
1000	53.000	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
1001	52.900	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
1002	52.800	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
1003	52.700	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
1004	52.600	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	

0.06																				
1005	52.500	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1006	52.400	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1007	52.300	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1008	52.200	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1009	52.100	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1010	52.000	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1011	51.900	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1012	51.800	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1013	51.700	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1014	51.600	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1015	51.500	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1016	51.400	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1017	51.300	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
1018	51.200	7.91	1.36	0.04	0.06	0.00	1.67	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	
0.06																				
20 DEG C RATE				0.03		0.00	1.05			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			1.19		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
989	54.100	27.40	0.00	8.30	0.00	5.76	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
990	54.000	27.40	0.00	8.30	0.00	5.69	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
991	53.900	27.40	0.00	8.30	0.00	5.65	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
992	53.800	27.40	0.00	8.30	0.00	5.62	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
993	53.700	27.40	0.00	8.30	0.00	5.61	4.64	4.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
994	53.600	27.40	0.00	8.30	0.00	5.59	4.97	4.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
995	53.500	27.40	0.00	8.30	0.00	5.58	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
996	53.400	27.40	0.00	8.30	0.00	5.58	5.44	5.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

997	53.300	27.40	0.00	8.30	0.00	5.57	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
998	53.200	27.40	0.00	8.30	0.00	5.56	5.74	5.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
999	53.100	27.40	0.00	8.30	0.00	5.56	5.84	5.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1000	53.000	27.40	0.00	8.30	0.00	5.56	5.92	5.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1001	52.900	27.40	0.00	8.30	0.00	5.56	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1002	52.800	27.40	0.00	8.30	0.00	5.55	6.04	6.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1003	52.700	27.40	0.00	8.30	0.00	5.55	6.08	6.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1004	52.600	27.40	0.00	8.30	0.00	5.55	6.11	6.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1005	52.500	27.40	0.00	8.30	0.00	5.55	6.13	6.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1006	52.400	27.40	0.00	8.30	0.00	5.55	6.15	6.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1007	52.300	27.40	0.00	8.30	0.00	5.55	6.17	6.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1008	52.200	27.40	0.00	8.30	0.00	5.55	6.18	6.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1009	52.100	27.40	0.00	8.30	0.00	5.55	6.19	6.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1010	52.000	27.40	0.00	8.30	0.00	5.55	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1011	51.900	27.40	0.00	8.30	0.00	5.55	6.20	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1012	51.800	27.40	0.00	8.30	0.00	5.55	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1013	51.700	27.40	0.00	8.30	0.00	5.55	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1014	51.600	27.40	0.00	8.30	0.00	5.55	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1015	51.500	27.40	0.00	8.30	0.00	5.55	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1016	51.400	27.40	0.00	8.30	0.00	5.55	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1017	51.300	27.40	0.00	8.30	0.00	5.55	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
1018	51.200	27.40	0.00	8.30	0.00	5.55	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 31 BEAUCOUP CREEK - BANISTER CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1019	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.55	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.58

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1019	51.20	51.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1020	51.10	51.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1021	51.00	50.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1022	50.90	50.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000

1023	50.80	50.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1024	50.70	50.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1025	50.60	50.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1026	50.50	50.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1027	50.40	50.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1028	50.30	50.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1029	50.20	50.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1030	50.10	50.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1031	50.00	49.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1032	49.90	49.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1033	49.80	49.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1034	49.70	49.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1035	49.60	49.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1036	49.50	49.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1037	49.40	49.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1038	49.30	49.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1039	49.20	49.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1040	49.10	49.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1041	49.00	48.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1042	48.90	48.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1043	48.80	48.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1044	48.70	48.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1045	48.60	48.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1046	48.50	48.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1047	48.40	48.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1048	48.30	48.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1049	48.20	48.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1050	48.10	48.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1051	48.00	47.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1052	47.90	47.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1053	47.80	47.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1054	47.70	47.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1055	47.60	47.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1056	47.50	47.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1057	47.40	47.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1058	47.30	47.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1059	47.20	47.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1060	47.10	47.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
TOT						107.75			26067.04	44980.02					
AVG					0.00045		0.58	10.71			6.21				
CUM						3318.38									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																			
1019	51.100	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1020	51.000	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1021	50.900	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1022	50.800	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1023	50.700	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1024	50.600	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1025	50.500	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1026	50.400	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1027	50.300	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1028	50.200	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1029	50.100	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1030	50.000	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1031	49.900	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1032	49.800	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1033	49.700	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1034	49.600	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1035	49.500	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1036	49.400	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1037	49.300	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1038	49.200	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1039	49.100	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1040	49.000	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1041	48.900	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
0.06																			
1042	48.800	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23

0.06																				
1043	48.700	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1044	48.600	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1045	48.500	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1046	48.400	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1047	48.300	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1048	48.200	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1049	48.100	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1050	48.000	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1051	47.900	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1052	47.800	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1053	47.700	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1054	47.600	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1055	47.500	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1056	47.400	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1057	47.300	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1058	47.200	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1059	47.100	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
1060	47.000	7.91	1.39	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	
0.06																				
20 DEG C RATE				0.03		0.00	0.95			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.21		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

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

1019	51.100	27.40	0.00	8.30	0.00	5.75	5.17	5.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
1020	51.000	27.40	0.00	8.30	0.00	5.83	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
1021	50.900	27.40	0.00	8.30	0.00	5.87	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1022	50.800	27.40	0.00	8.30	0.00	5.90	3.15	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1023	50.700	27.40	0.00	8.30	0.00	5.91	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1024	50.600	27.40	0.00	8.30	0.00	5.93	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
1025	50.500	27.40	0.00	8.30	0.00	5.94	2.14	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1026	50.400	27.40	0.00	8.30	0.00	5.95	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1027	50.300	27.40	0.00	8.30	0.00	5.95	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1028	50.200	27.40	0.00	8.30	0.00	5.96	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1029	50.100	27.40	0.00	8.30	0.00	5.96	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1030	50.000	27.40	0.00	8.30	0.00	5.96	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1031	49.900	27.40	0.00	8.30	0.00	5.96	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1032	49.800	27.40	0.00	8.30	0.00	5.97	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1033	49.700	27.40	0.00	8.30	0.00	5.97	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1034	49.600	27.40	0.00	8.30	0.00	5.97	1.26	1.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1035	49.500	27.40	0.00	8.30	0.00	5.97	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1036	49.400	27.40	0.00	8.30	0.00	5.97	1.21	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1037	49.300	27.40	0.00	8.30	0.00	5.97	1.19	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1038	49.200	27.40	0.00	8.30	0.00	5.97	1.18	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1039	49.100	27.40	0.00	8.30	0.00	5.97	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1040	49.000	27.40	0.00	8.30	0.00	5.97	1.16	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1041	48.900	27.40	0.00	8.30	0.00	5.97	1.16	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1042	48.800	27.40	0.00	8.30	0.00	5.97	1.15	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1043	48.700	27.40	0.00	8.30	0.00	5.97	1.15	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1044	48.600	27.40	0.00	8.30	0.00E+00	5.97	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1045	48.500	27.40	0.00	8.30	0.00E+00	5.97	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1046	48.400	27.40	0.00	8.30	0.00	5.97	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1047	48.300	27.40	0.00	8.30	0.00	5.97	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1048	48.200	27.40	0.00	8.30	0.00	5.97	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1049	48.100	27.40	0.00	8.30	0.00	5.97	1.14	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1050	48.000	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1051	47.900	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1052	47.800	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1053	47.700	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1054	47.600	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1055	47.500	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1056	47.400	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1057	47.300	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1058	47.200	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1059	47.100	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1060	47.000	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 32 BANISTER CREEK - BRUSHY CREEK2 CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1061	UPR RCH	0.00280	27.40	0.00	8.30	0.00	5.97	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.13
EACH	INCR	0.0005	27.40	0.00	6.00	4.20	7.10	3.32	3.32	0.00	0.00	0.00	0.00		0.00	0.13

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1061	47.00	46.90	0.00327	0.00	0.00055	2.12	0.56	10.71	599.91	1071.01	6.00	0.00	0.000	0.000	0.001
1062	46.90	46.80	0.00374	0.00	0.00062	1.86	0.56	10.71	600.54	1071.07	6.01	0.00	0.000	0.000	0.001
1063	46.80	46.70	0.00421	0.00	0.00070	1.65	0.56	10.71	601.13	1071.12	6.01	0.00	0.000	0.000	0.001
1064	46.70	46.60	0.00468	0.00	0.00078	1.49	0.56	10.71	601.67	1071.17	6.02	0.00	0.000	0.000	0.001
1065	46.60	46.50	0.00515	0.00	0.00086	1.35	0.56	10.71	602.19	1071.22	6.02	0.00	0.000	0.000	0.001
1066	46.50	46.40	0.00562	0.00	0.00093	1.24	0.56	10.71	602.68	1071.26	6.03	0.00	0.000	0.000	0.001
1067	46.40	46.30	0.00609	0.00	0.00101	1.15	0.56	10.71	603.14	1071.30	6.03	0.00	0.000	0.000	0.001
1068	46.30	46.20	0.00656	0.00	0.00109	1.06	0.56	10.71	603.58	1071.34	6.04	0.00	0.000	0.000	0.001
1069	46.20	46.10	0.00703	0.00	0.00116	0.99	0.56	10.71	604.00	1071.38	6.04	0.00	0.000	0.000	0.001
1070	46.10	46.00	0.00750	0.00	0.00124	0.93	0.56	10.71	604.41	1071.41	6.04	0.00	0.000	0.000	0.001
1071	46.00	45.90	0.00797	0.00	0.00132	0.88	0.56	10.71	604.80	1071.45	6.05	0.00	0.000	0.000	0.001
1072	45.90	45.80	0.00844	0.00	0.00139	0.83	0.56	10.71	605.18	1071.48	6.05	0.00	0.000	0.000	0.001
1073	45.80	45.70	0.00891	0.00	0.00147	0.79	0.57	10.72	605.55	1071.51	6.06	0.00	0.000	0.000	0.001
1074	45.70	45.60	0.00938	0.00	0.00155	0.75	0.57	10.72	605.90	1071.54	6.06	0.00	0.000	0.000	0.002
1075	45.60	45.50	0.00985	0.00	0.00162	0.71	0.57	10.72	606.25	1071.58	6.06	0.00	0.000	0.001	0.002
1076	45.50	45.40	0.01032	0.00	0.00170	0.68	0.57	10.72	606.58	1071.60	6.07	0.00	0.000	0.001	0.002
1077	45.40	45.30	0.01079	0.00	0.00178	0.65	0.57	10.72	606.91	1071.63	6.07	0.00	0.000	0.001	0.002
1078	45.30	45.20	0.01126	0.00	0.00185	0.62	0.57	10.72	607.22	1071.66	6.07	0.00	0.000	0.001	0.002
1079	45.20	45.10	0.01173	0.00	0.00193	0.60	0.57	10.72	607.53	1071.69	6.08	0.00	0.000	0.001	0.002
1080	45.10	45.00	0.01220	0.00	0.00201	0.58	0.57	10.72	607.84	1071.72	6.08	0.00	0.000	0.001	0.002
1081	45.00	44.90	0.01267	0.00	0.00208	0.56	0.57	10.72	608.13	1071.74	6.08	0.00	0.000	0.001	0.002
1082	44.90	44.80	0.01314	0.00	0.00216	0.54	0.57	10.72	608.42	1071.77	6.08	0.00	0.000	0.001	0.002
1083	44.80	44.70	0.01361	0.00	0.00224	0.52	0.57	10.72	608.70	1071.79	6.09	0.00	0.000	0.001	0.002
1084	44.70	44.60	0.01408	0.00	0.00231	0.50	0.57	10.72	608.98	1071.82	6.09	0.00	0.000	0.001	0.002
1085	44.60	44.50	0.01455	0.00	0.00239	0.48	0.57	10.72	609.25	1071.84	6.09	0.00	0.000	0.001	0.002
1086	44.50	44.40	0.01502	0.00	0.00246	0.47	0.57	10.72	609.52	1071.86	6.10	0.00	0.000	0.001	0.002
1087	44.40	44.30	0.01549	0.00	0.00254	0.46	0.57	10.72	609.78	1071.89	6.10	0.00	0.000	0.001	0.003
1088	44.30	44.20	0.01596	0.00	0.00262	0.44	0.57	10.72	610.03	1071.91	6.10	0.00	0.000	0.001	0.003
1089	44.20	44.10	0.01643	0.00	0.00269	0.43	0.57	10.72	610.28	1071.93	6.10	0.00	0.000	0.001	0.003
1090	44.10	44.00	0.01690	0.00	0.00277	0.42	0.57	10.72	610.53	1071.95	6.11	0.00	0.000	0.001	0.003
1091	44.00	43.90	0.01737	0.00	0.00284	0.41	0.57	10.72	610.78	1071.98	6.11	0.00	0.000	0.001	0.003
1092	43.90	43.80	0.01784	0.00	0.00292	0.40	0.57	10.72	611.02	1072.00	6.11	0.00	0.000	0.001	0.003
1093	43.80	43.70	0.01831	0.00	0.00300	0.39	0.57	10.72	611.25	1072.02	6.11	0.00	0.000	0.001	0.003

1094	43.70	43.60	0.01878	0.00	0.00307	0.38	0.57	10.72	611.48	1072.04	6.11	0.00	0.000	0.001	0.003
1095	43.60	43.50	0.01925	0.00	0.00315	0.37	0.57	10.72	611.71	1072.06	6.12	0.00	0.000	0.001	0.003
1096	43.50	43.40	0.01972	0.00	0.00322	0.36	0.57	10.72	611.94	1072.08	6.12	0.00	0.000	0.001	0.003
1097	43.40	43.30	0.02019	0.00	0.00330	0.35	0.57	10.72	612.16	1072.10	6.12	0.00	0.000	0.001	0.003
1098	43.30	43.20	0.02066	0.00	0.00337	0.34	0.57	10.72	612.38	1072.12	6.12	0.00	0.000	0.001	0.003
1099	43.20	43.10	0.02113	0.00	0.00345	0.34	0.57	10.72	612.60	1072.14	6.13	0.00	0.000	0.001	0.003
1100	43.10	43.00	0.02160	0.00	0.00352	0.33	0.57	10.72	612.81	1072.16	6.13	0.00	0.000	0.001	0.004
1101	43.00	42.90	0.02207	0.00	0.00360	0.32	0.57	10.72	613.02	1072.18	6.13	0.00	0.000	0.001	0.004
1102	42.90	42.80	0.02254	0.00	0.00368	0.31	0.57	10.72	613.23	1072.19	6.13	0.00	0.000	0.001	0.004
1103	42.80	42.70	0.02301	0.00	0.00375	0.31	0.57	10.72	613.43	1072.21	6.13	0.00	0.000	0.001	0.004
1104	42.70	42.60	0.02348	0.00	0.00383	0.30	0.57	10.72	613.64	1072.23	6.14	0.00	0.000	0.001	0.004
1105	42.60	42.50	0.02395	0.00	0.00390	0.30	0.57	10.72	613.84	1072.25	6.14	0.00	0.000	0.001	0.004
1106	42.50	42.40	0.02442	0.00	0.00398	0.29	0.57	10.72	614.03	1072.27	6.14	0.00	0.000	0.001	0.004
1107	42.40	42.30	0.02489	0.00	0.00405	0.29	0.57	10.72	614.23	1072.28	6.14	0.00	0.000	0.001	0.004
1108	42.30	42.20	0.02536	0.00	0.00413	0.28	0.57	10.72	614.42	1072.30	6.14	0.00	0.000	0.001	0.004
1109	42.20	42.10	0.02583	0.00	0.00420	0.28	0.57	10.72	614.62	1072.32	6.15	0.00	0.000	0.001	0.004
1110	42.10	42.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
TOT						32.35			30438.03	53589.89					
AVG					0.00179		0.57	10.72			6.09				
CUM						3350.73									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1061	46.900	7.91	1.44	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1062	46.800	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1063	46.700	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1064	46.600	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1065	46.500	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1066	46.400	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1067	46.300	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1068	46.200	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1069	46.100	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06

1070	46.000	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1071	45.900	7.91	1.43	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1072	45.800	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1073	45.700	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1074	45.600	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1075	45.500	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1076	45.400	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1077	45.300	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1078	45.200	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1079	45.100	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1080	45.000	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1081	44.900	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1082	44.800	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1083	44.700	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1084	44.600	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1085	44.500	7.91	1.42	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1086	44.400	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1087	44.300	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1088	44.200	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1089	44.100	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1090	44.000	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1091	43.900	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1092	43.800	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1093	43.700	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1094	43.600	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06

1095	43.500	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1096	43.400	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1097	43.300	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1098	43.200	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1099	43.100	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1100	43.000	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1101	42.900	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1102	42.800	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1103	42.700	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1104	42.600	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1105	42.500	7.91	1.41	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1106	42.400	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1107	42.300	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1108	42.200	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1109	42.100	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1110	42.000	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
20 DEG C RATE				0.03		0.00	0.94			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.23		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1061	46.900	27.40	0.00	7.97	0.61	6.02	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1062	46.800	27.40	0.00	7.72	1.06	6.03	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1063	46.700	27.40	0.00	7.53	1.41	6.03	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1064	46.600	27.40	0.00	7.38	1.69	6.02	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1065	46.500	27.40	0.00	7.25	1.92	6.02	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12

1066	46.400	27.40	0.00	7.15	2.11	6.02	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1067	46.300	27.40	0.00	7.06	2.27	6.02	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1068	46.200	27.40	0.00	6.98	2.41	6.02	2.14	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1069	46.100	27.40	0.00	6.92	2.53	6.02	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1070	46.000	27.40	0.00	6.86	2.63	6.02	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1071	45.900	27.40	0.00	6.81	2.72	6.02	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1072	45.800	27.40	0.00	6.76	2.81	6.02	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1073	45.700	27.40	0.00	6.72	2.88	6.02	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1074	45.600	27.40	0.00	6.69	2.95	6.02	2.23	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1075	45.500	27.40	0.00	6.65	3.01	6.02	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1076	45.400	27.40	0.00	6.62	3.06	6.01	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1077	45.300	27.40	0.00	6.60	3.11	6.01	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1078	45.200	27.40	0.00	6.57	3.16	6.01	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1079	45.100	27.40	0.00	6.55	3.20	6.01	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1080	45.000	27.40	0.00	6.53	3.24	6.01	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1081	44.900	27.40	0.00	6.51	3.27	6.01	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1082	44.800	27.40	0.00	6.49	3.31	6.01	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1083	44.700	27.40	0.00	6.47	3.34	6.01	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1084	44.600	27.40	0.00	6.46	3.36	6.01	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1085	44.500	27.40	0.00	6.44	3.39	6.01	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1086	44.400	27.40	0.00	6.43	3.42	6.01	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1087	44.300	27.40	0.00	6.42	3.44	6.01	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1088	44.200	27.40	0.00	6.40	3.46	6.01	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1089	44.100	27.40	0.00	6.39	3.48	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1090	44.000	27.40	0.00	6.38	3.50	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1091	43.900	27.40	0.00	6.37	3.52	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1092	43.800	27.40	0.00	6.36	3.54	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1093	43.700	27.40	0.00	6.35	3.56	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1094	43.600	27.40	0.00	6.34	3.57	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1095	43.500	27.40	0.00	6.33	3.59	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1096	43.400	27.40	0.00	6.33	3.60	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1097	43.300	27.40	0.00	6.32	3.62	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1098	43.200	27.40	0.00	6.31	3.63	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1099	43.100	27.40	0.00	6.30	3.64	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1100	43.000	27.40	0.00	6.30	3.66	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1101	42.900	27.40	0.00	6.29	3.67	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1102	42.800	27.40	0.00	6.29	3.68	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1103	42.700	27.40	0.00	6.28	3.69	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1104	42.600	27.40	0.00	6.27	3.70	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1105	42.500	27.40	0.00	6.27	3.71	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1106	42.400	27.40	0.00	6.26	3.72	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1107	42.300	27.40	0.00	6.26	3.73	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1108	42.200	27.40	0.00	6.25	3.74	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1109	42.100	27.40	0.00	6.25	3.74	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1110	42.000	27.40	0.00	6.24	3.75	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 33 BRUSHY CREEK2 - MCCLELLEN BR CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1111	UPR RCH	0.02630	27.40	0.00	6.24	3.75	6.01	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.12

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1111	42.00	41.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1112	41.90	41.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1113	41.80	41.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1114	41.70	41.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1115	41.60	41.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1116	41.50	41.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1117	41.40	41.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1118	41.30	41.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1119	41.20	41.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1120	41.10	41.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1121	41.00	40.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1122	40.90	40.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1123	40.80	40.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1124	40.70	40.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1125	40.60	40.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1126	40.50	40.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1127	40.40	40.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1128	40.30	40.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1129	40.20	40.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1130	40.10	40.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1131	40.00	39.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1132	39.90	39.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1133	39.80	39.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1134	39.70	39.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1135	39.60	39.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1136	39.50	39.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1137	39.40	39.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1138	39.30	39.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1139	39.20	39.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1140	39.10	39.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1141	39.00	38.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1142	38.90	38.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1143	38.80	38.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1144	38.70	38.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1145	38.60	38.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1146	38.50	38.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1147	38.40	38.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1148	38.30	38.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1149	38.20	38.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1150	38.10	38.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1151	38.00	37.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1152	37.90	37.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1153	37.80	37.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1154	37.70	37.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1155	37.60	37.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1156	37.50	37.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1157	37.40	37.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1158	37.30	37.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1159	37.20	37.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1160	37.10	37.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1161	37.00	36.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1162	36.90	36.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1163	36.80	36.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1164	36.70	36.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1165	36.60	36.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1166	36.50	36.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1167	36.40	36.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1168	36.30	36.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1169	36.20	36.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1170	36.10	36.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1171	36.00	35.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1172	35.90	35.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1173	35.80	35.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1174	35.70	35.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1175	35.60	35.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1176	35.50	35.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1177	35.40	35.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1178	35.30	35.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1179	35.20	35.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1180	35.10	35.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1181	35.00	34.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1182	34.90	34.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1183	34.80	34.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1184	34.70	34.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1185	34.60	34.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1186	34.50	34.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1187	34.40	34.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1188	34.30	34.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1189	34.20	34.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1190	34.10	34.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1191	34.00	33.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1192	33.90	33.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1193	33.80	33.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1194	33.70	33.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1195	33.60	33.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
TOT						23.00			52258.40	91148.36					
AVG					0.00428		0.57	10.72			6.15				
CUM						3373.72									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1111	41.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1112	41.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1113	41.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1114	41.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1115	41.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1116	41.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1117	41.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1118	41.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1119	41.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1120	41.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1121	40.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1122	40.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1123	40.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1124	40.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1125	40.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1126	40.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	

1127	40.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1128	40.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1129	40.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1130	40.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1131	39.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1132	39.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1133	39.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1134	39.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1135	39.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1136	39.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1137	39.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1138	39.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1139	39.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1140	39.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1141	38.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1142	38.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1143	38.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1144	38.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1145	38.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1146	38.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1147	38.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1148	38.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1149	38.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1150	38.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
1151	37.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10

0.06																			
1152	37.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1153	37.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1154	37.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1155	37.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1156	37.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1157	37.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1158	37.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1159	37.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1160	37.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1161	36.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1162	36.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1163	36.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1164	36.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1165	36.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1166	36.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1167	36.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1168	36.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1169	36.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1170	36.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1171	35.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1172	35.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1173	35.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1174	35.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1175	35.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1176	35.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10

0.06																				
1177	35.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1178	35.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1179	35.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1180	35.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1181	34.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1182	34.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1183	34.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1184	34.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1185	34.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1186	34.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1187	34.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1188	34.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1189	34.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1190	34.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1191	33.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1192	33.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1193	33.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1194	33.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1195	33.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
20 DEG C RATE				0.03		0.00	1.17			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM	ENDING	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	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	µg/L	**	#/100mL	*
1111	41.900	27.40	0.00	6.24	3.75	5.88	2.29	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
1112	41.800	27.40	0.00	6.24	3.75	5.78	2.31	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1113	41.700	27.40	0.00	6.24	3.75	5.70	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1114	41.600	27.40	0.00	6.24	3.75	5.65	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1115	41.500	27.40	0.00	6.24	3.75	5.61	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1116	41.400	27.40	0.00	6.24	3.75	5.59	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1117	41.300	27.40	0.00	6.24	3.75	5.57	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
1118	41.200	27.40	0.00	6.24	3.75	5.55	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
1119	41.100	27.40	0.00	6.24	3.75	5.54	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1120	41.000	27.40	0.00	6.24	3.75	5.53	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1121	40.900	27.40	0.00	6.24	3.75	5.53	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1122	40.800	27.40	0.00	6.24	3.75	5.52	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1123	40.700	27.40	0.00	6.24	3.75	5.52	2.44	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1124	40.600	27.40	0.00	6.24	3.75	5.51	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1125	40.500	27.40	0.00	6.24	3.75	5.51	2.46	2.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1126	40.400	27.40	0.00	6.24	3.75	5.51	2.47	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1127	40.300	27.40	0.00	6.24	3.75	5.51	2.48	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1128	40.200	27.40	0.00	6.24	3.75	5.51	2.49	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1129	40.100	27.40	0.00	6.24	3.75	5.51	2.50	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1130	40.000	27.40	0.00	6.24	3.75	5.51	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
1131	39.900	27.40	0.00	6.24	3.75	5.51	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
1132	39.800	27.40	0.00	6.24	3.75	5.51	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
1133	39.700	27.40	0.00	6.24	3.75	5.51	2.53	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
1134	39.600	27.40	0.00	6.24	3.75	5.50	2.54	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1135	39.500	27.40	0.00	6.24	3.75	5.50	2.55	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1136	39.400	27.40	0.00	6.24	3.75	5.50	2.55	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1137	39.300	27.40	0.00	6.24	3.75	5.50	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1138	39.200	27.40	0.00	6.24	3.75	5.50	2.57	2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1139	39.100	27.40	0.00	6.24	3.75	5.50	2.57	2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1140	39.000	27.40	0.00	6.24	3.75	5.50	2.58	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1141	38.900	27.40	0.00	6.24	3.75	5.50	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1142	38.800	27.40	0.00	6.24	3.75	5.50	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1143	38.700	27.40	0.00	6.24	3.75	5.50	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1144	38.600	27.40	0.00	6.24	3.75	5.50	2.61	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1145	38.500	27.40	0.00	6.24	3.75	5.50	2.61	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1146	38.400	27.40	0.00	6.24	3.75	5.50	2.62	2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1147	38.300	27.40	0.00	6.24	3.75	5.50	2.62	2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1148	38.200	27.40	0.00	6.24	3.75	5.50	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1149	38.100	27.40	0.00	6.24	3.75	5.50	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1150	38.000	27.40	0.00	6.24	3.75	5.50	2.64	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1151	37.900	27.40	0.00	6.24	3.75	5.50	2.64	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1152	37.800	27.40	0.00	6.24	3.75	5.50	2.65	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1153	37.700	27.40	0.00	6.24	3.75	5.50	2.65	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1154	37.600	27.40	0.00	6.24	3.75	5.50	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1155	37.500	27.40	0.00	6.24	3.75	5.50	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1156	37.400	27.40	0.00	6.24	3.75	5.50	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1157	37.300	27.40	0.00	6.24	3.75	5.50	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1158	37.200	27.40	0.00	6.24	3.75	5.50	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22

1159	37.100	27.40	0.00	6.24	3.75	5.50	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1160	37.000	27.40	0.00	6.24	3.75	5.50	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1161	36.900	27.40	0.00	6.24	3.75	5.50	2.69	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1162	36.800	27.40	0.00	6.24	3.75	5.50	2.69	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1163	36.700	27.40	0.00	6.24	3.75	5.50	2.69	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1164	36.600	27.40	0.00	6.24	3.75	5.50	2.70	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1165	36.500	27.40	0.00	6.24	3.75	5.50	2.70	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1166	36.400	27.40	0.00	6.24	3.75	5.50	2.70	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1167	36.300	27.40	0.00	6.24	3.75	5.50	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1168	36.200	27.40	0.00	6.24	3.75	5.50	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1169	36.100	27.40	0.00	6.24	3.75	5.50	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1170	36.000	27.40	0.00	6.24	3.75	5.50	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1171	35.900	27.40	0.00	6.24	3.75	5.50	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1172	35.800	27.40	0.00	6.24	3.75	5.50	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1173	35.700	27.40	0.00	6.24	3.75	5.50	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1174	35.600	27.40	0.00	6.24	3.75	5.50	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1175	35.500	27.40	0.00	6.24	3.75	5.50	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1176	35.400	27.40	0.00	6.24	3.75	5.50	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1177	35.300	27.40	0.00	6.24	3.75	5.50	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1178	35.200	27.40	0.00	6.24	3.75	5.50	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1179	35.100	27.40	0.00	6.24	3.75	5.50	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1180	35.000	27.40	0.00	6.24	3.75	5.49	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1181	34.900	27.40	0.00	6.24	3.75	5.49	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1182	34.800	27.40	0.00	6.24	3.75	5.49	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1183	34.700	27.40	0.00	6.24	3.75	5.49	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1184	34.600	27.40	0.00	6.24	3.75	5.49	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1185	34.500	27.40	0.00	6.24	3.75	5.49	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1186	34.400	27.40	0.00	6.24	3.75	5.49	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1187	34.300	27.40	0.00	6.24	3.75	5.49	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1188	34.200	27.40	0.00	6.24	3.75	5.49	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1189	34.100	27.40	0.00	6.24	3.75	5.49	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1190	34.000	27.40	0.00	6.24	3.75	5.49	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1191	33.900	27.40	0.00	6.24	3.75	5.49	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1192	33.800	27.40	0.00	6.24	3.75	5.49	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1193	33.700	27.40	0.00	6.24	3.75	5.49	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1194	33.600	27.40	0.00	6.24	3.75	5.49	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1195	33.500	27.40	0.00	6.24	3.75	5.49	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 34 MCCLELLEN BR - FLAT CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

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

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
1196	UPR RCH	0.02630	27.40	0.00	6.24	3.75	5.49	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.24

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1196	33.50	33.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1197	33.40	33.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1198	33.30	33.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1199	33.20	33.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1200	33.10	33.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1201	33.00	32.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1202	32.90	32.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1203	32.80	32.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1204	32.70	32.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1205	32.60	32.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1206	32.50	32.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1207	32.40	32.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1208	32.30	32.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1209	32.20	32.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1210	32.10	32.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
TOT						4.06			9222.07	16085.00					
AVG					0.00428		0.57	10.72			6.15				
CUM						3377.78									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1196	33.400	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1197	33.300	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1198	33.200	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1199	33.100	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1200	33.000	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	

0.06																				
1201	32.900	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1202	32.800	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1203	32.700	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1204	32.600	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1205	32.500	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1206	32.400	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1207	32.300	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1208	32.200	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1209	32.100	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
1210	32.000	7.91	1.40	0.04	0.06	0.00	1.51	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	
0.06																				
20 DEG C RATE				0.03		0.00	0.95			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1196	33.400	27.40	0.00	6.24	3.75	5.61	2.81	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1197	33.300	27.40	0.00	6.24	3.75	5.70	2.85	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1198	33.200	27.40	0.00	6.24	3.75	5.76	2.88	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1199	33.100	27.40	0.00	6.24	3.75	5.81	2.92	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1200	33.000	27.40	0.00	6.24	3.75	5.84	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
1201	32.900	27.40	0.00	6.24	3.75	5.86	2.99	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1202	32.800	27.40	0.00	6.24	3.75	5.88	3.03	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1203	32.700	27.40	0.00	6.24	3.75	5.89	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1204	32.600	27.40	0.00	6.24	3.75	5.90	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1205	32.500	27.40	0.00	6.24	3.75	5.91	3.12	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1206	32.400	27.40	0.00	6.24	3.75	5.91	3.15	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
1207	32.300	27.40	0.00	6.24	3.75	5.92	3.18	3.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1208	32.200	27.40	0.00	6.24	3.75	5.92	3.21	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1209	32.100	27.40	0.00	6.24	3.75	5.92	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1210	32.000	27.40	0.00	6.24	3.75	5.92	3.27	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 35 FLAT CREEK - SANDY CREEK CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1211	UPR RCH	0.02630	27.40	0.00	6.24	3.75	5.92	3.27	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1211	WSTLD	0.00280	27.40	0.00	0.00	0.00	7.10	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.13

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1211	32.00	31.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1212	31.90	31.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1213	31.80	31.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1214	31.70	31.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1215	31.60	31.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1216	31.50	31.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1217	31.40	31.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1218	31.30	31.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1219	31.20	31.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1220	31.10	31.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1221	31.00	30.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1222	30.90	30.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1223	30.80	30.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1224	30.70	30.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1225	30.60	30.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1226	30.50	30.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1227	30.40	30.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1228	30.30	30.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1229	30.20	30.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1230	30.10	30.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1231	30.00	29.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1232	29.90	29.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1233	29.80	29.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
TOT						5.63			14165.55	24665.88					
AVG					0.00472		0.57	10.72			6.16				

CUM 3383.41

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
1211	31.900	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1212	31.800	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1213	31.700	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1214	31.600	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1215	31.500	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1216	31.400	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1217	31.300	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1218	31.200	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1219	31.100	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1220	31.000	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1221	30.900	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1222	30.800	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1223	30.700	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1224	30.600	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1225	30.500	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1226	30.400	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1227	30.300	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1228	30.200	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1229	30.100	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06

1230	30.000	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1231	29.900	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1232	29.800	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1233	29.700	7.91	1.40	0.04	0.06	0.00	1.50	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
20 DEG C RATE				0.03		0.00	0.94			0.00		0.00	0.00	0.00	0.00			0.00	0.07	
AVG 20 DEG C RATE			1.22		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1211	31.900	27.40	0.00	5.64	3.39	6.01	3.18	3.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1212	31.800	27.40	0.00	5.64	3.39	5.99	3.20	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
1213	31.700	27.40	0.00	5.64	3.39	5.98	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
1214	31.600	27.40	0.00	5.64	3.39	5.97	3.25	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1215	31.500	27.40	0.00	5.64	3.39	5.96	3.27	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1216	31.400	27.40	0.00	5.64	3.39	5.95	3.29	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
1217	31.300	27.40	0.00	5.64	3.39	5.95	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1218	31.200	27.40	0.00	5.64	3.39	5.94	3.33	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1219	31.100	27.40	0.00	5.64	3.39	5.94	3.35	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1220	31.000	27.40	0.00	5.64	3.39	5.94	3.37	3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1221	30.900	27.40	0.00	5.64	3.39	5.94	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1222	30.800	27.40	0.00	5.64	3.39	5.93	3.41	3.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1223	30.700	27.40	0.00	5.64	3.39	5.93	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1224	30.600	27.40	0.00	5.64	3.39	5.93	3.45	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
1225	30.500	27.40	0.00	5.64	3.39	5.93	3.47	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
1226	30.400	27.40	0.00	5.64	3.39	5.93	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
1227	30.300	27.40	0.00	5.64	3.39	5.93	3.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
1228	30.200	27.40	0.00	5.64	3.39	5.92	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
1229	30.100	27.40	0.00	5.64	3.39	5.92	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
1230	30.000	27.40	0.00	5.64	3.39	5.92	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
1231	29.900	27.40	0.00	5.64	3.39	5.92	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
1232	29.800	27.40	0.00	5.64	3.39	5.92	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
1233	29.700	27.40	0.00	5.64	3.39	5.92	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 36 SANDY CREEK - HWY 124 CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1234	UPR RCH	0.02910	27.40	0.00	5.64	3.39	5.92	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.30

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1234	29.70	29.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1235	29.60	29.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1236	29.50	29.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1237	29.40	29.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1238	29.30	29.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1239	29.20	29.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1240	29.10	29.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1241	29.00	28.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1242	28.90	28.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1243	28.80	28.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1244	28.70	28.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
TOT						2.69			6774.83	11796.73					
AVG					0.00472		0.57	10.72			6.16				
CUM						3386.11									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
1234	29.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1235	29.500	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1236	29.400	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

1237	29.300	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1238	29.200	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1239	29.100	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1240	29.000	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1241	28.900	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1242	28.800	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1243	28.700	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1244	28.600	7.91	1.40	0.04	0.06	0.00	1.86	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
20 DEG C RATE				0.03		0.00	1.17			0.00		0.00	0.00	0.00	0.00			0.00	0.09	
AVG 20 DEG C RATE			1.22		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1234	29.600	27.40	0.00	5.64	3.39	5.80	3.57	3.57	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.28
1235	29.500	27.40	0.00	5.64	3.39	5.71	3.56	3.56	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.27
1236	29.400	27.40	0.00	5.64	3.39	5.65	3.54	3.54	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.26
1237	29.300	27.40	0.00	5.64	3.39	5.60	3.53	3.53	0.00	0.00	0.01	0.01	0.03	0.00	0.00	0.00	0.24
1238	29.200	27.40	0.00	5.64	3.39	5.57	3.51	3.51	0.00	0.00	0.01	0.01	0.04	0.00	0.00	0.00	0.23
1239	29.100	27.40	0.00	5.64	3.39	5.54	3.50	3.50	0.00	0.00	0.02	0.02	0.05	0.00	0.00	0.00	0.22
1240	29.000	27.40	0.00	5.64	3.39	5.52	3.48	3.48	0.00	0.00	0.02	0.02	0.06	0.00	0.00	0.00	0.21
1241	28.900	27.40	0.00	5.64	3.39	5.51	3.47	3.47	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.20
1242	28.800	27.40	0.00	5.64	3.39	5.50	3.45	3.45	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.19
1243	28.700	27.40	0.00	5.64	3.39	5.49	3.44	3.44	0.00	0.00	0.03	0.03	0.08	0.00	0.00	0.00	0.18
1244	28.600	27.40	0.00	5.64	3.39	5.49	3.43	3.43	0.00	0.00	0.03	0.03	0.09	0.00	0.00	0.00	0.17

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

STREAM SUMMARY
HEADWATER

CASTOR CREEK WATERSHED MODEL
CASTOR CREEK SUMMER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

TRAVEL TIME = 3386.11 DAYS

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MAXIMUM EFFLUENT =           9.62 PERCENT

FLOW             =   0.00280 TO    0.02910 m³/s
DISPERSION       =   0.0001  TO    0.0015  m²/s
VELOCITY         =   0.00029 TO    0.00472 m/s
DEPTH            =   0.54    TO    0.87    m
WIDTH            =  10.71    TO   11.91    m

BOD DECAY        =    0.04   TO    0.10    per day
NH3 DECAY        =    0.00   TO    0.00    per day
SDMNT OXYGEN DMND=    1.50   TO    1.86    g/m²/d
NH3 SOURCE       =    0.00   TO    0.00    g/m²/d
REAERATION       =    0.93   TO    1.49    per day
BOD SETTLING     =    0.06   TO    0.06    per day
ORGN DECAY       =    0.00   TO    0.00    per day
ORGN SETTLING    =    0.00   TO    0.00    per day

TEMPERATURE      =   27.40   TO   27.40    deg C
DISSOLVED OXYGEN =    5.33   TO    6.03    mg/L


    .....EXECUTION COMPLETED
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APPENDIX B2 - Current summer projection justifications

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 3, Program Constants			
Description of Constant	**Value**	**Result**	**Source/Justification**
Maximum iteration limit	1000.0		Standard
KL Minimum	0.7	Minimum KL to be used.	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
Inhibition control value	3.0	Inhibits all decay rate except SOD for low DO.	Standard LA modeling procedure.
Ocean exchange ratio	0.0	Set 0% tidal exchange at lower boundary.	This was done to allow dispersion in the model but not to force the bottom element through the boundary conditions.
Hydraulic calculation method	2.0	Sets the Hydraulic calc. to width and depth coef.	The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions, making the Leopold relationships inaccurate. This method allows the model to predict a more accurate depth and width during low flow conditions.
Settled rate units.	2.0	Sets the settled rate to a velocity (m/day).	By making the settling rate a velocity the rate becomes dependent upon the depth.
K2 Max	25.0	Max K2 at 20 C allowed for any computational element	EPA Policy in the absence of a measured value.
NCM Oxygen Uptake	1.0	Oxygen Uptake Rate per Unit of NBOD decay.	Standard LA modeling procedure

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
2	McDowell Branch - Horse Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
3	Horse Creek - Guice Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
4	Guice Branch - Curr Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
5	Curr Creek - Poplar Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
6	Poplar Branch - White Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
			Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
7	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
9	Fourmile Creek - Pool Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
10	Pool Branch - Ginney Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
11	Ginney Branch - Edwards Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
12	Edwards Branch - Little Flat	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.20	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.86	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
13	Little Flat - Glade Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.84	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
14	Glade Creek - Cub Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.82	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
15	Cub Creek - Cow Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.81	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
16	Cow Creek - Bear Creek Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.8	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
17	Bear Creek Branch - Biles Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
18	Biles Branch - Hurricane Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
19	Hurricane Creek - Indian Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.78	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
20	Indian Branch - Moody Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.77	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
21	Moody Creek - Bull Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.76	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
22	Bull Creek - Sweetwater Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.75	Zero flow cross section

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
23	Sweetwater Creek - Brushy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.74	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
24	Brushy Creek - White Oak Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.73	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
25	White Oak Creek - Bills Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.71	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
26	Bills Creek - Lost Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.68	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
27	Lost Creek - Messer Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.65	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
28	Messer Creek - Richland Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.63	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
29	Richland Creek - Piney Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.61	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
30	Piney Creek - Beaucoup Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.58	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
31	Beaucoup Creek - Banister Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.57	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
32	Banister Creek - Brushy Creek2	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
33	Brushy Creek 2 - McClellen Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
34	McClellen Branch - Flat Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
35	Flat Creek - Sandy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
36	Sandy Creek - Hwy 124	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
2	McDowell Branch - Horse Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
3	Horse Creek - Guice Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
4	Guice Branch - Curr Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
5	Curr Creek - Poplar Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
6	Poplar Branch - White Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
7	White Branch - Colston Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
8	White Branch - Colston Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
9	Fourmile Creek - Pool Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
10	Pool Branch - Ginney Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
11	Ginney Branch - Edwards Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
12	Edwards Branch - Little Flat	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
13	Little Flat - Glade Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
14	Glade Creek - Cub Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
15	Cub Creek - Cow Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
16	Cow Creek - Bear Creek Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
17	Bear Creek Branch - Biles Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
18	Biles Branch - Hurricane Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
19	Hurricane Creek - Indian Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
20	Indian Branch - Moody Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
21	Moody Creek - Bull Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
22	Bull Creek - Sweetwater Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
23	Sweetwater Creek - Brushy Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
24	Brushy Creek - White Oak Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
25	White Oak Creek - Bills Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
26	Bills Creek - Lost Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
27	Lost Creek - Messer Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
28	Messer Creek - Richland Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
29	Richland Creek - Piney Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
30	Piney Creek - Beaucoup Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
31	Beaucoup Creek - Banister Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
32	Banister Creek - Brushy Creek2	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
33	Brushy Creek 2 - McClellen Branch	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
34	McClellen Branch - Flat Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
35	Flat Creek - Sandy Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
36	Sandy Creek - Hwy 124	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.10	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
15	Cub Creek - Cow Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.10	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.04	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.00	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.00	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
22	Bull Creek - Sweetwater Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.04	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.06	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.07	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.04	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.03	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.01	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 4 and 5
		BOD Settling rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.97	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
29	Richland Creek - Piney Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.96	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.05	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.95	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.94	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.17	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	0.95	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.94	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.17	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate for Site 1
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
8	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
15	Cub Creek - Cow Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

19	Hurricane Creek - Indian Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
22	Bull Creek - Sweetwater Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	NCM Decay	1/day	0.1	Interpolation of Bottle Rates from sites 4-5
		NCM Settling Rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	NCM Decay	1/day	0.09	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
29	Richland Creek - Piney Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	NCM Decay	1/day	0.07	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
36	Sandy Creek - Hwy 124	NCM Decay	1/day	0.09	Bottle Rate Site 1
		NCM Settling Rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 16, Incremental Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
32		Incremental Outflow	m^3/s		
		Incremental Inflow	m^3/s	0.0235	
		Temperature	$^oCelcius$	27.4	Summer Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	6	Site 3
		Conservative Matl. II	mg/l	4.2	Site 3

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 17, Incremetal Data for DO, BOD, Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
32		Dissolved O_2	mg/l	7.1	Summer Season 90 percent DO Sat
		BOD	mg/l	3.32	60% Background from reference streams
		Org.-N	mg/l		
		NH_3-N	mg/l		
		NO_{2+3} - N	mg/l		

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 18, Incremetal Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives					
Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
32		NCM	mg/l	0.132	60% Background from reference streams

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	BOD	kg/day	6	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
2	McDowell Branch - Horse Creek	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
3	Horse Creek - Guice Branch	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
4	Guice Branch - Curr Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
5	Curr Creek - Poplar Branch	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
6	Poplar Branch - White Branch	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
7	White Branch - Colston Creek	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
8	White Branch - Colston Creek	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
9	Fourmile Creek - Pool Branch	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
10	Pool Branch - Ginney Branch	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
11	Ginney Branch - Edwards Branch	BOD	kg/day	7	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
12	Edwards Branch - Little Flat	BOD	kg/day	7	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
13	Little Flat - Glade Creek	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
14	Glade Creek - Cub Creek	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		4	100% reduction man-made + 40% reduction backgroun
15	Cub Creek - Cow Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
16	Cow Creek - Bear Creek Branch	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
17	Bear Creek Branch - Biles Branch	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
18	Biles Branch - Hurricane Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
19	Hurricane Creek - Indian Branch	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
20	Indian Branch - Moody Creek	BOD	kg/day	5	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
21	Moody Creek - Bull Creek	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
22	Bull Creek - Sweetwater Creek	BOD	kg/day	15	100% reduction man-made + 40% reduction background
		Nonconservative matl.		4	100% reduction man-made + 40% reduction backgroun
23	Sweetwater Creek - Brushy Creek	BOD	kg/day	4	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
24	Brushy Creek - White Oak Creek	BOD	kg/day	16	100% reduction man-made + 40% reduction background
		Nonconservative matl.		4	100% reduction man-made + 40% reduction backgroun
25	White Oak Creek - Bills Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
26	Bills Creek - Lost Creek	BOD	kg/day	13	100% reduction man-made + 40% reduction background
		Nonconservative matl.		4	100% reduction man-made + 40% reduction backgroun
27	Lost Creek - Messer Creek	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
28	Messer Creek - Richland Creek	BOD	kg/day	6	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
29	Richland Creek - Piney Creek	BOD	kg/day	8	100% reduction man-made + 40% reduction background
		Nonconservative matl.		3	100% reduction man-made + 40% reduction backgroun
30	Piney Creek - Beaucoup Creek	BOD	kg/day	12	100% reduction man-made + 40% reduction background
		Nonconservative matl.		3	100% reduction man-made + 40% reduction backgroun
31	Beaucoup Creek - Banister Creek	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
32	Banister Creek - Brushy Creek2	BOD	kg/day	5	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
33	Brushy Creek 2 - McClellen Branch	BOD	kg/day	15	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
34	McClellen Branch - Flat Creek	BOD	kg/day	4	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
35	Flat Creek - Sandy Creek	BOD	kg/day	6	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
36	Sandy Creek - Hwy 124	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 20, Headwater Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Element # of input		1	
		Headwater name		Castor Creek	
		Headwater flow	cms	0.0028	Per LTP
		Temperature	°Celcius	27.40	Summer Season 90th Percentile Temperature
		Conservative Matl. I	mg/l	8.30	Site 5
		Conservative Matl. II	mg/l	0.00	Site 5

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 21, Headwater Data for DO, BOD, and Nitrogen					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		Dissolved O_2	mg/l	7.1	Summer Season 90 percent DO Sat
		BOD	mg/l	3.32	60% Background

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 22, Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		NCM	mg/l	0.132	60% Background

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 24, Wastewater Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Wasteload inflow	cms	0.0028	LTP Summer Projection Value
		Temperature	^{o}Celcius	27.4	90th percentile Temperature for Summer Season
		Salinity	ppt		
		Conservative Matl. I	mg/l		
		Conservative Matl. II	mg/l		

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 25, Wastewater Data for DO, BOD, and Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Dissolved O_2	mg/l	7.1	90 percent of DO Sat at Summer 90th Percentile Temperature
		CBOD	mg/l	2.08	60% Background

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 26, Wastewater Data for NCM					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		NCM	mg/l	0.132	60% Background

Castor Creek Water Quality Current Standard Summer Model Input Description

DATA TYPE 27, Lower Boundary Conditions

Reach #	NAME	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	10.4	Site 1
		Conservative Matl. II		5	Site 1
		Dissolved O_2	mg/l	7.1	Summer Season 90 Percent DO Sat
		BOD	mg/l	9.58	Site 1
		Org.- N	mg/l	0	
		NH_3-N	mg/l	0	
		NO_{2+3}-N	mg/l	0.03	
		Chlorophyll a	ug/l	0	
		Nonconservative	mg/l	0.62	Site 1

APPENDIX B3 - Current summer loading calculations

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

led stream or water body: **Castor Creek - Current Standards Loading**

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

	Calibration Model Values									Projection Model Equivalents				Projected Model Loads			
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	TCBL adjusted for % reduction (Reduced TCBL)	Reduced TCBL adjusted for MOS	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Total Projection Benthic Load (LA+MOS)
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^3)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^3)(day)]	Kilo-meters	Meters	(degrees Celcius)	%	gm O_2 / [(m^3)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^3)(day)]	gm O_2 / [(m^3)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	**B,** (note 1)	**C,** (note 1)	**D,** (note 1)	**E,** (note 1)	**G**	**I**	**H**	**J,** (note 2)	**K,** (note 3)	**L = (K)(A / D)**	**M = (K)(B / D)**	**N = (K)(C / D)**	**O = (E)(G)(L)**	**P = (E)(G)(M)**	**Q,** (note 4)	**O + P + Q**
1	0.271	0.031	3.65	3.952	5.90	11.90	27.40	75.0%	0.99	1.23	0.085	0.010	1.14	6	1	128	134.25
2	0.263	0.032	3.65	3.944	1.60	11.90	27.40	75.0%	0.99	1.23	0.082	0.010	1.14	2	0	35	36.36
3	0.261	0.031	3.65	3.942	0.90	11.90	27.40	75.0%	0.99	1.23	0.082	0.010	1.14	1	0	19	20.45
4	0.259	0.030	3.65	3.938	1.30	11.90	27.40	75.0%	0.98	1.23	0.081	0.009	1.14	1	0	28	29.51
5	0.261	0.030	3.65	3.941	2.80	11.90	27.40	75.0%	0.99	1.23	0.082	0.009	1.14	3	0	61	63.60
6	0.261	0.029	3.65	3.940	0.10	11.90	27.40	75.0%	0.98	1.23	0.081	0.009	1.14	0	0	2	2.27
7	0.250	0.031	3.65	3.931	3.80	11.90	27.40	75.0%	0.98	1.23	0.078	0.010	1.14	4	0	82	86.17
8	0.252	0.030	3.65	3.932	0.50	11.90	27.40	75.0%	0.98	1.23	0.079	0.009	1.14	0	0	11	11.34
9	0.252	0.030	3.65	3.932	3.10	11.90	27.40	75.0%	0.98	1.23	0.079	0.009	1.14	3	0	67	70.31
10	0.252	0.032	3.65	3.934	0.20	11.90	27.40	75.0%	0.98	1.23	0.079	0.010	1.14	0	0	4	4.54
11	0.251	0.031	3.65	3.932	7.70	11.90	27.40	75.0%	0.98	1.23	0.078	0.010	1.14	7	1	167	174.62
12	0.326	0.117	4.30	4.743	7.40	11.20	27.40	75.0%	1.19	1.48	0.102	0.037	1.34	8	3	177	188.95
13	0.146	0.219	4.30	4.665	3.70	11.10	27.40	75.0%	1.17	1.46	0.046	0.068	1.34	2	3	88	92.64
14	0.131	0.246	4.20	4.577	5.50	11.10	27.40	75.0%	1.14	1.43	0.041	0.077	1.31	3	5	128	134.88
15	0.150	0.255	4.10	4.505	1.20	11.10	27.40	75.0%	1.13	1.41	0.047	0.080	1.28	1	1	27	28.88
16	0.141	0.253	4.10	4.494	3.20	11.10	27.40	75.0%	1.12	1.40	0.044	0.079	1.28	2	3	73	76.90
17	0.136	0.250	4.10	4.486	0.40	11.00	27.40	75.0%	1.12	1.40	0.043	0.078	1.28	0	0	9	9.52
18	0.144	0.254	4.10	4.497	1.90	11.00	27.40	75.0%	1.12	1.41	0.045	0.079	1.28	1	2	43	45.27
19	0.455	0.198	4.10	4.752	2.30	11.00	27.40	75.0%	1.19	1.49	0.142	0.062	1.28	4	2	52	56.81
20	0.515	0.242	3.70	4.458	3.00	11.00	27.40	75.0%	1.11	1.39	0.161	0.076	1.16	5	3	61	68.62
21	0.519	0.241	3.700	4.459	1.70	11.00	27.40	75.0%	1.11	1.39	0.162	0.075	1.16	3	1	34	38.89
22	0.506	0.146	3.700	4.258	9.70	11.00	27.40	75.0%	1.06	1.33	0.158	0.046	1.16	17	5	197	218.37
23	0.473	0.136	3.750	4.236	2.70	11.00	27.40	75.0%	1.06	1.32	0.148	0.043	1.17	4	1	55	61.12
24	0.470	0.125	3.750	4.206	11.10	11.00	27.40	75.0%	1.05	1.31	0.147	0.039	1.17	18	5	228	250.75
25	0.435	0.123	3.100	3.563	0.80	10.90	27.40	75.0%	0.89	1.11	0.136	0.038	0.97	1	0	13	14.98
26	0.374	0.112	3.100	3.611	9.60	10.90	27.40	75.0%	0.90	1.13	0.117	0.035	0.97	12	4	162	177.44
27	0.264	0.192	3.100	3.692	3.00	10.80	27.40	75.0%	0.92	1.15	0.083	0.060	0.97	3	2	50	54.64
28	0.347	0.116	2.700	3.334	4.20	10.80	27.40	75.0%	0.83	1.04	0.109	0.036	0.84	5	2	61	67.55
29	0.386	0.125	2.550	3.180	5.00	10.80	27.40	75.0%	0.79	0.99	0.121	0.039	0.80	7	2	69	77.20
30	0.467	0.125	3.650	4.183	8.50	10.70	27.40	75.0%	1.05	1.31	0.146	0.039	1.14	13	4	165	182.15
31	0.512	0.122	2.600	3.285	1.50	10.70	27.40	75.0%	0.82	1.03	0.160	0.038	0.81	3	1	21	23.96
32	0.505	0.125	2.500	3.191	2.30	10.70	27.40	75.0%	0.80	1.00	0.158	0.039	0.78	4	1	31	35.48
33	0.462	0.071	2.400	2.465	6.20	10.70	27.40	75.0%	0.62	0.77	0.144	0.022	0.75	10	1	79	90.35
34	0.623	0.062	2.600	3.285	1.50	10.70	27.40	75.0%	0.82	1.03	0.195	0.019	0.81	3	0	21	24.22
35	0.610	0.081	2.500	3.191	2.30	10.70	27.40	75.0%	0.80	1.00	0.190	0.025	0.78	5	1	31	35.95
36	0.060	0.005	2.400	2.465	6.20	10.70	27.40	75.0%	0.62	0.77	0.019	0.001	0.75	1	0	79	80.63
Sub-Total									35.28					160	53	2556	**2770**

	Margin of Safety Loads						Man-made Model equivalents				Man-made Model loads				Background Model loads			
Reach Number and Description	MOS Total Benthic Load @ 20°C	MOS SOD @ 20°C	Non-Point UCBOD MOS Loads	Non-Point UNBOD MOS Loads	Adjusted SOD MOS @ Proj. temp	Adjusted Total MOS @ Proj. temp	Manmade portion of TCBL	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load
	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	gm O_2 / [(m^3)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	R = (K-J)(E)(G)	**S = (R)(C/D)**	**T = (R)(A/D)**	**U = (R)(B/D)**	**V,** (note 5)	**T + U + V**	**W = K - F**	**X = (W)(A / D)**	**Y = (W)(B / D)**	**Z = (W)(C / D)**	**AA = (E)(G)(X)**	**AB = (E)(G)(Y)**	**AC,** (note 6)	**AA + AB + AC**	**AD = O - AA**	**AE = P - AB**	**AF = Q - AC**	**AD + AE + AF**
1	17	16	1	0	26	27	1.23	0.085	0.010	1.14	6	1	128	134.25	0	0	0	0.00
2	5	4	0	0	7	7	1.23	0.082	0.010	1.14	2	0	35	36.36	0	0	0	0.00
3	3	2	0	0	4	4	1.23	0.082	0.010	1.14	1	0	19	20.45	0	0	0	0.00
4	4	4	0	0	6	6	1.23	0.081	0.009	1.14	1	0	28	29.51	0	0	0	0.00
5	8	8	1	0	12	13	1.23	0.082	0.009	1.14	3	0	61	63.60	0	0	0	0.00
6	0	0	0	0	0	0	1.23	0.081	0.009	1.14	0	0	2	2.27	0	0	0	0.00
7	11	10	1	0	16	17	1.23	0.078	0.010	1.14	4	0	82	86.17	0	0	0	0.00
8	1	1	0	0	2	2	1.23	0.079	0.009	1.14	0	0	11	11.34	0	0	0	0.00
9	9	8	1	0	13	14	1.23	0.079	0.009	1.14	3	0	67	70.31	0	0	0	0.00
10	1	1	0	0	1	1	1.23	0.079	0.010	1.14	0	0	4	4.54	0	0	0	0.00
11	23	21	1	0	33	35	1.23	0.078	0.010	1.14	7	1	167	174.62	0	0	0	0.00
12	25	22	2	1	35	38	1.48	0.102	0.037	1.34	8	3	177	188.95	0	0	0	0.00
13	12	11	0	1	18	19	1.46	0.046	0.068	1.34	2	3	88	92.64	0	0	0	0.00
14	17	16	1	1	26	27	1.43	0.041	0.077	1.31	3	5	128	134.88	0	0	0	0.00
15	4	3	0	0	5	6	1.41	0.047	0.080	1.28	1	1	27	28.88	0	0	0	0.00
16	10	9	0	1	15	15	1.40	0.044	0.079	1.28	2	3	73	76.90	0	0	0	0.00
17	1	1	0	0	2	2	1.40	0.043	0.078	1.28	0	0	9	9.52	0	0	0	0.00
18	6	5	0	0	9	9	1.41	0.045	0.079	1.28	1	2	43	45.27	0	0	0	0.00
19	8	6	1	0	10	11	1.49	0.142	0.062	1.28	4	2	52	56.81	0	0	0	0.00
20	9	8	1	1	12	14	1.39	0.161	0.076	1.16	5	3	61	68.62	0	0	0	0.00
21	5	4	1	0	7	8	1.39	0.162	0.075	1.16	3	1	34	38.89	0	0	0	0.00
22	28	25	3	1	39	44	1.33	0.158	0.046	1.16	17	5	197	218.37	0	0	0	0.00
23	8	7	1	0	11	12	1.32	0.148	0.043	1.17	4	1	55	61.12	0	0	0	0.00
24	32	29	4	1	46	50	1.31	0.147	0.039	1.17	18	5	228	250.75	0	0	0	0.00
25	2	2	0	0	3	3	1.11	0.136	0.038	0.97	1	0	13	14.98	0	0	0	0.00
26	24	20	2	1	32	35	1.13	0.117	0.035	0.97	12	4	162	177.44	0	0	0	0.00
27	7	6	1	0	10	11	1.15	0.083	0.060	0.97	3	2	50	54.64	0	0	0	0.00
28	9	8	1	0	12	14	1.04	0.109	0.036	0.84	5	2	61	67.55	0	0	0	0.00
29	11	9	1	0	14	15	0.99	0.121	0.039	0.80	7	2	69	77.20	0	0	0	0.00
30	24	21	3	1	33	36	1.31	0.146	0.039	1.14	13	4	165	182.15	0	0	0	0.00
31	3	3	1	0	4	5	1.03	0.160	0.038	0.81	3	1	21	23.96	0	0	0	0.00
32	5	4	1	0	6	7	1.00	0.158	0.039	0.78	4	1	31	35.48	0	0	0	0.00
33	10	10	2	0	16	18	0.77	0.144	0.022	0.75	10	1	79	90.35	0	0	0	0.00
34	3	3	1	0	4	5	1.03	0.195	0.019	0.81	3	0	21	24.22	0	0	0	0.00
35	5	4	1	0	6	7	1.00	0.190	0.025	0.78	5	1	31	35.95	0	0	0	0.00
36	10	10	0	0	16	16	0.77	0.019	0.001	0.75	1	0	79	80.63	0	0	0	0.00
Sub-Total	361		32	11	511	**554**					160	53	2556	**2770**	0	0	0	**0**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset
Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]
Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]
Note 4, **Q** = **E** x **G** x **N** x 1.065 $^{(I-20)}$
Note 5, **V** = **S** x 1.065 $^{(I-20)}$
Note 6, **AC** = **E** x **G** x **Z** x 1.065 $^{(I-20)}$

EXPLICIT MARGINS:

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

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

Castor Creek - Current Standards Loading

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

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Headwater Castor Creek	0.0028	14.74	0.58	3.57	0.14	75%	0.89	0.04	1.11	0.04	4.61	0.18	**0.23**	**0.93**
Flat Creek	0.0028	3.46	0.50	0.84	0.12	75%	0.21	0.03	0.26	0.04	1.08	0.16	**0.06**	**0.24**
SUB-TOTAL TMDL LOADING				**4**	**0**		**1**	**0**	**1**	**0**			**0**	**1**

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

Summer TMDL calculations and Projection model calculations for Incremental loads:

Castor Creek - Current Standards Loading

Incremental Load Determinations:

Reach Description and #	Calibration Load determinations:					Percentage Reduction calculations:			Projection Model Input determinations:				Projection Model Input determinations:			
	Projection Flow (cms)	Calb. UCBOD conc. (mg/l)	Unadjusted UCBOD (kg/day)	Calb. UNBOD conc. (mg/l)	Unadjusted UNBOD (kg/day)	Actual % Reduction of Man Made Loads	Increm. UCBOD Load Adjusted For % Reduction **(LA load)**	Increm. UNBOD Load Adjusted For % Reduction **(LA load)**	Increm. UCBOD Adjusted for MOS (kg/day) (1)	Increm. UNBOD Adjusted for MOS (kg/day) (1)	Projection UCBOD conc. (mg/l)	Projection UNBOD conc. (mg/l)	Proj. UCBOD MOS load (kg/day)	Proj. UNBOD MOS load (kg/day)	**Sub-total MOS load (kg/day)**	**Sub-total LA load (kg/day)**
	A	**B**	**C** = (86.4)(**A**)(**B**)	**D**	**E** = (86.4)(**A**)(**D**)	**J,** Note 1	**K** = (**C-H**)(1-**J**) + **H**	**L** = (**E-I**)(1-**J**) + **I**	**M** = (**K-H**) / (1-**MOS**) + H	**N** = (**L-I**) / (1-**MOS**) + I	**M** / [(**A**)(86.4)]	**N** / [(**A**)(86.4)]	**O** = **M** - **K**	**P** = **N** - **L**	**O + P**	**K + L**
1						75%										
2						75%										
3						75%										
4						75%										
5						75%										
6						75%										
7						75%										
8						75%										
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26						75%										
27						75%										
28						75%										
29						75%										
30						75%										
31						75%										
32	0.02	9.19	18.66	0.84	1.71	75%	4.664844	0.426384	6	1	2.87	0.26	1	0	1	5
33						75%										
34						75%										
35						75%										
36						75%										
Sub-Total benthic loading							**5**	**0**	**6**	**1**			**1**	**0**	**1**	**5**

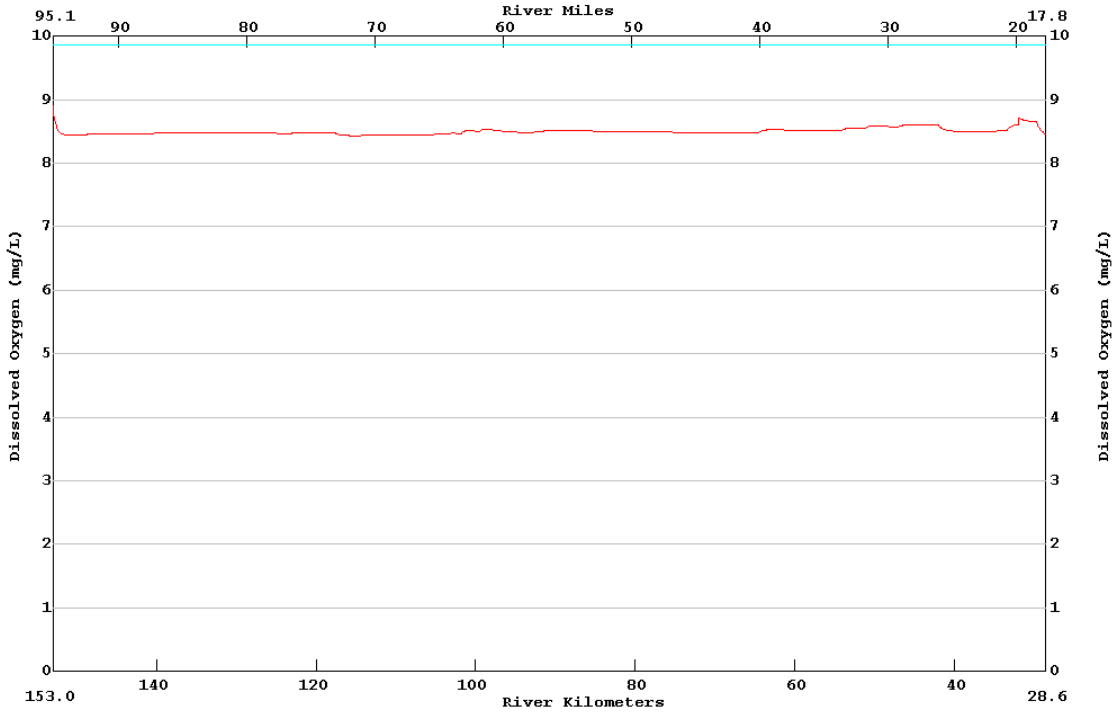
Note 1: The percentage reduction values are taken from the "Non-Point Benthic Load Input and TMDL Calculations" worksheet.

EXPLICIT MARGINS:

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

APPENDIX B4 - Current winter projection model input/output

LA-QUAL Version 5.02 Run at 14:51 on 02/22/2002 File D:\Castor\Input Files\castorwin5140.txt
CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND min= 8.43 max= 8.90
CASTOR CREEK WATERSHED MODEL



```
LA-QUAL Version 5.02
Louisiana Department of Environmental Quality

Input file is D:\Castor\Input Files\castorwin5140.txt
Output produced at 14:51 on 02/22/2002

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

CARD TYPE       CONTROL TITLES

TITLE01         CASTOR CREEK WATERSHED MODEL
TITLE02         CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND
CNTROL04  YES   METRIC UNITS
CNTROL05  YES   OXYGEN DEPENDENT RATES
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = SULFATES                  IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   NITROGEN
MODOPT08   NO   PHOSPHORUS
MODOPT09   NO   CHLOROPHYLL A
MODOPT10   NO   MACROPHYTES
MODOPT11   NO   COLIFORM
MODOPT12  YES   NONCONSERVATIVE MATERIAL
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                       VALUE

PROGRAM         MAXIMUM ITERATION LIMIT            =      1000.00000
PROGRAM         PLOT TYPE                          =         4.00000
PROGRAM         FINAL REPORT TYPE                  =         1.00000
PROGRAM         SPECIAL REPORT TYPE                =         3.00000
PROGRAM         KL MINIMUM                         =         0.70000 meters/day
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
PROGRAM         INHIBITION CONTROL VALUE           =         3.00000
PROGRAM         NH3 OXYGEN UPTAKE RATE             =         4.30000 mg O/mg N
PROGRAM         K2 MAXIMUM                         =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS                =         2.00000 (per day)
PROGRAM         OCEAN EXCHANGE RATIO               =         0.00000
```

ENDATA03

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

CARD TYPE RATE CODE THETA VALUE

ENDATA04

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA05

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA06

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA07

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	CC	HEADWATER CC - MCDOWELL BRANCH	153.00	TO	147.10	0.1000	5.90	59	1	59
REACH ID	2	CC	MCDOWELL BRANCH - HORSE CREEK	147.10	TO	145.50	0.1000	1.60	16	60	75
REACH ID	3	CC	HORSE CREEK - GUICE BRANCH	145.50	TO	144.60	0.1000	0.90	9	76	84
REACH ID	4	CC	GUICE BRANCH - CURR CREEK	144.60	TO	143.30	0.1000	1.30	13	85	97
REACH ID	5	CC	CURR CREEK - POPLAR BRANCH	143.30	TO	140.50	0.1000	2.80	28	98	125
REACH ID	6	CC	POPLAR BRANCH - WHITE BRANCH	140.50	TO	140.40	0.1000	0.10	1	126	126
REACH ID	7	CC	WHITE BRANCH - COLSTON CREEK	140.40	TO	136.60	0.1000	3.80	38	127	164
REACH ID	8	CC	COLSTON CREEK - FOURMILE CREEK	136.60	TO	136.10	0.1000	0.50	5	165	169
REACH ID	9	CC	FOURMILE CREEK - POOL BRANCH	136.10	TO	133.00	0.1000	3.10	31	170	200
REACH ID	10	CC	POOL BRANCH - GINNEY BRANCH	133.00	TO	132.80	0.1000	0.20	2	201	202
REACH ID	11	CC	GINNEY BRANCH - EDWARDS BRANCH	132.80	TO	125.10	0.1000	7.70	77	203	279
REACH ID	12	CC	EDWARDS BRANCH - LITTLE FLAT	125.10	TO	117.70	0.1000	7.40	74	280	353
REACH ID	13	CC	LITTLE FLAT - GLADE CREEK	117.70	TO	114.00	0.1000	3.70	37	354	390
REACH ID	14	CC	GLADE CREEK - CUB CREEK	114.00	TO	108.50	0.1000	5.50	55	391	445
REACH ID	15	CC	CUB CREEK - COW CREEK	108.50	TO	107.30	0.1000	1.20	12	446	457
REACH ID	16	CC	COW CREEK - BEAR CREEK BRANCH	107.30	TO	104.10	0.1000	3.20	32	458	489
REACH ID	17	CC	BEAR CREEK BRANCH - BILES BR	104.10	TO	103.70	0.1000	0.40	4	490	493
REACH ID	18	CC	BILES BRANCH - HURRICANE CR	103.70	TO	101.80	0.1000	1.90	19	494	512
REACH ID	19	CC	HURRICANE CR - INDIAN BRANCH	101.80	TO	99.50	0.1000	2.30	23	513	535

REACH ID	20	CC	INDIAN BRANCH - MOODY CREEK	99.50	TO	96.50	0.1000	3.00	30	536	565
REACH ID	21	CC	MOODY CREEK - BULL CREEK	96.50	TO	94.80	0.1000	1.70	17	566	582
REACH ID	22	CC	BULL CREEK - SWEETWATER CREEK	94.80	TO	92.00	0.1000	2.80	28	583	610
REACH ID	23	CC	SWEETWATER CREEK - BRUSHY CREEK	92.00	TO	91.00	0.1000	1.00	10	611	620
REACH ID	24	CC	BRUSHY CREEK - WHITE OAK CREEK	91.00	TO	88.10	0.1000	2.90	29	621	649
REACH ID	25	CC	WHITE OAK CREEK - BILLS CREEK	88.10	TO	78.40	0.1000	9.70	97	650	746
REACH ID	26	CC	BILLS CREEK - LOST CREEK	78.40	TO	75.70	0.1000	2.70	27	747	773
REACH ID	27	CC	LOST CREEK - MESSER CREEK	75.70	TO	64.60	0.1000	11.10	111	774	884
REACH ID	28	CC	MESSER CREEK - RICHLAND CREEK	64.60	TO	63.80	0.1000	0.80	8	885	892
REACH ID	29	CC	RICHLAND CREEK - PINEY CREEK	63.80	TO	54.20	0.1000	9.60	96	893	988
REACH ID	30	CC	PINEY CREEK - BEAUCOUP CREEK	54.20	TO	51.20	0.1000	3.00	30	989	1018
REACH ID	31	CC	BEAUCOUP CREEK - BANISTER CREEK	51.20	TO	47.00	0.1000	4.20	42	1019	1060
REACH ID	32	CC	BANISTER CREEK - BRUSHY CREEK2	47.00	TO	42.00	0.1000	5.00	50	1061	1110
REACH ID	33	CC	BRUSHY CREEK2 - MCCLELLEN BR	42.00	TO	33.50	0.1000	8.50	85	1111	1195
REACH ID	34	CC	MCCLELLEN BR - FLAT CREEK	33.50	TO	32.00	0.1000	1.50	15	1196	1210
REACH ID	35	CC	FLAT CREEK - SANDY CREEK	32.00	TO	29.70	0.1000	2.30	23	1211	1233
REACH ID	36	CC	SANDY CREEK - HWY 124	29.70	TO	28.60	0.1000	1.10	11	1234	1244

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	2	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	3	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	4	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	5	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	6	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	7	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	8	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	9	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	10	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	11	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	12	CC	0.100	0.400	11.200	0.100	0.400	0.860	0.00000	0.027
HYDR-1	13	CC	0.100	0.400	11.100	0.100	0.400	0.840	0.00000	0.027
HYDR-1	14	CC	0.100	0.400	11.100	0.100	0.400	0.820	0.00000	0.027
HYDR-1	15	CC	0.100	0.400	11.100	0.100	0.400	0.810	0.00000	0.027
HYDR-1	16	CC	0.100	0.400	11.100	0.100	0.400	0.800	0.00000	0.027
HYDR-1	17	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	18	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	19	CC	0.100	0.400	11.000	0.100	0.400	0.780	0.00000	0.027
HYDR-1	20	CC	0.100	0.400	11.000	0.100	0.400	0.770	0.00000	0.027
HYDR-1	21	CC	0.100	0.400	11.000	0.100	0.400	0.760	0.00000	0.027
HYDR-1	22	CC	0.100	0.400	11.000	0.100	0.400	0.750	0.00000	0.027
HYDR-1	23	CC	0.100	0.400	11.000	0.100	0.400	0.740	0.00000	0.027
HYDR-1	24	CC	0.100	0.400	11.000	0.100	0.400	0.730	0.00000	0.027
HYDR-1	25	CC	0.100	0.400	10.900	0.100	0.400	0.710	0.00000	0.027
HYDR-1	26	CC	0.100	0.400	10.900	0.100	0.400	0.680	0.00000	0.027

HYDR-1	27	CC	0.100	0.400	10.800	0.100	0.400	0.650	0.00000	0.027
HYDR-1	28	CC	0.100	0.400	10.800	0.100	0.400	0.630	0.00000	0.027
HYDR-1	29	CC	0.100	0.400	10.800	0.100	0.400	0.610	0.00000	0.027
HYDR-1	30	CC	0.100	0.400	10.700	0.100	0.400	0.580	0.00000	0.027
HYDR-1	31	CC	0.100	0.400	10.700	0.100	0.400	0.570	0.00000	0.027
HYDR-1	32	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	33	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	34	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	35	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	36	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	2	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	3	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	4	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	5	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	8	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	9	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	10	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	11	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	12	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	13	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	14	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	15	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	16	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	17	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	18	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	19	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	20	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	22	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	23	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	24	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	25	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	26	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	27	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00

INITIAL	28	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	29	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	30	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	31	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	32	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	33	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	34	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	35	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	36	CC	16.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00

ENDATA11

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

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	AEROB BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD DECAY
COEF-1	1	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	2	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	3	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	4	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	5	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	6	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	7	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	8	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	9	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	10	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	11	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	12	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.030	0.050	0.000	0.000
COEF-1	13	CC	20 K2=a/D	0.700	0.000	0.000	1.110	0.040	0.050	0.000	0.000
COEF-1	14	CC	20 K2=a/D	0.700	0.000	0.000	1.100	0.050	0.050	0.000	0.000
COEF-1	15	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.060	0.050	0.000	0.000
COEF-1	16	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.060	0.050	0.000	0.000
COEF-1	17	CC	20 K2=a/D	0.700	0.000	0.000	1.100	0.070	0.050	0.000	0.000
COEF-1	18	CC	20 K2=a/D	0.700	0.000	0.000	1.090	0.070	0.050	0.000	0.000
COEF-1	19	CC	20 K2=a/D	0.700	0.000	0.000	1.040	0.070	0.050	0.000	0.000
COEF-1	20	CC	20 K2=a/D	0.700	0.000	0.000	1.000	0.060	0.050	0.000	0.000
COEF-1	21	CC	20 K2=a/D	0.700	0.000	0.000	1.000	0.060	0.050	0.000	0.000
COEF-1	22	CC	20 K2=a/D	0.700	0.000	0.000	1.020	0.060	0.050	0.000	0.000
COEF-1	23	CC	20 K2=a/D	0.700	0.000	0.000	1.030	0.050	0.050	0.000	0.000
COEF-1	24	CC	20 K2=a/D	0.700	0.000	0.000	1.030	0.050	0.050	0.000	0.000
COEF-1	25	CC	20 K2=a/D	0.700	0.000	0.000	1.040	0.040	0.050	0.000	0.000
COEF-1	26	CC	20 K2=a/D	0.700	0.000	0.000	1.060	0.030	0.050	0.000	0.000
COEF-1	27	CC	20 K2=a/D	0.700	0.000	0.000	1.070	0.040	0.050	0.000	0.000
COEF-1	28	CC	20 K2=a/D	0.700	0.000	0.000	1.040	0.040	0.050	0.000	0.000
COEF-1	29	CC	20 K2=a/D	0.700	0.000	0.000	1.030	0.040	0.050	0.000	0.000
COEF-1	30	CC	20 K2=a/D	0.700	0.000	0.000	1.010	0.030	0.050	0.000	0.000
COEF-1	31	CC	20 K2=a/D	0.700	0.000	0.000	0.970	0.030	0.050	0.000	0.000
COEF-1	32	CC	20 K2=a/D	0.700	0.000	0.000	0.960	0.030	0.050	0.000	0.000
COEF-1	33	CC	20 K2=a/D	0.700	0.000	0.000	1.050	0.030	0.050	0.000	0.000

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COEF-1      34   CC  20 K2=a/D           0.700     0.000     0.000     0.950     0.030     0.050     0.000     0.000
COEF-1      35   CC  20 K2=a/D           0.700     0.000     0.000     0.940     0.030     0.050     0.000     0.000
COEF-1      36   CC  20 K2=a/D           0.700     0.000     0.000     1.170     0.030     0.050     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

ENDATA13

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

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

ENDATA14

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

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

COEF-4           1   CC        0.00      0.04      0.05      0.00
COEF-4           2   CC        0.00      0.04      0.05      0.00
COEF-4           3   CC        0.00      0.04      0.05      0.00
COEF-4           4   CC        0.00      0.04      0.05      0.00
COEF-4           5   CC        0.00      0.04      0.05      0.00
COEF-4           6   CC        0.00      0.04      0.05      0.00
COEF-4           7   CC        0.00      0.04      0.05      0.00
COEF-4           8   CC        0.00      0.04      0.05      0.00
COEF-4           9   CC        0.00      0.04      0.05      0.00
COEF-4          10   CC        0.00      0.04      0.05      0.00
COEF-4          11   CC        0.00      0.04      0.05      0.00
COEF-4          12   CC        0.00      0.18      0.05      0.00
COEF-4          13   CC        0.00      0.18      0.05      0.00
COEF-4          14   CC        0.00      0.17      0.05      0.00
COEF-4          15   CC        0.00      0.17      0.05      0.00
COEF-4          16   CC        0.00      0.17      0.05      0.00
COEF-4          17   CC        0.00      0.17      0.05      0.00
COEF-4          18   CC        0.00      0.17      0.05      0.00
COEF-4          19   CC        0.00      0.17      0.05      0.00
COEF-4          20   CC        0.00      0.16      0.05      0.00
COEF-4          21   CC        0.00      0.16      0.05      0.00
COEF-4          22   CC        0.00      0.15      0.05      0.00
COEF-4          23   CC        0.00      0.15      0.05      0.00
COEF-4          24   CC        0.00      0.14      0.05      0.00
COEF-4          25   CC        0.00      0.13      0.05      0.00
COEF-4          26   CC        0.00      0.11      0.05      0.00
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COEF-4           27   CC        0.00      0.10      0.05      0.00
COEF-4           28   CC        0.00      0.09      0.05      0.00
COEF-4           29   CC        0.00      0.11      0.05      0.00
COEF-4           30   CC        0.00      0.13      0.05      0.00
COEF-4           31   CC        0.00      0.14      0.05      0.00
COEF-4           32   CC        0.00      0.14      0.05      0.00
COEF-4           33   CC        0.00      0.06      0.05      0.00
COEF-4           34   CC        0.00      0.06      0.05      0.00
COEF-4           35   CC        0.00      0.07      0.05      0.00
COEF-4           36   CC        0.00      0.09      0.05      0.00
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           32   CC       0.00000     0.02350     16.00      0.00      6.00      4.20   0.00470   0.00000
ENDATA16

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

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

INCR-2           32   CC        8.90      3.32      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           32   CC        0.00      0.00      0.00      0.13
ENDATA18

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

CARD TYPE      REACH  ID         BOD     ORG-N      COLI       NCM        DO

NONPOINT          1   CC        6.00      0.00      0.00      1.00      0.00
NONPOINT          2   CC        2.00      0.00      0.00      0.00      0.00
NONPOINT          3   CC        1.00      0.00      0.00      0.00      0.00
NONPOINT          4   CC        1.00      0.00      0.00      0.00      0.00
NONPOINT          5   CC        3.00      0.00      0.00      0.00      0.00
NONPOINT          6   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT          7   CC        3.00      0.00      0.00      0.00      0.00
NONPOINT          8   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT          9   CC        3.00      0.00      0.00      0.00      0.00
NONPOINT         10   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT         11   CC        7.00      0.00      0.00      1.00      0.00
NONPOINT         12   CC        7.00      0.00      0.00      2.00      0.00
NONPOINT         13   CC        2.00      0.00      0.00      2.00      0.00
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NONPOINT         14   CC        2.00      0.00      0.00      4.00      0.00
NONPOINT         15   CC        1.00      0.00      0.00      1.00      0.00
NONPOINT         16   CC        1.00      0.00      0.00      2.00      0.00
NONPOINT         17   CC        0.00      0.00      0.00      0.00      0.00
NONPOINT         18   CC        1.00      0.00      0.00      1.00      0.00
NONPOINT         19   CC        3.00      0.00      0.00      1.00      0.00
NONPOINT         20   CC        5.00      0.00      0.00      2.00      0.00
NONPOINT         21   CC        3.00      0.00      0.00      1.00      0.00
NONPOINT         22   CC        4.00      0.00      0.00      1.00      0.00
NONPOINT         23   CC        1.00      0.00      0.00      0.00      0.00
NONPOINT         24   CC        4.00      0.00      0.00      1.00      0.00
NONPOINT         25   CC       13.00      0.00      0.00      4.00      0.00
NONPOINT         26   CC        3.00      0.00      0.00      1.00      0.00
NONPOINT         27   CC        9.00      0.00      0.00      7.00      0.00
NONPOINT         28   CC        1.00      0.00      0.00      0.00      0.00
NONPOINT         29   CC       13.00      0.00      0.00      4.00      0.00
NONPOINT         30   CC        5.00      0.00      0.00      1.00      0.00
NONPOINT         31   CC        8.00      0.00      0.00      2.00      0.00
NONPOINT         32   CC       10.00      0.00      0.00      3.00      0.00
NONPOINT         33   CC       12.00      0.00      0.00      2.00      0.00
NONPOINT         34   CC        4.00      0.00      0.00      0.00      0.00
NONPOINT         35   CC        6.00      0.00      0.00      1.00      0.00
NONPOINT         36   CC        2.00      0.00      0.00      0.00      0.00
ENDATA19

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

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

HDWTR-1           1     HEADWATER               0   0.02800    0.989   16.00     0.00     8.300     0.000
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO       BOD     ORG-N       NH3     NO3+2

HDWTR-2           1     HEADWATER                   8.90      3.32      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM

HDWTR-3           1     HEADWATER                    0.00      0.00      0.00      0.13
ENDATA22

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

CARD TYPE   JUNCTION   UPSTRM     RIVER     NAME
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             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     1211      32.00  FLAT CREEK             0.02800    0.98870    0.639   16.00     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    NITRIF     NO3+2

WSTLD-2        1211     FLAT CREEK                  8.90      2.08      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

WSTLD-3        1211     FLAT CREEK                  0.00      0.00      0.00      0.13
ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                       =     16.000 deg C
LOWER BC     SALINITY                          =      0.000 ppt
LOWER BC     CONSERVATIVE MATERIAL I           =     10.400 MG/L
LOWER BC     CONSERVATIVE MATERIAL II          =      5.000 MG/L
LOWER BC     DISSOLVED OXYGEN                  =      8.900 mg/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND         =      9.580 mg/L
LOWER BC     ORGANIC NITROGEN                  =      0.000 mg/L
LOWER BC     AMMONIA NITROGEN                  =      0.000 mg/L
LOWER BC     NITRATE + NITRITE                 =      0.030 mg/L
LOWER BC     PHOSPHORUS                        =      0.090 mg/L
LOWER BC     CHLOROPHYLL A                     =      0.000 µg/L
LOWER BC     COLIFORM                          =      0.000 #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL          =      0.620
ENDATA27

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

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

ENDATA28
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$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$

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

ENDATA29

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


NUMBER OF PLOTS =  6
NUMBER OF REACHES IN PLOT 1 =  36
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
         25 26 27 28 29 30 31 32 33 34 35 36
NUMBER OF REACHES IN PLOT 2 =  12
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12
NUMBER OF REACHES IN PLOT 3 =   9
PLOT RCH 12 13 14 15 16 17 18 19 20
NUMBER OF REACHES IN PLOT 4 =  10
PLOT RCH 19 20 21 22 23 24 25 26 27 28
NUMBER OF REACHES IN PLOT 5 =   8
PLOT RCH 26 27 28 29 30 31 32 33
NUMBER OF REACHES IN PLOT 6 =   6
PLOT RCH 31 32 33 34 35 36
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   1 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
     .....GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
     .....GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14
     .....GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 15
     .....GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 16


FINAL REPORT    HEADWATER                                       CASTOR CREEK WATERSHED MODEL
REACH NO.  1    HEADWATER CC - MCDOWELL BRANCH                  CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND
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********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1	HDWTR	0.02800	16.00	0.00	8.30	0.00	8.90	3.32	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.13

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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	153.00	152.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
2	152.90	152.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
3	152.80	152.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
4	152.70	152.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
5	152.60	152.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
6	152.50	152.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
7	152.40	152.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
8	152.30	152.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
9	152.20	152.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
10	152.10	152.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
11	152.00	151.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
12	151.90	151.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
13	151.80	151.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
14	151.70	151.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
15	151.60	151.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
16	151.50	151.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
17	151.40	151.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
18	151.30	151.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
19	151.20	151.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
20	151.10	151.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
21	151.00	150.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
22	150.90	150.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
23	150.80	150.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
24	150.70	150.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
25	150.60	150.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
26	150.50	150.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
27	150.40	150.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
28	150.30	150.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
29	150.20	150.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
30	150.10	150.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
31	150.00	149.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
32	149.90	149.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
33	149.80	149.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
34	149.70	149.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
35	149.60	149.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
36	149.50	149.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004

37	149.40	149.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
38	149.30	149.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
39	149.20	149.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
40	149.10	149.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
41	149.00	148.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
42	148.90	148.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
43	148.80	148.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
44	148.70	148.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
45	148.60	148.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
46	148.50	148.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
47	148.40	148.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
48	148.30	148.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
49	148.20	148.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
50	148.10	148.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
51	148.00	147.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
52	147.90	147.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
53	147.80	147.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
54	147.70	147.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
55	147.60	147.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
56	147.50	147.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
57	147.40	147.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
58	147.30	147.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
59	147.20	147.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						16.11			38969.29	70351.10					
AVG					0.00424		0.55	11.92			6.60				
CUM						16.11									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	152.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
2	152.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
3	152.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
4	152.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
5	152.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
6	152.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

7	152.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
8	152.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
9	152.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
10	152.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
11	151.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
12	151.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
13	151.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
14	151.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
15	151.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
16	151.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
17	151.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
18	151.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
19	151.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20	151.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
21	150.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
22	150.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
23	150.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
24	150.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
25	150.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
26	150.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
27	150.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
28	150.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
29	150.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
30	150.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
31	149.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

32	149.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
33	149.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
34	149.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
35	149.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
36	149.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
37	149.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
38	149.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
39	149.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
40	149.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
41	148.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
42	148.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
43	148.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
44	148.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
45	148.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
46	148.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
47	148.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
48	148.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
49	148.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
50	148.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
51	147.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
52	147.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
53	147.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
54	147.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
55	147.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
56	147.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

57	147.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
58	147.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
59	147.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1	152.900	16.00	0.00	8.30	0.00	8.79	3.29	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
2	152.800	16.00	0.00	8.30	0.00	8.70	3.26	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
3	152.700	16.00	0.00	8.30	0.00	8.64	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
4	152.600	16.00	0.00	8.30	0.00	8.59	3.21	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
5	152.500	16.00	0.00	8.30	0.00	8.55	3.18	3.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
6	152.400	16.00	0.00	8.30	0.00	8.52	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
7	152.300	16.00	0.00	8.30	0.00	8.50	3.13	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
8	152.200	16.00	0.00	8.30	0.00	8.49	3.11	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
9	152.100	16.00	0.00	8.30	0.00	8.48	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
10	152.000	16.00	0.00	8.30	0.00	8.47	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
11	151.900	16.00	0.00	8.30	0.00	8.46	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
12	151.800	16.00	0.00	8.30	0.00	8.46	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
13	151.700	16.00	0.00	8.30	0.00	8.45	2.99	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
14	151.600	16.00	0.00	8.30	0.00	8.45	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
15	151.500	16.00	0.00	8.30	0.00	8.45	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
16	151.400	16.00	0.00	8.30	0.00	8.45	2.93	2.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
17	151.300	16.00	0.00	8.30	0.00	8.45	2.91	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
18	151.200	16.00	0.00	8.30	0.00	8.45	2.89	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
19	151.100	16.00	0.00	8.30	0.00	8.45	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
20	151.000	16.00	0.00	8.30	0.00	8.45	2.85	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
21	150.900	16.00	0.00	8.30	0.00	8.45	2.83	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
22	150.800	16.00	0.00	8.30	0.00	8.45	2.81	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
23	150.700	16.00	0.00	8.30	0.00	8.45	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
24	150.600	16.00	0.00	8.30	0.00	8.45	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
25	150.500	16.00	0.00	8.30	0.00	8.45	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
26	150.400	16.00	0.00	8.30	0.00	8.45	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
27	150.300	16.00	0.00	8.30	0.00	8.45	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
28	150.200	16.00	0.00	8.30	0.00	8.45	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
29	150.100	16.00	0.00	8.30	0.00	8.45	2.69	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
30	150.000	16.00	0.00	8.30	0.00	8.45	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
31	149.900	16.00	0.00	8.30	0.00	8.45	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23

32	149.800	16.00	0.00	8.30	0.00	8.45	2.65	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
33	149.700	16.00	0.00	8.30	0.00	8.45	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
34	149.600	16.00	0.00	8.30	0.00	8.45	2.62	2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
35	149.500	16.00	0.00	8.30	0.00	8.45	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
36	149.400	16.00	0.00	8.30	0.00	8.45	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
37	149.300	16.00	0.00	8.30	0.00	8.45	2.58	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
38	149.200	16.00	0.00	8.30	0.00	8.45	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
39	149.100	16.00	0.00	8.30	0.00	8.45	2.55	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
40	149.000	16.00	0.00	8.30	0.00	8.45	2.54	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
41	148.900	16.00	0.00	8.30	0.00	8.45	2.53	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
42	148.800	16.00	0.00	8.30	0.00	8.45	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
43	148.700	16.00	0.00	8.30	0.00	8.45	2.50	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
44	148.600	16.00	0.00	8.30	0.00	8.45	2.49	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
45	148.500	16.00	0.00	8.30	0.00	8.45	2.48	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
46	148.400	16.00	0.00	8.30	0.00	8.45	2.47	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
47	148.300	16.00	0.00	8.30	0.00	8.45	2.46	2.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
48	148.200	16.00	0.00	8.30	0.00	8.45	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
49	148.100	16.00	0.00	8.30	0.00	8.45	2.44	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
50	148.000	16.00	0.00	8.30	0.00	8.45	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
51	147.900	16.00	0.00	8.30	0.00	8.45	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
52	147.800	16.00	0.00	8.30	0.00	8.46	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
53	147.700	16.00	0.00	8.30	0.00	8.46	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
54	147.600	16.00	0.00	8.30	0.00	8.46	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
55	147.500	16.00	0.00	8.30	0.00	8.46	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
56	147.400	16.00	0.00	8.30	0.00	8.46	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
57	147.300	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
58	147.200	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
59	147.100	16.00	0.00	8.30	0.00	8.46	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 2 MCDOWELL BRANCH - HORSE CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
60	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.46	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.28

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
60	147.10	147.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
61	147.00	146.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
62	146.90	146.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
63	146.80	146.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
64	146.70	146.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
65	146.60	146.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
66	146.50	146.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
67	146.40	146.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
68	146.30	146.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
69	146.20	146.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
70	146.10	146.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
71	146.00	145.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
72	145.90	145.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
73	145.80	145.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
74	145.70	145.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
75	145.60	145.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						4.37			10567.95	19078.28					
AVG					0.00424		0.55	11.92			6.60				
CUM						20.48									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
60	147.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
61	146.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
62	146.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
63	146.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
64	146.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
65	146.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
66	146.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
67	146.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
68	146.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	

69	146.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
70	146.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
71	145.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
72	145.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
73	145.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
74	145.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
75	145.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
60	147.000	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
61	146.900	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
62	146.800	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
63	146.700	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
64	146.600	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
65	146.500	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
66	146.400	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
67	146.300	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
68	146.200	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
69	146.100	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
70	146.000	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
71	145.900	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
72	145.800	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
73	145.700	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
74	145.600	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
75	145.500	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 3 HORSE CREEK - GUICE BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
76	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.20

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
76	145.50	145.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
77	145.40	145.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
78	145.30	145.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
79	145.20	145.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
80	145.10	145.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
81	145.00	144.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
82	144.90	144.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
83	144.80	144.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
84	144.70	144.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						2.46			5944.47	10731.53					
AVG					0.00424		0.55	11.92			6.60				
CUM						22.93									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
76	145.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
77	145.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
78	145.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
79	145.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

80	145.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
81	144.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
82	144.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
83	144.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
84	144.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
76	145.400	16.00	0.00	8.30	0.00	8.46	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
77	145.300	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
78	145.200	16.00	0.00	8.30	0.00	8.46	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
79	145.100	16.00	0.00	8.30	0.00	8.46	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
80	145.000	16.00	0.00	8.30	0.00	8.46	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
81	144.900	16.00	0.00	8.30	0.00	8.46	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
82	144.800	16.00	0.00	8.30	0.00	8.46	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
83	144.700	16.00	0.00	8.30	0.00	8.46	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
84	144.600	16.00	0.00	8.30	0.00	8.46	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 4 GUICE BRANCH - CURR CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
85	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.46	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.17

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
85	144.60	144.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
86	144.50	144.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
87	144.40	144.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
88	144.30	144.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
89	144.20	144.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
90	144.10	144.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
91	144.00	143.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
92	143.90	143.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
93	143.80	143.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
94	143.70	143.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
95	143.60	143.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
96	143.50	143.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
97	143.40	143.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						3.55			8586.46	15501.10					
AVG					0.00424		0.55	11.92			6.60				
CUM						26.48									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
85	144.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
86	144.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
87	144.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
88	144.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
89	144.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
90	144.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
91	143.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
92	143.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

93	143.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
94	143.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
95	143.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
96	143.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
97	143.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
85	144.500	16.00	0.00	8.30	0.00	8.46	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
86	144.400	16.00	0.00	8.30	0.00	8.46	2.29	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
87	144.300	16.00	0.00	8.30	0.00	8.46	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
88	144.200	16.00	0.00	8.30	0.00	8.46	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
89	144.100	16.00	0.00	8.30	0.00	8.46	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
90	144.000	16.00	0.00	8.30	0.00	8.46	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
91	143.900	16.00	0.00	8.30	0.00	8.46	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
92	143.800	16.00	0.00	8.30	0.00	8.46	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
93	143.700	16.00	0.00	8.30	0.00	8.46	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
94	143.600	16.00	0.00	8.30	0.00	8.46	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
95	143.500	16.00	0.00	8.30	0.00	8.47	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
96	143.400	16.00	0.00	8.30	0.00	8.47	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
97	143.300	16.00	0.00	8.30	0.00	8.47	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 5 CURR CREEK - POPLAR BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

98	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.47	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.13

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
98	143.30	143.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
99	143.20	143.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
100	143.10	143.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
101	143.00	142.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
102	142.90	142.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
103	142.80	142.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
104	142.70	142.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
105	142.60	142.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
106	142.50	142.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
107	142.40	142.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
108	142.30	142.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
109	142.20	142.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
110	142.10	142.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
111	142.00	141.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
112	141.90	141.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
113	141.80	141.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
114	141.70	141.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
115	141.60	141.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
116	141.50	141.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
117	141.40	141.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
118	141.30	141.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
119	141.20	141.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
120	141.10	141.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
121	141.00	140.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
122	140.90	140.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
123	140.80	140.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
124	140.70	140.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
125	140.60	140.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						7.64			18493.91	33386.99					
AVG					0.00424		0.55	11.92			6.60				
CUM						34.13									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
98	143.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
99	143.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
100	143.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
101	142.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
102	142.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
103	142.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
104	142.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
105	142.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
106	142.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
107	142.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
108	142.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
109	142.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
110	142.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
111	141.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
112	141.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
113	141.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
114	141.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
115	141.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
116	141.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
117	141.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
118	141.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
119	141.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
120	141.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
121	140.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	

0.05																				
122	140.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
123	140.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
124	140.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
125	140.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
98	143.200	16.00	0.00	8.30	0.00	8.47	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
99	143.100	16.00	0.00	8.30	0.00	8.47	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
100	143.000	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
101	142.900	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
102	142.800	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
103	142.700	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
104	142.600	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
105	142.500	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
106	142.400	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
107	142.300	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
108	142.200	16.00	0.00	8.30	0.00	8.47	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
109	142.100	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
110	142.000	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
111	141.900	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
112	141.800	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
113	141.700	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
114	141.600	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
115	141.500	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
116	141.400	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
117	141.300	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
118	141.200	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
119	141.100	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
120	141.000	16.00	0.00	8.30	0.00	8.47	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
121	140.900	16.00	0.00	8.30	0.00	8.47	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
122	140.800	16.00	0.00	8.30	0.00	8.47	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
123	140.700	16.00	0.00	8.30	0.00	8.47	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
124	140.600	16.00	0.00	8.30	0.00	8.47	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
125	140.500	16.00	0.00	8.30	0.00	8.47	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 6 POPLAR BRANCH - WHITE BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
126	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.47	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.07

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
126	140.50	140.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						0.27			660.50	1192.39					
AVG					0.00424		0.55	11.92			6.60				
CUM						34.40									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
126	140.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	0.05
AVG 20 DEG C RATE			1.26		0.05						0.00									

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
126	140.400	16.00	0.00	8.30	0.00	8.47	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 7 WHITE BRANCH - COLSTON CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
127	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.47	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.07

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
127	140.40	140.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
128	140.30	140.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
129	140.20	140.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
130	140.10	140.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
131	140.00	139.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
132	139.90	139.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
133	139.80	139.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
134	139.70	139.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
135	139.60	139.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
136	139.50	139.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
137	139.40	139.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
138	139.30	139.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
139	139.20	139.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
140	139.10	139.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
141	139.00	138.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
142	138.90	138.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
143	138.80	138.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
144	138.70	138.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
145	138.60	138.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
146	138.50	138.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004

147	138.40	138.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
148	138.30	138.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
149	138.20	138.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
150	138.10	138.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
151	138.00	137.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
152	137.90	137.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
153	137.80	137.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
154	137.70	137.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
155	137.60	137.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
156	137.50	137.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
157	137.40	137.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
158	137.30	137.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
159	137.20	137.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
160	137.10	137.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
161	137.00	136.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
162	136.90	136.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
163	136.80	136.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
164	136.70	136.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						10.37			25098.87	45310.90					
AVG					0.00424		0.55	11.92			6.60				
CUM						44.78									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
127	140.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
128	140.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
129	140.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
130	140.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
131	139.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
132	139.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
133	139.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
134	139.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
135	139.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	

136	139.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
137	139.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
138	139.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
139	139.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
140	139.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
141	138.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
142	138.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
143	138.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
144	138.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
145	138.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
146	138.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
147	138.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
148	138.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
149	138.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
150	138.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
151	137.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
152	137.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
153	137.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
154	137.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
155	137.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
156	137.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
157	137.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
158	137.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
159	137.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
160	137.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03

0.05																				
161	136.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
162	136.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
163	136.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
164	136.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	
0.05																				
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
127	140.300	16.00	0.00	8.30	0.00	8.47	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
128	140.200	16.00	0.00	8.30	0.00	8.47	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
129	140.100	16.00	0.00	8.30	0.00	8.47	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
130	140.000	16.00	0.00	8.30	0.00	8.47	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
131	139.900	16.00	0.00	8.30	0.00	8.47	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
132	139.800	16.00	0.00	8.30	0.00	8.47	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
133	139.700	16.00	0.00	8.30	0.00	8.47	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
134	139.600	16.00	0.00	8.30	0.00	8.47	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
135	139.500	16.00	0.00	8.30	0.00	8.47	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
136	139.400	16.00	0.00	8.30	0.00	8.47	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
137	139.300	16.00	0.00	8.30	0.00	8.47	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
138	139.200	16.00	0.00	8.30	0.00	8.47	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
139	139.100	16.00	0.00	8.30	0.00	8.47	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
140	139.000	16.00	0.00	8.30	0.00	8.47	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
141	138.900	16.00	0.00	8.30	0.00	8.48	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
142	138.800	16.00	0.00	8.30	0.00	8.48	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
143	138.700	16.00	0.00	8.30	0.00	8.48	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
144	138.600	16.00	0.00	8.30	0.00	8.48	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
145	138.500	16.00	0.00	8.30	0.00	8.48	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
146	138.400	16.00	0.00	8.30	0.00	8.48	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
147	138.300	16.00	0.00	8.30	0.00	8.48	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
148	138.200	16.00	0.00	8.30	0.00	8.48	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
149	138.100	16.00	0.00	8.30	0.00	8.48	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
150	138.000	16.00	0.00	8.30	0.00	8.48	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
151	137.900	16.00	0.00	8.30	0.00	8.48	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
152	137.800	16.00	0.00	8.30	0.00	8.48	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
153	137.700	16.00	0.00	8.30	0.00	8.48	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
154	137.600	16.00	0.00	8.30	0.00	8.48	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04

155	137.500	16.00	0.00	8.30	0.00	8.48	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
156	137.400	16.00	0.00	8.30	0.00	8.48	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
157	137.300	16.00	0.00	8.30	0.00	8.48	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
158	137.200	16.00	0.00	8.30	0.00	8.48	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
159	137.100	16.00	0.00	8.30	0.00	8.48	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
160	137.000	16.00	0.00	8.30	0.00	8.48	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
161	136.900	16.00	0.00	8.30	0.00	8.48	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
162	136.800	16.00	0.00	8.30	0.00	8.48	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
163	136.700	16.00	0.00	8.30	0.00	8.48	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
164	136.600	16.00	0.00	8.30	0.00	8.48	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 8 COLSTON CREEK - FOURMILE CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
165	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.48	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.03

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
165	136.60	136.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
166	136.50	136.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
167	136.40	136.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
168	136.30	136.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
169	136.20	136.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						1.37			3302.48	5961.96					
AVG					0.00424		0.55	11.92			6.60				
CUM						46.14									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

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
165	136.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
166	136.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
167	136.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
168	136.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
169	136.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
165	136.500	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
166	136.400	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
167	136.300	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
168	136.200	16.00	0.00	8.30	0.00	8.48	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
169	136.100	16.00	0.00	8.30	0.00	8.48	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 9 FOURMILE CREEK - POOL BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
170	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.48	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.03

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
170	136.10	136.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
171	136.00	135.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
172	135.90	135.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
173	135.80	135.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
174	135.70	135.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
175	135.60	135.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
176	135.50	135.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
177	135.40	135.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
178	135.30	135.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
179	135.20	135.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
180	135.10	135.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
181	135.00	134.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
182	134.90	134.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
183	134.80	134.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
184	134.70	134.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
185	134.60	134.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
186	134.50	134.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
187	134.40	134.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
188	134.30	134.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
189	134.20	134.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
190	134.10	134.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
191	134.00	133.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
192	133.90	133.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
193	133.80	133.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
194	133.70	133.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
195	133.60	133.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
196	133.50	133.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
197	133.40	133.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
198	133.30	133.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
199	133.20	133.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
200	133.10	133.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						8.46			20475.40	36964.16					
AVG					0.00424		0.55	11.92			6.60				
CUM						54.60									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

170	136.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
171	135.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
172	135.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
173	135.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
174	135.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
175	135.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
176	135.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
177	135.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
178	135.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
179	135.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
180	135.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
181	134.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
182	134.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
183	134.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
184	134.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
185	134.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
186	134.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
187	134.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
188	134.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
189	134.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
190	134.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
191	133.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
192	133.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			
193	133.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
0.05																			

194	133.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
195	133.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
196	133.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
197	133.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
198	133.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
199	133.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
200	133.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
170	136.000	16.00	0.00	8.30	0.00	8.48	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
171	135.900	16.00	0.00	8.30	0.00	8.48	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
172	135.800	16.00	0.00	8.30	0.00	8.48	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
173	135.700	16.00	0.00	8.30	0.00	8.48	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
174	135.600	16.00	0.00	8.30	0.00	8.48	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
175	135.500	16.00	0.00	8.30	0.00	8.49	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
176	135.400	16.00	0.00	8.30	0.00	8.49	1.62	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
177	135.300	16.00	0.00	8.30	0.00	8.48	1.62	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
178	135.200	16.00	0.00	8.30	0.00	8.48	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
179	135.100	16.00	0.00	8.30	0.00	8.48	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
180	135.000	16.00	0.00	8.30	0.00	8.48	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
181	134.900	16.00	0.00	8.30	0.00	8.48	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
182	134.800	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
183	134.700	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
184	134.600	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
185	134.500	16.00	0.00	8.30	0.00	8.48	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
186	134.400	16.00	0.00	8.30	0.00	8.48	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
187	134.300	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
188	134.200	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
189	134.100	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
190	134.000	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
191	133.900	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
192	133.800	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

193	133.700	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
194	133.600	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
195	133.500	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
196	133.400	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
197	133.300	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
198	133.200	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
199	133.100	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
200	133.000	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 10 POOL BRANCH - GINNEY BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
201	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.02

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
201	133.00	132.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
202	132.90	132.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						0.55			1320.99	2384.79					
AVG					0.00424		0.55	11.92			6.60				
CUM						55.15									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
201	132.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	

0.05
202 132.800 9.87 1.16 0.03 0.05 0.00 0.86 0.86 0.86 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.03
0.05

20 DEG C RATE 0.04 0.00 1.11 0.00 0.00 0.00 0.00 0.00 0.00 0.04
AVG 20 DEG C RATE 1.26 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
201	132.900	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
202	132.800	16.00	0.00	8.30	0.00	8.48	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 11 GINNEY BRANCH - EDWARDS BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
203	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.48	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.01

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
203	132.80	132.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
204	132.70	132.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
205	132.60	132.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
206	132.50	132.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
207	132.40	132.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
208	132.30	132.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
209	132.20	132.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
210	132.10	132.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004

211	132.00	131.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
212	131.90	131.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
213	131.80	131.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
214	131.70	131.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
215	131.60	131.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
216	131.50	131.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
217	131.40	131.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
218	131.30	131.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
219	131.20	131.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
220	131.10	131.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
221	131.00	130.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
222	130.90	130.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
223	130.80	130.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
224	130.70	130.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
225	130.60	130.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
226	130.50	130.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
227	130.40	130.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
228	130.30	130.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
229	130.20	130.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
230	130.10	130.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
231	130.00	129.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
232	129.90	129.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
233	129.80	129.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
234	129.70	129.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
235	129.60	129.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
236	129.50	129.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
237	129.40	129.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
238	129.30	129.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
239	129.20	129.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
240	129.10	129.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
241	129.00	128.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
242	128.90	128.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
243	128.80	128.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
244	128.70	128.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
245	128.60	128.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
246	128.50	128.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
247	128.40	128.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
248	128.30	128.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
249	128.20	128.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
250	128.10	128.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
251	128.00	127.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
252	127.90	127.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
253	127.80	127.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
254	127.70	127.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
255	127.60	127.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
256	127.50	127.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
257	127.40	127.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
258	127.30	127.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
259	127.20	127.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
260	127.10	127.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004

261	127.00	126.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
262	126.90	126.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
263	126.80	126.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
264	126.70	126.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
265	126.60	126.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
266	126.50	126.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
267	126.40	126.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
268	126.30	126.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
269	126.20	126.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
270	126.10	126.00	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
271	126.00	125.90	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
272	125.90	125.80	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
273	125.80	125.70	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
274	125.70	125.60	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
275	125.60	125.50	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
276	125.50	125.40	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
277	125.40	125.30	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
278	125.30	125.20	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
279	125.20	125.10	0.02800	0.00	0.00424	0.27	0.55	11.92	660.50	1192.39	6.60	0.00	0.000	0.001	0.004
TOT						21.02			50858.22	91814.13					
AVG					0.00424		0.55	11.92			6.60				
CUM						76.17									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
203	132.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
204	132.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
205	132.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
206	132.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
207	132.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
208	132.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
209	132.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
210	132.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

211	131.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
212	131.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
213	131.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
214	131.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
215	131.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
216	131.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
217	131.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
218	131.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
219	131.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
220	131.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
221	130.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
222	130.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
223	130.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
224	130.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
225	130.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
226	130.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
227	130.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
228	130.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
229	130.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
230	130.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
231	129.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
232	129.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
233	129.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
234	129.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
235	129.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

236	129.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
237	129.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
238	129.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
239	129.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
240	129.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
241	128.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
242	128.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
243	128.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
244	128.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
245	128.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
246	128.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
247	128.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
248	128.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
249	128.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
250	128.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
251	127.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
252	127.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
253	127.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
254	127.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
255	127.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
256	127.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
257	127.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
258	127.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
259	127.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
260	127.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05

261	126.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
262	126.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
263	126.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
264	126.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
265	126.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
266	126.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
267	126.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
268	126.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
269	126.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
270	126.000	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
271	125.900	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
272	125.800	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
273	125.700	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
274	125.600	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
275	125.500	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
276	125.400	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
277	125.300	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
278	125.200	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
279	125.100	9.87	1.16	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.26		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

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

203	132.700	16.00	0.00	8.30	0.00	8.48	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
204	132.600	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
205	132.500	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
206	132.400	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
207	132.300	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
208	132.200	16.00	0.00	8.30	0.00	8.48	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
209	132.100	16.00	0.00	8.30	0.00	8.48	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
210	132.000	16.00	0.00	8.30	0.00	8.48	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
211	131.900	16.00	0.00	8.30	0.00	8.48	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
212	131.800	16.00	0.00	8.30	0.00	8.48	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
213	131.700	16.00	0.00	8.30	0.00	8.48	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
214	131.600	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
215	131.500	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
216	131.400	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
217	131.300	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
218	131.200	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
219	131.100	16.00	0.00	8.30	0.00	8.48	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
220	131.000	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
221	130.900	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
222	130.800	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
223	130.700	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
224	130.600	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
225	130.500	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
226	130.400	16.00	0.00	8.30	0.00	8.48	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
227	130.300	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
228	130.200	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
229	130.100	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
230	130.000	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
231	129.900	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
232	129.800	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
233	129.700	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
234	129.600	16.00	0.00	8.30	0.00	8.48	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
235	129.500	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
236	129.400	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
237	129.300	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
238	129.200	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
239	129.100	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
240	129.000	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
241	128.900	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
242	128.800	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
243	128.700	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
244	128.600	16.00	0.00	8.30	0.00	8.48	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
245	128.500	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
246	128.400	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
247	128.300	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
248	128.200	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
249	128.100	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
250	128.000	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
251	127.900	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17

252	127.800	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
253	127.700	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
254	127.600	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
255	127.500	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
256	127.400	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
257	127.300	16.00	0.00	8.30	0.00	8.48	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
258	127.200	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
259	127.100	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
260	127.000	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
261	126.900	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
262	126.800	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
263	126.700	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
264	126.600	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
265	126.500	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
266	126.400	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
267	126.300	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
268	126.200	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
269	126.100	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
270	126.000	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
271	125.900	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
272	125.800	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
273	125.700	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
274	125.600	16.00	0.00	8.30	0.00	8.48	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
275	125.500	16.00	0.00	8.30	0.00	8.48	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
276	125.400	16.00	0.00	8.30	0.00	8.48	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
277	125.300	16.00	0.00	8.30	0.00	8.48	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
278	125.200	16.00	0.00	8.30	0.00	8.48	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
279	125.100	16.00	0.00	8.30	0.00	8.48	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 12 EDWARDS BRANCH - LITTLE FLAT CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
280	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.48	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.21

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
280	125.10	125.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
281	125.00	124.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
282	124.90	124.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
283	124.80	124.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
284	124.70	124.60	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
285	124.60	124.50	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
286	124.50	124.40	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
287	124.40	124.30	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
288	124.30	124.20	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
289	124.20	124.10	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
290	124.10	124.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
291	124.00	123.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
292	123.90	123.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
293	123.80	123.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
294	123.70	123.60	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
295	123.60	123.50	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
296	123.50	123.40	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
297	123.40	123.30	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
298	123.30	123.20	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
299	123.20	123.10	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
300	123.10	123.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
301	123.00	122.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
302	122.90	122.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
303	122.80	122.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
304	122.70	122.60	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
305	122.60	122.50	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
306	122.50	122.40	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
307	122.40	122.30	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
308	122.30	122.20	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
309	122.20	122.10	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
310	122.10	122.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
311	122.00	121.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
312	121.90	121.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
313	121.80	121.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
314	121.70	121.60	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
315	121.60	121.50	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
316	121.50	121.40	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
317	121.40	121.30	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
318	121.30	121.20	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
319	121.20	121.10	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
320	121.10	121.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
321	121.00	120.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
322	120.90	120.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
323	120.80	120.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
324	120.70	120.60	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
325	120.60	120.50	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
326	120.50	120.40	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
327	120.40	120.30	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003

328	120.30	120.20	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
329	120.20	120.10	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
330	120.10	120.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
331	120.00	119.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
332	119.90	119.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
333	119.80	119.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
334	119.70	119.60	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
335	119.60	119.50	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
336	119.50	119.40	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
337	119.40	119.30	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
338	119.30	119.20	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
339	119.20	119.10	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
340	119.10	119.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
341	119.00	118.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
342	118.90	118.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
343	118.80	118.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
344	118.70	118.60	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
345	118.60	118.50	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
346	118.50	118.40	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
347	118.40	118.30	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
348	118.30	118.20	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
349	118.20	118.10	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
350	118.10	118.00	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
351	118.00	117.90	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
352	117.90	117.80	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
353	117.80	117.70	0.02800	0.00	0.00282	0.41	0.88	11.22	992.11	1122.39	9.92	0.00	0.000	0.001	0.003
TOT						30.35			73416.29	83056.97					
AVG					0.00282		0.88	11.22			9.92				
CUM						106.52									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
280	125.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
281	124.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
282	124.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
283	124.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
284	124.600	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	

285	124.500	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
286	124.400	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
287	124.300	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
288	124.200	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
289	124.100	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
290	124.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
291	123.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
292	123.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
293	123.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
294	123.600	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
295	123.500	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
296	123.400	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
297	123.300	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
298	123.200	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
299	123.100	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
300	123.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
301	122.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
302	122.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
303	122.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
304	122.600	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
305	122.500	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
306	122.400	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
307	122.300	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
308	122.200	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
309	122.100	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

0.05																			
310	122.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
311	121.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
312	121.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
313	121.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
314	121.600	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
315	121.500	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
316	121.400	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
317	121.300	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
318	121.200	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
319	121.100	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
320	121.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
321	120.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
322	120.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
323	120.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
324	120.600	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
325	120.500	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
326	120.400	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
327	120.300	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
328	120.200	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
329	120.100	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
330	120.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
331	119.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
332	119.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
333	119.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
334	119.600	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

0.05																				
335	119.500	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
336	119.400	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
337	119.300	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
338	119.200	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
339	119.100	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
340	119.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
341	118.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
342	118.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
343	118.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
344	118.600	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
345	118.500	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
346	118.400	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
347	118.300	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
348	118.200	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
349	118.100	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
350	118.000	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
351	117.900	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
352	117.800	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
353	117.700	9.87	0.73	0.02	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	
0.05																				
20 DEG C RATE				0.03		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.18	
AVG 20 DEG C RATE			0.79		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM	ENDING	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	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	µg/L	**	#/100mL	*
280	125.000	16.00	0.00	8.30	0.00	8.47	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
281	124.900	16.00	0.00	8.30	0.00	8.47	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
282	124.800	16.00	0.00	8.30	0.00	8.47	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
283	124.700	16.00	0.00	8.30	0.00	8.47	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
284	124.600	16.00	0.00	8.30	0.00	8.47	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
285	124.500	16.00	0.00	8.30	0.00	8.47	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
286	124.400	16.00	0.00	8.30	0.00	8.46	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
287	124.300	16.00	0.00	8.30	0.00	8.46	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
288	124.200	16.00	0.00	8.30	0.00	8.47	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
289	124.100	16.00	0.00	8.30	0.00	8.47	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
290	124.000	16.00	0.00	8.30	0.00	8.47	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
291	123.900	16.00	0.00	8.30	0.00	8.47	1.62	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
292	123.800	16.00	0.00	8.30	0.00	8.47	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
293	123.700	16.00	0.00	8.30	0.00	8.47	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
294	123.600	16.00	0.00	8.30	0.00	8.47	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
295	123.500	16.00	0.00	8.30	0.00	8.47	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
296	123.400	16.00	0.00	8.30	0.00	8.47	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
297	123.300	16.00	0.00	8.30	0.00	8.47	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
298	123.200	16.00	0.00	8.30	0.00	8.47	1.57	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
299	123.100	16.00	0.00	8.30	0.00	8.47	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
300	123.000	16.00	0.00	8.30	0.00	8.47	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
301	122.900	16.00	0.00	8.30	0.00	8.47	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
302	122.800	16.00	0.00	8.30	0.00	8.47	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
303	122.700	16.00	0.00	8.30	0.00	8.47	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
304	122.600	16.00	0.00	8.30	0.00	8.47	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
305	122.500	16.00	0.00	8.30	0.00	8.47	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
306	122.400	16.00	0.00	8.30	0.00	8.47	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
307	122.300	16.00	0.00	8.30	0.00	8.47	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
308	122.200	16.00	0.00	8.30	0.00	8.47	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
309	122.100	16.00	0.00	8.30	0.00	8.47	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
310	122.000	16.00	0.00	8.30	0.00	8.47	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
311	121.900	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
312	121.800	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
313	121.700	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
314	121.600	16.00	0.00	8.30	0.00	8.48	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
315	121.500	16.00	0.00	8.30	0.00	8.48	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
316	121.400	16.00	0.00	8.30	0.00	8.48	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
317	121.300	16.00	0.00	8.30	0.00	8.48	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
318	121.200	16.00	0.00	8.30	0.00	8.48	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
319	121.100	16.00	0.00	8.30	0.00	8.48	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
320	121.000	16.00	0.00	8.30	0.00	8.48	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
321	120.900	16.00	0.00	8.30	0.00	8.48	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
322	120.800	16.00	0.00	8.30	0.00	8.48	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
323	120.700	16.00	0.00	8.30	0.00	8.48	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
324	120.600	16.00	0.00	8.30	0.00	8.48	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
325	120.500	16.00	0.00	8.30	0.00	8.48	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
326	120.400	16.00	0.00	8.30	0.00	8.48	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
327	120.300	16.00	0.00	8.30	0.00	8.48	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15

328	120.200	16.00	0.00	8.30	0.00	8.48	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
329	120.100	16.00	0.00	8.30	0.00	8.48	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
330	120.000	16.00	0.00	8.30	0.00	8.48	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
331	119.900	16.00	0.00	8.30	0.00	8.48	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
332	119.800	16.00	0.00	8.30	0.00	8.48	1.44	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
333	119.700	16.00	0.00	8.30	0.00	8.48	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
334	119.600	16.00	0.00	8.30	0.00	8.48	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
335	119.500	16.00	0.00	8.30	0.00	8.48	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
336	119.400	16.00	0.00	8.30	0.00	8.48	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
337	119.300	16.00	0.00	8.30	0.00	8.48	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
338	119.200	16.00	0.00	8.30	0.00	8.48	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
339	119.100	16.00	0.00	8.30	0.00	8.48	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
340	119.000	16.00	0.00	8.30	0.00	8.48	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
341	118.900	16.00	0.00	8.30	0.00	8.48	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
342	118.800	16.00	0.00	8.30	0.00	8.48	1.42	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
343	118.700	16.00	0.00	8.30	0.00	8.48	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
344	118.600	16.00	0.00	8.30	0.00	8.48	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
345	118.500	16.00	0.00	8.30	0.00	8.48	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
346	118.400	16.00	0.00	8.30	0.00	8.48	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
347	118.300	16.00	0.00	8.30	0.00	8.48	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
348	118.200	16.00	0.00	8.30	0.00	8.48	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
349	118.100	16.00	0.00	8.30	0.00	8.48	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
350	118.000	16.00	0.00	8.30	0.00	8.48	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
351	117.900	16.00	0.00	8.30	0.00	8.48	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
352	117.800	16.00	0.00	8.30	0.00	8.48	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
353	117.700	16.00	0.00	8.30	0.00	8.48	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 13 LITTLE FLAT - GLADE CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
354	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.48	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.15

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

354	117.70	117.60	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
355	117.60	117.50	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
356	117.50	117.40	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
357	117.40	117.30	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
358	117.30	117.20	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
359	117.20	117.10	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
360	117.10	117.00	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
361	117.00	116.90	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
362	116.90	116.80	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
363	116.80	116.70	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
364	116.70	116.60	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
365	116.60	116.50	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
366	116.50	116.40	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
367	116.40	116.30	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
368	116.30	116.20	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
369	116.20	116.10	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
370	116.10	116.00	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
371	116.00	115.90	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
372	115.90	115.80	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
373	115.80	115.70	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
374	115.70	115.60	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
375	115.60	115.50	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
376	115.50	115.40	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
377	115.40	115.30	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
378	115.30	115.20	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
379	115.20	115.10	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
380	115.10	115.00	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
381	115.00	114.90	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
382	114.90	114.80	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
383	114.80	114.70	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
384	114.70	114.60	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
385	114.60	114.50	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
386	114.50	114.40	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
387	114.40	114.30	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
388	114.30	114.20	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
389	114.20	114.10	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
390	114.10	114.00	0.02800	0.00	0.00291	0.40	0.86	11.12	961.02	1112.39	9.61	0.00	0.000	0.001	0.003
TOT						14.70			35557.92	41158.52					
AVG					0.00291		0.86	11.12			9.61				
CUM						121.22									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

354	117.600	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
355	117.500	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
356	117.400	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
357	117.300	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
358	117.200	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
359	117.100	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
360	117.000	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
361	116.900	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
362	116.800	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
363	116.700	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
364	116.600	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
365	116.500	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
366	116.400	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
367	116.300	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
368	116.200	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
369	116.100	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
370	116.000	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
371	115.900	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
372	115.800	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
373	115.700	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
374	115.600	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
375	115.500	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
376	115.400	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			
377	115.300	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
0.05																			

378	115.200	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
379	115.100	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
380	115.000	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
381	114.900	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
382	114.800	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
383	114.700	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
384	114.600	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
385	114.500	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
386	114.400	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
387	114.300	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
388	114.200	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
389	114.100	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
390	114.000	9.87	0.75	0.03	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
20 DEG C RATE				0.04		0.00	1.11			0.00		0.00	0.00	0.00	0.00			0.00	0.18	
AVG 20 DEG C RATE			0.81		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
354	117.600	16.00	0.00	8.30	0.00	8.47	1.38	1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
355	117.500	16.00	0.00	8.30	0.00	8.46	1.36	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
356	117.400	16.00	0.00	8.30	0.00	8.46	1.34	1.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
357	117.300	16.00	0.00	8.30	0.00	8.45	1.32	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
358	117.200	16.00	0.00	8.30	0.00	8.45	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
359	117.100	16.00	0.00	8.30	0.00	8.45	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
360	117.000	16.00	0.00	8.30	0.00	8.44	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
361	116.900	16.00	0.00	8.30	0.00	8.44	1.25	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
362	116.800	16.00	0.00	8.30	0.00	8.44	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
363	116.700	16.00	0.00	8.30	0.00	8.44	1.22	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
364	116.600	16.00	0.00	8.30	0.00	8.44	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23

365	116.500	16.00	0.00	8.30	0.00	8.44	1.19	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
366	116.400	16.00	0.00	8.30	0.00	8.44	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
367	116.300	16.00	0.00	8.30	0.00	8.44	1.16	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
368	116.200	16.00	0.00	8.30	0.00	8.44	1.15	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
369	116.100	16.00	0.00	8.30	0.00	8.44	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
370	116.000	16.00	0.00	8.30	0.00	8.44	1.12	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
371	115.900	16.00	0.00	8.30	0.00	8.44	1.11	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
372	115.800	16.00	0.00	8.30	0.00	8.43	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
373	115.700	16.00	0.00	8.30	0.00	8.43	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
374	115.600	16.00	0.00	8.30	0.00	8.43	1.07	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
375	115.500	16.00	0.00	8.30	0.00	8.43	1.06	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
376	115.400	16.00	0.00	8.30	0.00	8.43	1.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
377	115.300	16.00	0.00	8.30	0.00	8.43	1.04	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
378	115.200	16.00	0.00	8.30	0.00	8.43	1.03	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
379	115.100	16.00	0.00	8.30	0.00	8.43	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
380	115.000	16.00	0.00	8.30	0.00	8.43	1.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
381	114.900	16.00	0.00	8.30	0.00	8.43	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
382	114.800	16.00	0.00	8.30	0.00	8.43	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
383	114.700	16.00	0.00	8.30	0.00	8.43	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
384	114.600	16.00	0.00	8.30	0.00	8.43	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
385	114.500	16.00	0.00	8.30	0.00	8.43	0.97	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
386	114.400	16.00	0.00	8.30	0.00	8.43	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
387	114.300	16.00	0.00	8.30	0.00	8.43	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
388	114.200	16.00	0.00	8.30	0.00	8.44	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
389	114.100	16.00	0.00	8.30	0.00	8.44	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
390	114.000	16.00	0.00	8.30	0.00	8.44	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 14 GLADE CREEK - CUB CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
391	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.44	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.30

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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

391	114.00	113.90	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
392	113.90	113.80	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
393	113.80	113.70	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
394	113.70	113.60	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
395	113.60	113.50	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
396	113.50	113.40	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
397	113.40	113.30	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
398	113.30	113.20	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
399	113.20	113.10	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
400	113.10	113.00	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
401	113.00	112.90	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
402	112.90	112.80	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
403	112.80	112.70	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
404	112.70	112.60	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
405	112.60	112.50	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
406	112.50	112.40	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
407	112.40	112.30	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
408	112.30	112.20	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
409	112.20	112.10	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
410	112.10	112.00	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
411	112.00	111.90	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
412	111.90	111.80	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
413	111.80	111.70	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
414	111.70	111.60	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
415	111.60	111.50	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
416	111.50	111.40	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
417	111.40	111.30	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
418	111.30	111.20	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
419	111.20	111.10	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
420	111.10	111.00	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
421	111.00	110.90	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
422	110.90	110.80	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
423	110.80	110.70	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
424	110.70	110.60	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
425	110.60	110.50	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
426	110.50	110.40	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
427	110.40	110.30	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
428	110.30	110.20	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
429	110.20	110.10	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
430	110.10	110.00	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
431	110.00	109.90	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
432	109.90	109.80	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
433	109.80	109.70	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
434	109.70	109.60	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
435	109.60	109.50	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
436	109.50	109.40	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
437	109.40	109.30	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
438	109.30	109.20	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
439	109.20	109.10	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
440	109.10	109.00	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003

441	109.00	108.90	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
442	108.90	108.80	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
443	108.80	108.70	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
444	108.70	108.60	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
445	108.60	108.50	0.02800	0.00	0.00298	0.39	0.84	11.12	938.78	1112.39	9.39	0.00	0.000	0.001	0.003
TOT						21.34			51632.74	61181.55					
AVG					0.00298		0.84	11.12			9.39				
CUM						142.56									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
391	113.900	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
392	113.800	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
393	113.700	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
394	113.600	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
395	113.500	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
396	113.400	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
397	113.300	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
398	113.200	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
399	113.100	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
400	113.000	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
401	112.900	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
402	112.800	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
403	112.700	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
404	112.600	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
405	112.500	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05

406	112.400	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
407	112.300	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
408	112.200	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
409	112.100	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
410	112.000	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
411	111.900	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
412	111.800	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
413	111.700	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
414	111.600	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
415	111.500	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
416	111.400	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
417	111.300	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
418	111.200	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
419	111.100	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
420	111.000	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
421	110.900	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
422	110.800	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
423	110.700	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
424	110.600	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
425	110.500	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
426	110.400	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
427	110.300	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
428	110.200	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
429	110.100	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
430	110.000	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05

431	109.900	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
432	109.800	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
433	109.700	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
434	109.600	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
435	109.500	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
436	109.400	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
437	109.300	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
438	109.200	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
439	109.100	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
440	109.000	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
441	108.900	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
442	108.800	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
443	108.700	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
444	108.600	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
445	108.500	9.87	0.76	0.04	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
20 DEG C RATE				0.05		0.00	1.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.83		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
391	113.900	16.00	0.00	8.30	0.00	8.44	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
392	113.800	16.00	0.00	8.30	0.00	8.44	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
393	113.700	16.00	0.00	8.30	0.00	8.44	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
394	113.600	16.00	0.00	8.30	0.00	8.44	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
395	113.500	16.00	0.00	8.30	0.00	8.44	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
396	113.400	16.00	0.00	8.30	0.00	8.44	0.84	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
397	113.300	16.00	0.00	8.30	0.00	8.44	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35

398	113.200	16.00	0.00	8.30	0.00	8.44	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
399	113.100	16.00	0.00	8.30	0.00	8.44	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
400	113.000	16.00	0.00	8.30	0.00	8.44	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
401	112.900	16.00	0.00	8.30	0.00	8.44	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
402	112.800	16.00	0.00	8.30	0.00	8.44	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
403	112.700	16.00	0.00	8.30	0.00	8.44	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
404	112.600	16.00	0.00	8.30	0.00	8.44	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
405	112.500	16.00	0.00	8.30	0.00	8.44	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
406	112.400	16.00	0.00	8.30	0.00	8.44	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
407	112.300	16.00	0.00	8.30	0.00	8.44	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
408	112.200	16.00	0.00	8.30	0.00	8.44	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
409	112.100	16.00	0.00	8.30	0.00	8.44	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
410	112.000	16.00	0.00	8.30	0.00	8.44	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
411	111.900	16.00	0.00	8.30	0.00	8.44	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
412	111.800	16.00	0.00	8.30	0.00	8.44	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
413	111.700	16.00	0.00	8.30	0.00	8.44	0.67	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
414	111.600	16.00	0.00	8.30	0.00	8.44	0.66	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
415	111.500	16.00	0.00	8.30	0.00	8.44	0.66	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
416	111.400	16.00	0.00	8.30	0.00	8.44	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
417	111.300	16.00	0.00	8.30	0.00	8.44	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
418	111.200	16.00	0.00	8.30	0.00	8.44	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
419	111.100	16.00	0.00	8.30	0.00	8.44	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
420	111.000	16.00	0.00	8.30	0.00	8.44	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
421	110.900	16.00	0.00	8.30	0.00	8.44	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
422	110.800	16.00	0.00	8.30	0.00	8.44	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
423	110.700	16.00	0.00	8.30	0.00	8.44	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
424	110.600	16.00	0.00	8.30	0.00	8.44	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
425	110.500	16.00	0.00	8.30	0.00	8.44	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
426	110.400	16.00	0.00	8.30	0.00	8.44	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
427	110.300	16.00	0.00	8.30	0.00	8.44	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
428	110.200	16.00	0.00	8.30	0.00	8.44	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
429	110.100	16.00	0.00	8.30	0.00	8.44	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
430	110.000	16.00	0.00	8.30	0.00	8.44	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
431	109.900	16.00	0.00	8.30	0.00	8.44	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
432	109.800	16.00	0.00	8.30	0.00	8.44	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
433	109.700	16.00	0.00	8.30	0.00	8.44	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
434	109.600	16.00	0.00	8.30	0.00	8.44	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
435	109.500	16.00	0.00	8.30	0.00	8.44	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
436	109.400	16.00	0.00	8.30	0.00	8.44	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
437	109.300	16.00	0.00	8.30	0.00	8.44	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
438	109.200	16.00	0.00	8.30	0.00	8.44	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
439	109.100	16.00	0.00	8.30	0.00	8.44	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
440	109.000	16.00	0.00	8.30	0.00	8.44	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
441	108.900	16.00	0.00	8.30	0.00	8.44	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
442	108.800	16.00	0.00	8.30	0.00	8.44	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
443	108.700	16.00	0.00	8.30	0.00	8.44	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
444	108.600	16.00	0.00	8.30	0.00	8.44	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
445	108.500	16.00	0.00	8.30	0.00	8.44	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44

* CM-I = CHLORIDES CM-II = SULFATES NCM =

MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 15 CUB CREEK - COW CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
446	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.44	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.44

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
446	108.50	108.40	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
447	108.40	108.30	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
448	108.30	108.20	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
449	108.20	108.10	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
450	108.10	108.00	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
451	108.00	107.90	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
452	107.90	107.80	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
453	107.80	107.70	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
454	107.70	107.60	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
455	107.60	107.50	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
456	107.50	107.40	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
457	107.40	107.30	0.02800	0.00	0.00302	0.38	0.83	11.12	927.65	1112.39	9.28	0.00	0.000	0.001	0.003
TOT						4.60			11131.83	13348.71					
AVG					0.00302		0.83	11.12			9.28				
CUM						147.16									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
446	108.400	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	

0.05																				
447	108.300	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
448	108.200	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
449	108.100	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
450	108.000	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
451	107.900	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
452	107.800	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
453	107.700	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
454	107.600	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
455	107.500	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
456	107.400	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
457	107.300	9.87	0.77	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	
0.05																				
20 DEG C RATE				0.06		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.84		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
446	108.400	16.00	0.00	8.30	0.00	8.44	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
447	108.300	16.00	0.00	8.30	0.00	8.44	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
448	108.200	16.00	0.00	8.30	0.00	8.44	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
449	108.100	16.00	0.00	8.30	0.00	8.44	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
450	108.000	16.00	0.00	8.30	0.00	8.44	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
451	107.900	16.00	0.00	8.30	0.00	8.44	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
452	107.800	16.00	0.00	8.30	0.00	8.44	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
453	107.700	16.00	0.00	8.30	0.00	8.44	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
454	107.600	16.00	0.00	8.30	0.00	8.44	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
455	107.500	16.00	0.00	8.30	0.00	8.44	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
456	107.400	16.00	0.00	8.30	0.00	8.44	0.66	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
457	107.300	16.00	0.00	8.30	0.00	8.44	0.67	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48

* CM-I = CHLORIDES CM-II = SULFATES NCM =

MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 16 COW CREEK - BEAR CREEK BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
458	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.44	0.67	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.48

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
458	107.30	107.20	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
459	107.20	107.10	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
460	107.10	107.00	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
461	107.00	106.90	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
462	106.90	106.80	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
463	106.80	106.70	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
464	106.70	106.60	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
465	106.60	106.50	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
466	106.50	106.40	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
467	106.40	106.30	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
468	106.30	106.20	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
469	106.20	106.10	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
470	106.10	106.00	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
471	106.00	105.90	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
472	105.90	105.80	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
473	105.80	105.70	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
474	105.70	105.60	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
475	105.60	105.50	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
476	105.50	105.40	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
477	105.40	105.30	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
478	105.30	105.20	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
479	105.20	105.10	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
480	105.10	105.00	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
481	105.00	104.90	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
482	104.90	104.80	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
483	104.80	104.70	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
484	104.70	104.60	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
485	104.60	104.50	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003

486	104.50	104.40	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
487	104.40	104.30	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
488	104.30	104.20	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
489	104.20	104.10	0.02800	0.00	0.00306	0.38	0.82	11.12	916.53	1112.39	9.17	0.00	0.000	0.001	0.003
TOT						12.12			29328.93	35596.56					
AVG					0.00306		0.82	11.12			9.17				
CUM						159.29									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
458	107.200	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
459	107.100	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
460	107.000	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
461	106.900	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
462	106.800	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
463	106.700	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
464	106.600	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
465	106.500	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
466	106.400	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
467	106.300	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
468	106.200	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
469	106.100	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
470	106.000	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
471	105.900	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
472	105.800	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
473	105.700	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	

474	105.600	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
475	105.500	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
476	105.400	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
477	105.300	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
478	105.200	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
479	105.100	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
480	105.000	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
481	104.900	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
482	104.800	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
483	104.700	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
484	104.600	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
485	104.500	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
486	104.400	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
487	104.300	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
488	104.200	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
489	104.100	9.87	0.78	0.05	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
20 DEG C RATE				0.06		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.85		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
458	107.200	16.00	0.00	8.30	0.00	8.44	0.66	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
459	107.100	16.00	0.00	8.30	0.00	8.44	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
460	107.000	16.00	0.00	8.30	0.00	8.44	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
461	106.900	16.00	0.00	8.30	0.00	8.44	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46

462	106.800	16.00	0.00	8.30	0.00	8.44	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
463	106.700	16.00	0.00	8.30	0.00	8.44	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
464	106.600	16.00	0.00	8.30	0.00	8.44	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
465	106.500	16.00	0.00	8.30	0.00	8.44	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
466	106.400	16.00	0.00	8.30	0.00	8.44	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
467	106.300	16.00	0.00	8.30	0.00	8.44	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
468	106.200	16.00	0.00	8.30	0.00	8.44	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
469	106.100	16.00	0.00	8.30	0.00	8.45	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
470	106.000	16.00	0.00	8.30	0.00	8.45	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
471	105.900	16.00	0.00	8.30	0.00	8.45	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
472	105.800	16.00	0.00	8.30	0.00	8.45	0.54	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
473	105.700	16.00	0.00	8.30	0.00	8.45	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
474	105.600	16.00	0.00	8.30	0.00	8.45	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
475	105.500	16.00	0.00	8.30	0.00	8.45	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
476	105.400	16.00	0.00	8.30	0.00	8.45	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
477	105.300	16.00	0.00	8.30	0.00	8.45	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
478	105.200	16.00	0.00	8.30	0.00	8.45	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
479	105.100	16.00	0.00	8.30	0.00	8.45	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
480	105.000	16.00	0.00	8.30	0.00	8.45	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
481	104.900	16.00	0.00	8.30	0.00	8.45	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
482	104.800	16.00	0.00	8.30	0.00	8.46	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
483	104.700	16.00	0.00	8.30	0.00	8.46	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
484	104.600	16.00	0.00	8.30	0.00	8.46	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
485	104.500	16.00	0.00	8.30	0.00	8.46	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
486	104.400	16.00	0.00	8.30	0.00	8.46	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
487	104.300	16.00	0.00	8.30	0.00	8.46	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
488	104.200	16.00	0.00	8.30	0.00	8.46	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
489	104.100	16.00	0.00	8.30	0.00	8.46	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 17 BEAR CREEK BRANCH - BILES BR CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
490	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.46	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.40

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

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

	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
490	104.10	104.00	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
491	104.00	103.90	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
492	103.90	103.80	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
493	103.80	103.70	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
TOT						1.48			3589.06	4409.57					
AVG					0.00312		0.81	11.02			8.97				
CUM						160.77									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
490	104.000	9.87	0.79	0.06	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
491	103.900	9.87	0.79	0.06	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
492	103.800	9.87	0.79	0.06	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
493	103.700	9.87	0.79	0.06	0.05	0.00	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
20 DEG C RATE				0.07		0.00	1.10			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.86		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
490	104.000	16.00	0.00	8.30	0.00	8.46	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
491	103.900	16.00	0.00	8.30	0.00	8.46	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
492	103.800	16.00	0.00	8.30	0.00	8.46	0.41	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
493	103.700	16.00	0.00	8.30	0.00	8.46	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 18 BILES BRANCH - HURRICANE CR CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
494	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.46	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.31

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
494	103.70	103.60	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
495	103.60	103.50	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
496	103.50	103.40	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
497	103.40	103.30	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
498	103.30	103.20	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
499	103.20	103.10	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
500	103.10	103.00	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
501	103.00	102.90	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
502	102.90	102.80	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
503	102.80	102.70	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
504	102.70	102.60	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
505	102.60	102.50	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
506	102.50	102.40	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
507	102.40	102.30	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
508	102.30	102.20	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
509	102.20	102.10	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
510	102.10	102.00	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
511	102.00	101.90	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
512	101.90	101.80	0.02800	0.00	0.00312	0.37	0.81	11.02	897.27	1102.39	8.97	0.00	0.000	0.001	0.003
TOT						7.05			17048.04	20945.46					
AVG					0.00312		0.81	11.02			8.97				
CUM						167.82									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
494	103.600	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
495	103.500	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
496	103.400	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
497	103.300	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
498	103.200	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
499	103.100	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
500	103.000	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
501	102.900	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
502	102.800	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
503	102.700	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
504	102.600	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
505	102.500	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
506	102.400	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
507	102.300	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
508	102.200	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
509	102.100	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
510	102.000	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
511	101.900	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
512	101.800	9.87	0.79	0.06	0.05	0.00	0.85	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
20 DEG C RATE				0.07		0.00	1.09			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.86		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
494	103.600	16.00	0.00	8.30	0.00	8.46	0.40	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
495	103.500	16.00	0.00	8.30	0.00	8.47	0.41	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
496	103.400	16.00	0.00	8.30	0.00	8.47	0.41	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
497	103.300	16.00	0.00	8.30	0.00	8.47	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
498	103.200	16.00	0.00	8.30	0.00	8.47	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
499	103.100	16.00	0.00	8.30	0.00	8.47	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
500	103.000	16.00	0.00	8.30	0.00	8.47	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
501	102.900	16.00	0.00	8.30	0.00	8.47	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
502	102.800	16.00	0.00	8.30	0.00	8.47	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
503	102.700	16.00	0.00	8.30	0.00	8.47	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
504	102.600	16.00	0.00	8.30	0.00	8.47	0.45	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
505	102.500	16.00	0.00	8.30	0.00	8.47	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
506	102.400	16.00	0.00	8.30	0.00	8.47	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
507	102.300	16.00	0.00	8.30	0.00	8.47	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
508	102.200	16.00	0.00	8.30	0.00	8.47	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
509	102.100	16.00	0.00	8.30	0.00	8.47	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
510	102.000	16.00	0.00	8.30	0.00	8.47	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
511	101.900	16.00	0.00	8.30	0.00	8.47	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
512	101.800	16.00	0.00	8.30	0.00	8.47	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 19 HURRICANE CR - INDIAN BRANCH CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
513	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.47	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.33

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
513	101.80	101.70	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
514	101.70	101.60	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003

515	101.60	101.50	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
516	101.50	101.40	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
517	101.40	101.30	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
518	101.30	101.20	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
519	101.20	101.10	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
520	101.10	101.00	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
521	101.00	100.90	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
522	100.90	100.80	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
523	100.80	100.70	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
524	100.70	100.60	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
525	100.60	100.50	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
526	100.50	100.40	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
527	100.40	100.30	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
528	100.30	100.20	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
529	100.20	100.10	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
530	100.10	100.00	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
531	100.00	99.90	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
532	99.90	99.80	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
533	99.80	99.70	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
534	99.70	99.60	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
535	99.60	99.50	0.02800	0.00	0.00316	0.37	0.80	11.02	886.24	1102.39	8.86	0.00	0.000	0.001	0.003
TOT						8.43			20383.56	25355.03					
AVG					0.00316		0.80	11.02			8.86				
CUM						176.24									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
513	101.700	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
514	101.600	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
515	101.500	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
516	101.400	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
517	101.300	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
518	101.200	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
519	101.100	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05

520	101.000	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
521	100.900	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
522	100.800	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
523	100.700	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
524	100.600	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
525	100.500	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
526	100.400	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
527	100.300	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
528	100.200	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
529	100.100	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
530	100.000	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
531	99.900	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
532	99.800	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
533	99.700	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
534	99.600	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
535	99.500	9.87	0.80	0.06	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.05
20 DEG C RATE				0.07		0.00	1.04			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.87		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
513	101.700	16.00	0.00	8.30	0.00	8.48	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
514	101.600	16.00	0.00	8.30	0.00	8.49	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
515	101.500	16.00	0.00	8.30	0.00	8.50	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
516	101.400	16.00	0.00	8.30	0.00	8.50	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
517	101.300	16.00	0.00	8.30	0.00	8.51	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32

518	101.200	16.00	0.00	8.30	0.00	8.51	0.67	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
519	101.100	16.00	0.00	8.30	0.00	8.51	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
520	101.000	16.00	0.00	8.30	0.00	8.51	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
521	100.900	16.00	0.00	8.30	0.00	8.51	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
522	100.800	16.00	0.00	8.30	0.00	8.51	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
523	100.700	16.00	0.00	8.30	0.00	8.51	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
524	100.600	16.00	0.00	8.30	0.00	8.51	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
525	100.500	16.00	0.00	8.30	0.00	8.51	0.84	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
526	100.400	16.00	0.00	8.30	0.00	8.51	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
527	100.300	16.00	0.00	8.30	0.00	8.51	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
528	100.200	16.00	0.00	8.30	0.00	8.51	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
529	100.100	16.00	0.00	8.30	0.00	8.51	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
530	100.000	16.00	0.00	8.30	0.00	8.50	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
531	99.900	16.00	0.00	8.30	0.00	8.50	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
532	99.800	16.00	0.00	8.30	0.00	8.50	0.97	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
533	99.700	16.00	0.00	8.30	0.00	8.50	0.99	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
534	99.600	16.00	0.00	8.30	0.00	8.50	1.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
535	99.500	16.00	0.00	8.30	0.00	8.50	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 20 INDIAN BRANCH - MOODY CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
536	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.50	1.02	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.29

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
536	99.50	99.40	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
537	99.40	99.30	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
538	99.30	99.20	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
539	99.20	99.10	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
540	99.10	99.00	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
541	99.00	98.90	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
542	98.90	98.80	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
543	98.80	98.70	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003

544	98.70	98.60	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
545	98.60	98.50	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
546	98.50	98.40	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
547	98.40	98.30	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
548	98.30	98.20	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
549	98.20	98.10	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
550	98.10	98.00	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
551	98.00	97.90	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
552	97.90	97.80	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
553	97.80	97.70	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
554	97.70	97.60	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
555	97.60	97.50	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
556	97.50	97.40	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
557	97.40	97.30	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
558	97.30	97.20	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
559	97.20	97.10	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
560	97.10	97.00	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
561	97.00	96.90	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
562	96.90	96.80	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
563	96.80	96.70	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
564	96.70	96.60	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
565	96.60	96.50	0.02800	0.00	0.00320	0.36	0.79	11.02	875.22	1102.39	8.75	0.00	0.000	0.001	0.003
TOT						10.85			26256.52	33071.78					
AVG					0.00320		0.79	11.02			8.75				
CUM						187.10									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
536	99.400	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
537	99.300	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
538	99.200	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
539	99.100	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
540	99.000	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
541	98.900	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
542	98.800	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	

543	98.700	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
544	98.600	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
545	98.500	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
546	98.400	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
547	98.300	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
548	98.200	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
549	98.100	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
550	98.000	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
551	97.900	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
552	97.800	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
553	97.700	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
554	97.600	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
555	97.500	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
556	97.400	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
557	97.300	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
558	97.200	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
559	97.100	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
560	97.000	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
561	96.900	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
562	96.800	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
563	96.700	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
564	96.600	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
565	96.500	9.87	0.81	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
20 DEG C RATE				0.06		0.00	1.00			0.00		0.00	0.00	0.00	0.00			0.00	0.16
AVG 20 DEG C RATE			0.88		0.05						0.00								

0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
536	99.400	16.00	0.00	8.30	0.00	8.51	1.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
537	99.300	16.00	0.00	8.30	0.00	8.52	1.09	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
538	99.200	16.00	0.00	8.30	0.00	8.53	1.12	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
539	99.100	16.00	0.00	8.30	0.00	8.53	1.15	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
540	99.000	16.00	0.00	8.30	0.00	8.53	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
541	98.900	16.00	0.00	8.30	0.00	8.53	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
542	98.800	16.00	0.00	8.30	0.00	8.54	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
543	98.700	16.00	0.00	8.30	0.00	8.54	1.25	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
544	98.600	16.00	0.00	8.30	0.00	8.53	1.28	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
545	98.500	16.00	0.00	8.30	0.00	8.53	1.30	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
546	98.400	16.00	0.00	8.30	0.00	8.53	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
547	98.300	16.00	0.00	8.30	0.00	8.53	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
548	98.200	16.00	0.00	8.30	0.00	8.53	1.37	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
549	98.100	16.00	0.00	8.30	0.00	8.53	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
550	98.000	16.00	0.00	8.30	0.00	8.53	1.41	1.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
551	97.900	16.00	0.00	8.30	0.00	8.52	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
552	97.800	16.00	0.00	8.30	0.00	8.52	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
553	97.700	16.00	0.00	8.30	0.00	8.52	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
554	97.600	16.00	0.00	8.30	0.00	8.52	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
555	97.500	16.00	0.00	8.30	0.00	8.52	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
556	97.400	16.00	0.00	8.30	0.00	8.52	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
557	97.300	16.00	0.00	8.30	0.00	8.51	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
558	97.200	16.00	0.00	8.30	0.00	8.51	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
559	97.100	16.00	0.00	8.30	0.00	8.51	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
560	97.000	16.00	0.00	8.30	0.00	8.51	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
561	96.900	16.00	0.00	8.30	0.00	8.51	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
562	96.800	16.00	0.00	8.30	0.00	8.51	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
563	96.700	16.00	0.00	8.30	0.00	8.51	1.62	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
564	96.600	16.00	0.00	8.30	0.00	8.50	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
565	96.500	16.00	0.00	8.30	0.00	8.50	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 21 MOODY CREEK - BULL CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
566	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.50	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.43

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
566	96.50	96.40	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
567	96.40	96.30	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
568	96.30	96.20	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
569	96.20	96.10	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
570	96.10	96.00	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
571	96.00	95.90	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
572	95.90	95.80	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
573	95.80	95.70	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
574	95.70	95.60	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
575	95.60	95.50	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
576	95.50	95.40	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
577	95.40	95.30	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
578	95.30	95.20	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
579	95.20	95.10	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
580	95.10	95.00	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
581	95.00	94.90	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
582	94.90	94.80	0.02800	0.00	0.00324	0.36	0.78	11.02	864.19	1102.39	8.64	0.00	0.000	0.001	0.003
TOT						6.07			14691.29	18740.67					
AVG					0.00324		0.78	11.02			8.64				
CUM						193.17									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
566	96.400	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
567	96.300	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05

568	96.200	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
569	96.100	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
570	96.000	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
571	95.900	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
572	95.800	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
573	95.700	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
574	95.600	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
575	95.500	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
576	95.400	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
577	95.300	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
578	95.200	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
579	95.100	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
580	95.000	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
581	94.900	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
582	94.800	9.87	0.82	0.05	0.05	0.00	0.78	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
20 DEG C RATE				0.06		0.00	1.00			0.00		0.00	0.00	0.00	0.00			0.00	0.16	
AVG 20 DEG C RATE			0.89		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
566	96.400	16.00	0.00	8.30	0.00	8.50	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
567	96.300	16.00	0.00	8.30	0.00	8.50	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
568	96.200	16.00	0.00	8.30	0.00	8.50	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
569	96.100	16.00	0.00	8.30	0.00	8.50	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
570	96.000	16.00	0.00	8.30	0.00	8.50	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
571	95.900	16.00	0.00	8.30	0.00	8.50	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
572	95.800	16.00	0.00	8.30	0.00	8.50	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42

573	95.700	16.00	0.00	8.30	0.00	8.50	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
574	95.600	16.00	0.00	8.30	0.00	8.50	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
575	95.500	16.00	0.00	8.30	0.00	8.50	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
576	95.400	16.00	0.00	8.30	0.00	8.50	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
577	95.300	16.00	0.00	8.30	0.00	8.50	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
578	95.200	16.00	0.00	8.30	0.00	8.49	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
579	95.100	16.00	0.00	8.30	0.00	8.49	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
580	95.000	16.00	0.00	8.30	0.00	8.49	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
581	94.900	16.00	0.00	8.30	0.00	8.49	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
582	94.800	16.00	0.00	8.30	0.00	8.49	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 22 BULL CREEK - SWEETWATER CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
583	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.49	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.41

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
583	94.80	94.70	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
584	94.70	94.60	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
585	94.60	94.50	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
586	94.50	94.40	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
587	94.40	94.30	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
588	94.30	94.20	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
589	94.20	94.10	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
590	94.10	94.00	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
591	94.00	93.90	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
592	93.90	93.80	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
593	93.80	93.70	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
594	93.70	93.60	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
595	93.60	93.50	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
596	93.50	93.40	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
597	93.40	93.30	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
598	93.30	93.20	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003

599	93.20	93.10	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
600	93.10	93.00	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
601	93.00	92.90	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
602	92.90	92.80	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
603	92.80	92.70	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
604	92.70	92.60	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
605	92.60	92.50	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
606	92.50	92.40	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
607	92.40	92.30	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
608	92.30	92.20	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
609	92.20	92.10	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
610	92.10	92.00	0.02800	0.00	0.00328	0.35	0.77	11.02	853.17	1102.39	8.53	0.00	0.000	0.001	0.003
TOT						9.87			23888.76	30866.99					
AVG					0.00328		0.77	11.02			8.53				
CUM						203.04									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
583	94.700	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
584	94.600	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
585	94.500	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
586	94.400	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
587	94.300	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
588	94.200	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
589	94.100	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
590	94.000	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
591	93.900	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
592	93.800	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
593	93.700	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
594	93.600	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	

595	93.500	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
596	93.400	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
597	93.300	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
598	93.200	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
599	93.100	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
600	93.000	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
601	92.900	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
602	92.800	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
603	92.700	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
604	92.600	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
605	92.500	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
606	92.400	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
607	92.300	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
608	92.200	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
609	92.100	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
610	92.000	9.87	0.83	0.05	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
20 DEG C RATE				0.06		0.00	1.02			0.00		0.00	0.00	0.00	0.00			0.00	0.15	
AVG 20 DEG C RATE			0.90		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
583	94.700	16.00	0.00	8.30	0.00	8.49	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
584	94.600	16.00	0.00	8.30	0.00	8.48	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
585	94.500	16.00	0.00	8.30	0.00	8.48	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
586	94.400	16.00	0.00	8.30	0.00	8.48	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38

587	94.300	16.00	0.00	8.30	0.00	8.48	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
588	94.200	16.00	0.00	8.30	0.00	8.48	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
589	94.100	16.00	0.00	8.30	0.00	8.48	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
590	94.000	16.00	0.00	8.30	0.00	8.48	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
591	93.900	16.00	0.00	8.30	0.00	8.48	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
592	93.800	16.00	0.00	8.30	0.00	8.48	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
593	93.700	16.00	0.00	8.30	0.00	8.48	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
594	93.600	16.00	0.00	8.30	0.00	8.48	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
595	93.500	16.00	0.00	8.30	0.00	8.48	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
596	93.400	16.00	0.00	8.30	0.00	8.48	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
597	93.300	16.00	0.00	8.30	0.00	8.48	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
598	93.200	16.00	0.00	8.30	0.00	8.48	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
599	93.100	16.00	0.00	8.30	0.00	8.49	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
600	93.000	16.00	0.00	8.30	0.00	8.49	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
601	92.900	16.00	0.00	8.30	0.00	8.49	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
602	92.800	16.00	0.00	8.30	0.00	8.49	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
603	92.700	16.00	0.00	8.30	0.00	8.49	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
604	92.600	16.00	0.00	8.30	0.00	8.49	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
605	92.500	16.00	0.00	8.30	0.00	8.49	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
606	92.400	16.00	0.00	8.30	0.00	8.49	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
607	92.300	16.00	0.00	8.30	0.00	8.49	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
608	92.200	16.00	0.00	8.30	0.00	8.49	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
609	92.100	16.00	0.00	8.30	0.00	8.49	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
610	92.000	16.00	0.00	8.30	0.00	8.49	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 23 SWEETWATER CREEK - BRUSHY CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
611	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.49	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.29

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
611	92.00	91.90	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
612	91.90	91.80	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003

613	91.80	91.70	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
614	91.70	91.60	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
615	91.60	91.50	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
616	91.50	91.40	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
617	91.40	91.30	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
618	91.30	91.20	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
619	91.20	91.10	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
620	91.10	91.00	0.02800	0.00	0.00332	0.35	0.76	11.02	842.15	1102.39	8.42	0.00	0.000	0.001	0.003
TOT						3.48			8421.46	11023.93					
AVG					0.00332		0.76	11.02			8.42				
CUM						206.52									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
611	91.900	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
612	91.800	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
613	91.700	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
614	91.600	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
615	91.500	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
616	91.400	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
617	91.300	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
618	91.200	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
619	91.100	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
620	91.000	9.87	0.84	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
20 DEG C RATE				0.05		0.00	1.03			0.00		0.00	0.00	0.00	0.00			0.00	0.15	
AVG 20 DEG C RATE			0.92		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
611	91.900	16.00	0.00	8.30	0.00	8.49	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
612	91.800	16.00	0.00	8.30	0.00	8.50	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
613	91.700	16.00	0.00	8.30	0.00	8.50	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
614	91.600	16.00	0.00	8.30	0.00	8.50	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
615	91.500	16.00	0.00	8.30	0.00	8.50	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
616	91.400	16.00	0.00	8.30	0.00	8.51	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
617	91.300	16.00	0.00	8.30	0.00	8.51	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
618	91.200	16.00	0.00	8.30	0.00	8.51	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
619	91.100	16.00	0.00	8.30	0.00	8.51	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
620	91.000	16.00	0.00	8.30	0.00	8.51	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 24 BRUSHY CREEK - WHITE OAK CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
621	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.51	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.17

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
621	91.00	90.90	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
622	90.90	90.80	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
623	90.80	90.70	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
624	90.70	90.60	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
625	90.60	90.50	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
626	90.50	90.40	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
627	90.40	90.30	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
628	90.30	90.20	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
629	90.20	90.10	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
630	90.10	90.00	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003

631	90.00	89.90	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
632	89.90	89.80	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
633	89.80	89.70	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
634	89.70	89.60	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
635	89.60	89.50	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
636	89.50	89.40	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
637	89.40	89.30	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
638	89.30	89.20	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
639	89.20	89.10	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
640	89.10	89.00	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
641	89.00	88.90	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
642	88.90	88.80	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
643	88.80	88.70	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
644	88.70	88.60	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
645	88.60	88.50	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
646	88.50	88.40	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
647	88.40	88.30	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
648	88.30	88.20	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
649	88.20	88.10	0.02800	0.00	0.00337	0.34	0.75	11.02	831.12	1102.39	8.31	0.00	0.000	0.001	0.003
TOT						9.96			24102.53	31969.38					
AVG					0.00337		0.75	11.02			8.31				
CUM						216.49									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
621	90.900	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
622	90.800	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
623	90.700	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
624	90.600	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
625	90.500	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
626	90.400	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
627	90.300	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
628	90.200	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05

629	90.100	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
630	90.000	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
631	89.900	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
632	89.800	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
633	89.700	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
634	89.600	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
635	89.500	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
636	89.400	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
637	89.300	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
638	89.200	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
639	89.100	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
640	89.000	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
641	88.900	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
642	88.800	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
643	88.700	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
644	88.600	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
645	88.500	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
646	88.400	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
647	88.300	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
648	88.200	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
649	88.100	9.87	0.86	0.04	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
20 DEG C RATE				0.05		0.00	1.03			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			0.93		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
621	90.900	16.00	0.00	8.30	0.00	8.52	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
622	90.800	16.00	0.00	8.30	0.00	8.52	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
623	90.700	16.00	0.00	8.30	0.00	8.52	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
624	90.600	16.00	0.00	8.30	0.00	8.52	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
625	90.500	16.00	0.00	8.30	0.00	8.52	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
626	90.400	16.00	0.00	8.30	0.00	8.52	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
627	90.300	16.00	0.00	8.30	0.00	8.52	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
628	90.200	16.00	0.00	8.30	0.00	8.52	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
629	90.100	16.00	0.00	8.30	0.00	8.52	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
630	90.000	16.00	0.00	8.30	0.00	8.52	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
631	89.900	16.00	0.00	8.30	0.00	8.52	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
632	89.800	16.00	0.00	8.30	0.00	8.52	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
633	89.700	16.00	0.00	8.30	0.00	8.52	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
634	89.600	16.00	0.00	8.30	0.00	8.52	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
635	89.500	16.00	0.00	8.30	0.00	8.52	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
636	89.400	16.00	0.00	8.30	0.00	8.52	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
637	89.300	16.00	0.00	8.30	0.00	8.52	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
638	89.200	16.00	0.00	8.30	0.00	8.51	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
639	89.100	16.00	0.00	8.30	0.00	8.51	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
640	89.000	16.00	0.00	8.30	0.00	8.51	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
641	88.900	16.00	0.00	8.30	0.00	8.51	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
642	88.800	16.00	0.00	8.30	0.00	8.51	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
643	88.700	16.00	0.00	8.30	0.00	8.51	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
644	88.600	16.00	0.00	8.30	0.00	8.51	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
645	88.500	16.00	0.00	8.30	0.00	8.51	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
646	88.400	16.00	0.00	8.30	0.00	8.51	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
647	88.300	16.00	0.00	8.30	0.00	8.51	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
648	88.200	16.00	0.00	8.30	0.00	8.51	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
649	88.100	16.00	0.00	8.30	0.00	8.51	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 25 WHITE OAK CREEK - BILLS CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
650	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.51	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.25

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
650	88.10	88.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
651	88.00	87.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
652	87.90	87.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
653	87.80	87.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
654	87.70	87.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
655	87.60	87.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
656	87.50	87.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
657	87.40	87.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
658	87.30	87.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
659	87.20	87.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
660	87.10	87.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
661	87.00	86.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
662	86.90	86.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
663	86.80	86.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
664	86.70	86.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
665	86.60	86.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
666	86.50	86.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
667	86.40	86.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
668	86.30	86.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
669	86.20	86.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
670	86.10	86.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
671	86.00	85.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
672	85.90	85.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
673	85.80	85.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
674	85.70	85.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
675	85.60	85.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
676	85.50	85.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
677	85.40	85.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
678	85.30	85.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
679	85.20	85.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
680	85.10	85.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
681	85.00	84.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
682	84.90	84.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
683	84.80	84.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
684	84.70	84.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
685	84.60	84.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
686	84.50	84.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
687	84.40	84.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
688	84.30	84.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
689	84.20	84.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
690	84.10	84.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
691	84.00	83.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003

692	83.90	83.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
693	83.80	83.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
694	83.70	83.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
695	83.60	83.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
696	83.50	83.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
697	83.40	83.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
698	83.30	83.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
699	83.20	83.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
700	83.10	83.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
701	83.00	82.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
702	82.90	82.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
703	82.80	82.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
704	82.70	82.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
705	82.60	82.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
706	82.50	82.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
707	82.40	82.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
708	82.30	82.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
709	82.20	82.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
710	82.10	82.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
711	82.00	81.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
712	81.90	81.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
713	81.80	81.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
714	81.70	81.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
715	81.60	81.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
716	81.50	81.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
717	81.40	81.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
718	81.30	81.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
719	81.20	81.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
720	81.10	81.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
721	81.00	80.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
722	80.90	80.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
723	80.80	80.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
724	80.70	80.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
725	80.60	80.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
726	80.50	80.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
727	80.40	80.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
728	80.30	80.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
729	80.20	80.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
730	80.10	80.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
731	80.00	79.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
732	79.90	79.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
733	79.80	79.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
734	79.70	79.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
735	79.60	79.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
736	79.50	79.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
737	79.40	79.30	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
738	79.30	79.20	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
739	79.20	79.10	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
740	79.10	79.00	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
741	79.00	78.90	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003

742	78.90	78.80	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
743	78.80	78.70	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
744	78.70	78.60	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
745	78.60	78.50	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
746	78.50	78.40	0.02800	0.00	0.00349	0.33	0.73	10.92	801.73	1092.39	8.02	0.00	0.000	0.001	0.003
TOT						32.15			77768.24	105961.95					
AVG					0.00349		0.73	10.92			8.02				
CUM						248.63									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
650	88.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
651	87.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
652	87.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
653	87.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
654	87.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
655	87.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
656	87.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
657	87.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
658	87.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
659	87.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
660	87.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
661	86.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
662	86.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
663	86.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
664	86.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05

665	86.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
666	86.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
667	86.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
668	86.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
669	86.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
670	86.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
671	85.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
672	85.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
673	85.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
674	85.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
675	85.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
676	85.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
677	85.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
678	85.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
679	85.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
680	85.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
681	84.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
682	84.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
683	84.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
684	84.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
685	84.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
686	84.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
687	84.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
688	84.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
689	84.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05

690	84.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
691	83.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
692	83.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
693	83.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
694	83.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
695	83.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
696	83.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
697	83.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
698	83.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
699	83.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
700	83.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
701	82.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
702	82.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
703	82.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
704	82.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
705	82.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
706	82.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
707	82.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
708	82.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
709	82.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
710	82.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
711	81.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
712	81.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
713	81.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
714	81.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05

715	81.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
716	81.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
717	81.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
718	81.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
719	81.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
720	81.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
721	80.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
722	80.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
723	80.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
724	80.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
725	80.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
726	80.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
727	80.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
728	80.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
729	80.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
730	80.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
731	79.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
732	79.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
733	79.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
734	79.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
735	79.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
736	79.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
737	79.300	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
738	79.200	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
739	79.100	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05

740	79.000	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
741	78.900	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
742	78.800	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
743	78.700	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
744	78.600	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
745	78.500	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
746	78.400	9.87	0.88	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
20 DEG C RATE				0.04		0.00	1.04			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			0.95		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
650	88.000	16.00	0.00	8.30	0.00	8.51	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
651	87.900	16.00	0.00	8.30	0.00	8.51	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
652	87.800	16.00	0.00	8.30	0.00	8.51	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
653	87.700	16.00	0.00	8.30	0.00	8.51	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
654	87.600	16.00	0.00	8.30	0.00	8.51	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
655	87.500	16.00	0.00	8.30	0.00	8.51	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
656	87.400	16.00	0.00	8.30	0.00	8.51	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
657	87.300	16.00	0.00	8.30	0.00	8.51	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
658	87.200	16.00	0.00	8.30	0.00	8.51	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
659	87.100	16.00	0.00	8.30	0.00	8.51	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
660	87.000	16.00	0.00	8.30	0.00	8.51	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
661	86.900	16.00	0.00	8.30	0.00	8.51	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
662	86.800	16.00	0.00	8.30	0.00	8.51	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
663	86.700	16.00	0.00	8.30	0.00	8.51	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
664	86.600	16.00	0.00	8.30	0.00	8.51	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
665	86.500	16.00	0.00	8.30	0.00	8.51	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
666	86.400	16.00	0.00	8.30	0.00	8.51	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
667	86.300	16.00	0.00	8.30	0.00	8.51	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
668	86.200	16.00	0.00	8.30	0.00	8.51	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
669	86.100	16.00	0.00	8.30	0.00	8.51	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
670	86.000	16.00	0.00	8.30	0.00	8.51	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
671	85.900	16.00	0.00	8.30	0.00	8.51	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
672	85.800	16.00	0.00	8.30	0.00	8.51	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32

673	85.700	16.00	0.00	8.30	0.00	8.51	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
674	85.600	16.00	0.00	8.30	0.00	8.51	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
675	85.500	16.00	0.00	8.30	0.00	8.51	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
676	85.400	16.00	0.00	8.30	0.00	8.51	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
677	85.300	16.00	0.00	8.30	0.00	8.51	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
678	85.200	16.00	0.00	8.30	0.00	8.51	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
679	85.100	16.00	0.00	8.30	0.00	8.51	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
680	85.000	16.00	0.00	8.30	0.00	8.50	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
681	84.900	16.00	0.00	8.30	0.00	8.50	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
682	84.800	16.00	0.00	8.30	0.00	8.50	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
683	84.700	16.00	0.00	8.30	0.00	8.50	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
684	84.600	16.00	0.00	8.30	0.00	8.50	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
685	84.500	16.00	0.00	8.30	0.00	8.50	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
686	84.400	16.00	0.00	8.30	0.00	8.50	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
687	84.300	16.00	0.00	8.30	0.00	8.50	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
688	84.200	16.00	0.00	8.30	0.00	8.50	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
689	84.100	16.00	0.00	8.30	0.00	8.50	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
690	84.000	16.00	0.00	8.30	0.00	8.50	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
691	83.900	16.00	0.00	8.30	0.00	8.50	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
692	83.800	16.00	0.00	8.30	0.00	8.50	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
693	83.700	16.00	0.00	8.30	0.00	8.50	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
694	83.600	16.00	0.00	8.30	0.00	8.50	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
695	83.500	16.00	0.00	8.30	0.00	8.50	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
696	83.400	16.00	0.00	8.30	0.00	8.50	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
697	83.300	16.00	0.00	8.30	0.00	8.50	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
698	83.200	16.00	0.00	8.30	0.00	8.50	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
699	83.100	16.00	0.00	8.30	0.00	8.50	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
700	83.000	16.00	0.00	8.30	0.00	8.50	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
701	82.900	16.00	0.00	8.30	0.00	8.50	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
702	82.800	16.00	0.00	8.30	0.00	8.50	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
703	82.700	16.00	0.00	8.30	0.00	8.50	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
704	82.600	16.00	0.00	8.30	0.00	8.50	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
705	82.500	16.00	0.00	8.30	0.00	8.50	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
706	82.400	16.00	0.00	8.30	0.00	8.50	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
707	82.300	16.00	0.00	8.30	0.00	8.50	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
708	82.200	16.00	0.00	8.30	0.00	8.50	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
709	82.100	16.00	0.00	8.30	0.00	8.50	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
710	82.000	16.00	0.00	8.30	0.00	8.50	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
711	81.900	16.00	0.00	8.30	0.00	8.50	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
712	81.800	16.00	0.00	8.30	0.00	8.50	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
713	81.700	16.00	0.00	8.30	0.00	8.50	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
714	81.600	16.00	0.00	8.30	0.00	8.50	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
715	81.500	16.00	0.00	8.30	0.00	8.50	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
716	81.400	16.00	0.00	8.30	0.00	8.50	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
717	81.300	16.00	0.00	8.30	0.00	8.50	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
718	81.200	16.00	0.00	8.30	0.00	8.50	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
719	81.100	16.00	0.00	8.30	0.00	8.50	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
720	81.000	16.00	0.00	8.30	0.00	8.50	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
721	80.900	16.00	0.00	8.30	0.00	8.50	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
722	80.800	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35

723	80.700	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
724	80.600	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
725	80.500	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
726	80.400	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
727	80.300	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
728	80.200	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
729	80.100	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
730	80.000	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
731	79.900	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
732	79.800	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
733	79.700	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
734	79.600	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
735	79.500	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
736	79.400	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
737	79.300	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
738	79.200	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
739	79.100	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
740	79.000	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
741	78.900	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
742	78.800	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
743	78.700	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
744	78.600	16.00	0.00	8.30	0.00	8.50	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
745	78.500	16.00	0.00	8.30	0.00	8.50	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
746	78.400	16.00	0.00	8.30	0.00	8.50	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 26 BILLS CREEK - LOST CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
747	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.50	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.35

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
747	78.40	78.30	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
748	78.30	78.20	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004

749	78.20	78.10	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
750	78.10	78.00	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
751	78.00	77.90	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
752	77.90	77.80	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
753	77.80	77.70	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
754	77.70	77.60	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
755	77.60	77.50	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
756	77.50	77.40	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
757	77.40	77.30	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
758	77.30	77.20	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
759	77.20	77.10	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
760	77.10	77.00	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
761	77.00	76.90	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
762	76.90	76.80	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
763	76.80	76.70	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
764	76.70	76.60	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
765	76.60	76.50	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
766	76.50	76.40	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
767	76.40	76.30	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
768	76.30	76.20	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
769	76.20	76.10	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
770	76.10	76.00	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
771	76.00	75.90	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
772	75.90	75.80	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
773	75.80	75.70	0.02800	0.00	0.00364	0.32	0.70	10.92	768.96	1092.39	7.69	0.00	0.000	0.001	0.004
TOT						8.58			20762.00	29494.60					
AVG					0.00364		0.70	10.92			7.69				
CUM						257.22									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
747	78.300	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
748	78.200	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
749	78.100	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
750	78.000	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
751	77.900	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05

752	77.800	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
753	77.700	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
754	77.600	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
755	77.500	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
756	77.400	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
757	77.300	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
758	77.200	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
759	77.100	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
760	77.000	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
761	76.900	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
762	76.800	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
763	76.700	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
764	76.600	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
765	76.500	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
766	76.400	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
767	76.300	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
768	76.200	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
769	76.100	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
770	76.000	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
771	75.900	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
772	75.800	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
773	75.700	9.87	0.92	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
20 DEG C RATE				0.03		0.00	1.06			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			0.99		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
747	78.300	16.00	0.00	8.30	0.00	8.50	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
748	78.200	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
749	78.100	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
750	78.000	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
751	77.900	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
752	77.800	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
753	77.700	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
754	77.600	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
755	77.500	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
756	77.400	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
757	77.300	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
758	77.200	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
759	77.100	16.00	0.00	8.30	0.00	8.50	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
760	77.000	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
761	76.900	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
762	76.800	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
763	76.700	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
764	76.600	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
765	76.500	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
766	76.400	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
767	76.300	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
768	76.200	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
769	76.100	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
770	76.000	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
771	75.900	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
772	75.800	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
773	75.700	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 27 LOST CREEK - MESSER CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
774	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.50	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.37

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
774	75.70	75.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
775	75.60	75.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
776	75.50	75.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
777	75.40	75.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
778	75.30	75.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
779	75.20	75.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
780	75.10	75.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
781	75.00	74.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
782	74.90	74.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
783	74.80	74.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
784	74.70	74.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
785	74.60	74.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
786	74.50	74.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
787	74.40	74.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
788	74.30	74.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
789	74.20	74.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
790	74.10	74.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
791	74.00	73.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
792	73.90	73.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
793	73.80	73.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
794	73.70	73.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
795	73.60	73.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
796	73.50	73.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
797	73.40	73.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
798	73.30	73.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
799	73.20	73.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
800	73.10	73.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
801	73.00	72.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
802	72.90	72.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
803	72.80	72.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
804	72.70	72.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
805	72.60	72.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
806	72.50	72.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
807	72.40	72.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
808	72.30	72.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
809	72.20	72.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
810	72.10	72.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
811	72.00	71.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
812	71.90	71.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
813	71.80	71.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
814	71.70	71.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
815	71.60	71.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004

816	71.50	71.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
817	71.40	71.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
818	71.30	71.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
819	71.20	71.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
820	71.10	71.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
821	71.00	70.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
822	70.90	70.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
823	70.80	70.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
824	70.70	70.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
825	70.60	70.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
826	70.50	70.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
827	70.40	70.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
828	70.30	70.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
829	70.20	70.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
830	70.10	70.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
831	70.00	69.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
832	69.90	69.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
833	69.80	69.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
834	69.70	69.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
835	69.60	69.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
836	69.50	69.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
837	69.40	69.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
838	69.30	69.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
839	69.20	69.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
840	69.10	69.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
841	69.00	68.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
842	68.90	68.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
843	68.80	68.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
844	68.70	68.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
845	68.60	68.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
846	68.50	68.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
847	68.40	68.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
848	68.30	68.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
849	68.20	68.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
850	68.10	68.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
851	68.00	67.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
852	67.90	67.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
853	67.80	67.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
854	67.70	67.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
855	67.60	67.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
856	67.50	67.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
857	67.40	67.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
858	67.30	67.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
859	67.20	67.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
860	67.10	67.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
861	67.00	66.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
862	66.90	66.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
863	66.80	66.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
864	66.70	66.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
865	66.60	66.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004

866	66.50	66.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
867	66.40	66.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
868	66.30	66.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
869	66.20	66.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
870	66.10	66.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
871	66.00	65.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
872	65.90	65.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
873	65.80	65.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
874	65.70	65.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
875	65.60	65.50	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
876	65.50	65.40	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
877	65.40	65.30	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
878	65.30	65.20	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
879	65.20	65.10	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
880	65.10	65.00	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
881	65.00	64.90	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
882	64.90	64.80	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
883	64.80	64.70	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
884	64.70	64.60	0.02800	0.00	0.00384	0.30	0.67	10.82	729.45	1082.39	7.29	0.00	0.000	0.001	0.004
TOT						33.47			80969.23	120145.42					
AVG					0.00384		0.67	10.82			7.29				
CUM						290.68									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
774	75.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
775	75.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
776	75.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
777	75.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
778	75.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
779	75.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
780	75.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
781	74.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05

782	74.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
783	74.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
784	74.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
785	74.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
786	74.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
787	74.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
788	74.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
789	74.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
790	74.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
791	73.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
792	73.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
793	73.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
794	73.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
795	73.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
796	73.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
797	73.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
798	73.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
799	73.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
800	73.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
801	72.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
802	72.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
803	72.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
804	72.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
805	72.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
806	72.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05

807	72.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
808	72.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
809	72.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
810	72.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
811	71.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
812	71.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
813	71.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
814	71.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
815	71.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
816	71.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
817	71.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
818	71.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
819	71.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
820	71.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
821	70.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
822	70.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
823	70.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
824	70.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
825	70.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
826	70.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
827	70.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
828	70.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
829	70.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
830	70.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			
831	69.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
0.05																			

832	69.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
833	69.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
834	69.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
835	69.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
836	69.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
837	69.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
838	69.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
839	69.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
840	69.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
841	68.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
842	68.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
843	68.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
844	68.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
845	68.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
846	68.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
847	68.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
848	68.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
849	68.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
850	68.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
851	67.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
852	67.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
853	67.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
854	67.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
855	67.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
856	67.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05

857	67.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
858	67.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
859	67.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
860	67.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
861	66.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
862	66.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
863	66.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
864	66.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
865	66.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
866	66.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
867	66.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
868	66.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
869	66.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
870	66.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
871	65.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
872	65.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
873	65.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
874	65.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
875	65.500	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
876	65.400	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
877	65.300	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
878	65.200	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
879	65.100	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
880	65.000	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
881	64.900	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05

882	64.800	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
883	64.700	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
884	64.600	9.87	0.96	0.03	0.05	0.00	0.83	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
20 DEG C RATE				0.04		0.00	1.07			0.00		0.00	0.00	0.00	0.00			0.00	0.10	
AVG 20 DEG C RATE			1.04		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
774	75.600	16.00	0.00	8.30	0.00	8.50	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
775	75.500	16.00	0.00	8.30	0.00	8.49	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
776	75.400	16.00	0.00	8.30	0.00	8.49	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
777	75.300	16.00	0.00	8.30	0.00	8.49	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
778	75.200	16.00	0.00	8.30	0.00	8.48	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
779	75.100	16.00	0.00	8.30	0.00	8.48	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
780	75.000	16.00	0.00	8.30	0.00	8.48	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
781	74.900	16.00	0.00	8.30	0.00	8.48	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
782	74.800	16.00	0.00	8.30	0.00	8.48	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
783	74.700	16.00	0.00	8.30	0.00	8.48	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
784	74.600	16.00	0.00	8.30	0.00	8.48	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
785	74.500	16.00	0.00	8.30	0.00	8.48	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
786	74.400	16.00	0.00	8.30	0.00	8.48	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
787	74.300	16.00	0.00	8.30	0.00	8.48	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
788	74.200	16.00	0.00	8.30	0.00	8.48	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
789	74.100	16.00	0.00	8.30	0.00	8.48	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
790	74.000	16.00	0.00	8.30	0.00	8.47	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
791	73.900	16.00	0.00	8.30	0.00	8.47	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
792	73.800	16.00	0.00	8.30	0.00	8.47	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
793	73.700	16.00	0.00	8.30	0.00	8.47	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
794	73.600	16.00	0.00	8.30	0.00	8.47	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
795	73.500	16.00	0.00	8.30	0.00	8.47	1.81	1.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
796	73.400	16.00	0.00	8.30	0.00	8.47	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
797	73.300	16.00	0.00	8.30	0.00	8.47	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
798	73.200	16.00	0.00	8.30	0.00	8.47	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
799	73.100	16.00	0.00	8.30	0.00	8.47	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
800	73.000	16.00	0.00	8.30	0.00	8.47	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
801	72.900	16.00	0.00	8.30	0.00	8.47	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
802	72.800	16.00	0.00	8.30	0.00	8.47	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
803	72.700	16.00	0.00	8.30	0.00	8.47	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
804	72.600	16.00	0.00	8.30	0.00	8.47	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60

805	72.500	16.00	0.00	8.30	0.00	8.47	1.73	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
806	72.400	16.00	0.00	8.30	0.00	8.47	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
807	72.300	16.00	0.00	8.30	0.00	8.47	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
808	72.200	16.00	0.00	8.30	0.00	8.47	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
809	72.100	16.00	0.00	8.30	0.00	8.47	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
810	72.000	16.00	0.00	8.30	0.00	8.47	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
811	71.900	16.00	0.00	8.30	0.00	8.47	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
812	71.800	16.00	0.00	8.30	0.00	8.47	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
813	71.700	16.00	0.00	8.30	0.00	8.47	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
814	71.600	16.00	0.00	8.30	0.00	8.47	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
815	71.500	16.00	0.00	8.30	0.00	8.47	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
816	71.400	16.00	0.00	8.30	0.00	8.47	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
817	71.300	16.00	0.00	8.30	0.00	8.47	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
818	71.200	16.00	0.00	8.30	0.00	8.47	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
819	71.100	16.00	0.00	8.30	0.00	8.47	1.64	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
820	71.000	16.00	0.00	8.30	0.00	8.47	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
821	70.900	16.00	0.00	8.30	0.00	8.47	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
822	70.800	16.00	0.00	8.30	0.00	8.47	1.62	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
823	70.700	16.00	0.00	8.30	0.00	8.47	1.62	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
824	70.600	16.00	0.00	8.30	0.00	8.47	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
825	70.500	16.00	0.00	8.30	0.00	8.47	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
826	70.400	16.00	0.00	8.30	0.00	8.47	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
827	70.300	16.00	0.00	8.30	0.00	8.47	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
828	70.200	16.00	0.00	8.30	0.00	8.47	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
829	70.100	16.00	0.00	8.30	0.00	8.47	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
830	70.000	16.00	0.00	8.30	0.00	8.47	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
831	69.900	16.00	0.00	8.30	0.00	8.47	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
832	69.800	16.00	0.00	8.30	0.00	8.47	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
833	69.700	16.00	0.00	8.30	0.00	8.47	1.57	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
834	69.600	16.00	0.00	8.30	0.00	8.47	1.57	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
835	69.500	16.00	0.00	8.30	0.00	8.47	1.57	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
836	69.400	16.00	0.00	8.30	0.00	8.47	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
837	69.300	16.00	0.00	8.30	0.00	8.47	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
838	69.200	16.00	0.00	8.30	0.00	8.47	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
839	69.100	16.00	0.00	8.30	0.00	8.47	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
840	69.000	16.00	0.00	8.30	0.00	8.47	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
841	68.900	16.00	0.00	8.30	0.00	8.47	1.55	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
842	68.800	16.00	0.00	8.30	0.00	8.47	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
843	68.700	16.00	0.00	8.30	0.00	8.47	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
844	68.600	16.00	0.00	8.30	0.00	8.47	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
845	68.500	16.00	0.00	8.30	0.00	8.47	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
846	68.400	16.00	0.00	8.30	0.00	8.47	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
847	68.300	16.00	0.00	8.30	0.00	8.47	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
848	68.200	16.00	0.00	8.30	0.00	8.47	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
849	68.100	16.00	0.00	8.30	0.00	8.47	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
850	68.000	16.00	0.00	8.30	0.00	8.47	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
851	67.900	16.00	0.00	8.30	0.00	8.47	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
852	67.800	16.00	0.00	8.30	0.00	8.47	1.52	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
853	67.700	16.00	0.00	8.30	0.00	8.47	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
854	67.600	16.00	0.00	8.30	0.00	8.47	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69

855	67.500	16.00	0.00	8.30	0.00	8.47	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
856	67.400	16.00	0.00	8.30	0.00	8.47	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
857	67.300	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
858	67.200	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
859	67.100	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
860	67.000	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
861	66.900	16.00	0.00	8.30	0.00	8.47	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
862	66.800	16.00	0.00	8.30	0.00	8.47	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
863	66.700	16.00	0.00	8.30	0.00	8.47	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
864	66.600	16.00	0.00	8.30	0.00	8.47	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
865	66.500	16.00	0.00	8.30	0.00	8.47	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
866	66.400	16.00	0.00	8.30	0.00	8.47	1.49	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
867	66.300	16.00	0.00	8.30	0.00	8.47	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
868	66.200	16.00	0.00	8.30	0.00	8.47	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
869	66.100	16.00	0.00	8.30	0.00	8.47	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
870	66.000	16.00	0.00	8.30	0.00	8.47	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
871	65.900	16.00	0.00	8.30	0.00	8.47	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
872	65.800	16.00	0.00	8.30	0.00	8.47	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
873	65.700	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
874	65.600	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
875	65.500	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
876	65.400	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
877	65.300	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
878	65.200	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
879	65.100	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
880	65.000	16.00	0.00	8.30	0.00	8.47	1.47	1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
881	64.900	16.00	0.00	8.30	0.00	8.47	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
882	64.800	16.00	0.00	8.30	0.00	8.47	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
883	64.700	16.00	0.00	8.30	0.00	8.47	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
884	64.600	16.00	0.00	8.30	0.00	8.47	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 28 MESSER CREEK - RICHLAND CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
885	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.47	1.46	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.70

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
885	64.60	64.50	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
886	64.50	64.40	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
887	64.40	64.30	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
888	64.30	64.20	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
889	64.20	64.10	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
890	64.10	64.00	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
891	64.00	63.90	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
892	63.90	63.80	0.02800	0.00	0.00396	0.29	0.65	10.82	707.80	1082.39	7.08	0.00	0.000	0.001	0.004
TOT						2.34			5662.43	8659.14					
AVG					0.00396		0.65	10.82			7.08				
CUM						293.02									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
885	64.500	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
886	64.400	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
887	64.300	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
888	64.200	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
889	64.100	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
890	64.000	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
891	63.900	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
892	63.800	9.87	0.99	0.03	0.05	0.00	0.81	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
20 DEG C RATE				0.04		0.00	1.04			0.00		0.00	0.00	0.00	0.00			0.00	0.09	
AVG 20 DEG C RATE			1.07		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
885	64.500	16.00	0.00	8.30	0.00	8.48	1.48	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
886	64.400	16.00	0.00	8.30	0.00	8.49	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
887	64.300	16.00	0.00	8.30	0.00	8.50	1.51	1.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
888	64.200	16.00	0.00	8.30	0.00	8.50	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
889	64.100	16.00	0.00	8.30	0.00	8.51	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
890	64.000	16.00	0.00	8.30	0.00	8.51	1.56	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
891	63.900	16.00	0.00	8.30	0.00	8.51	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
892	63.800	16.00	0.00	8.30	0.00	8.52	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 29 RICHLAND CREEK - PINEY CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
893	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.52	1.59	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.54

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
893	63.80	63.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
894	63.70	63.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
895	63.60	63.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
896	63.50	63.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
897	63.40	63.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
898	63.30	63.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
899	63.20	63.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
900	63.10	63.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
901	63.00	62.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
902	62.90	62.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
903	62.80	62.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
904	62.70	62.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004

905	62.60	62.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
906	62.50	62.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
907	62.40	62.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
908	62.30	62.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
909	62.20	62.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
910	62.10	62.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
911	62.00	61.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
912	61.90	61.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
913	61.80	61.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
914	61.70	61.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
915	61.60	61.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
916	61.50	61.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
917	61.40	61.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
918	61.30	61.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
919	61.20	61.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
920	61.10	61.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
921	61.00	60.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
922	60.90	60.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
923	60.80	60.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
924	60.70	60.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
925	60.60	60.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
926	60.50	60.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
927	60.40	60.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
928	60.30	60.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
929	60.20	60.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
930	60.10	60.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
931	60.00	59.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
932	59.90	59.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
933	59.80	59.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
934	59.70	59.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
935	59.60	59.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
936	59.50	59.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
937	59.40	59.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
938	59.30	59.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
939	59.20	59.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
940	59.10	59.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
941	59.00	58.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
942	58.90	58.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
943	58.80	58.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
944	58.70	58.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
945	58.60	58.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
946	58.50	58.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
947	58.40	58.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
948	58.30	58.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
949	58.20	58.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
950	58.10	58.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
951	58.00	57.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
952	57.90	57.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
953	57.80	57.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
954	57.70	57.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004

955	57.60	57.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
956	57.50	57.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
957	57.40	57.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
958	57.30	57.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
959	57.20	57.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
960	57.10	57.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
961	57.00	56.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
962	56.90	56.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
963	56.80	56.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
964	56.70	56.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
965	56.60	56.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
966	56.50	56.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
967	56.40	56.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
968	56.30	56.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
969	56.20	56.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
970	56.10	56.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
971	56.00	55.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
972	55.90	55.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
973	55.80	55.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
974	55.70	55.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
975	55.60	55.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
976	55.50	55.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
977	55.40	55.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
978	55.30	55.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
979	55.20	55.10	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
980	55.10	55.00	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
981	55.00	54.90	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
982	54.90	54.80	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
983	54.80	54.70	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
984	54.70	54.60	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
985	54.60	54.50	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
986	54.50	54.40	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
987	54.40	54.30	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
988	54.30	54.20	0.02800	0.00	0.00408	0.28	0.63	10.82	686.16	1082.39	6.86	0.00	0.000	0.001	0.004
TOT						27.23			65871.01	103909.56					
AVG					0.00408		0.63	10.82			6.86				
CUM						320.25									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
893	63.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	

894	63.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
895	63.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
896	63.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
897	63.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
898	63.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
899	63.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
900	63.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
901	62.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
902	62.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
903	62.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
904	62.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
905	62.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
906	62.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
907	62.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
908	62.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
909	62.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
910	62.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
911	61.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
912	61.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
913	61.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
914	61.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
915	61.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
916	61.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
917	61.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
918	61.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08

919	61.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
920	61.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
921	60.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
922	60.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
923	60.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
924	60.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
925	60.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
926	60.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
927	60.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
928	60.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
929	60.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
930	60.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
931	59.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
932	59.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
933	59.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
934	59.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
935	59.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
936	59.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
937	59.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
938	59.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
939	59.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
940	59.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
941	58.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
942	58.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
943	58.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08

944	58.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
945	58.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
946	58.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
947	58.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
948	58.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
949	58.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
950	58.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
951	57.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
952	57.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
953	57.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
954	57.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
955	57.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
956	57.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
957	57.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
958	57.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
959	57.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
960	57.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
961	56.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
962	56.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
963	56.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
964	56.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
965	56.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
966	56.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
967	56.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
968	56.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08

969	56.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
970	56.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
971	55.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
972	55.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
973	55.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
974	55.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
975	55.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
976	55.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
977	55.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
978	55.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
979	55.100	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
980	55.000	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
981	54.900	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
982	54.800	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
983	54.700	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
984	54.600	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
985	54.500	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
986	54.400	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
987	54.300	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
988	54.200	9.87	1.02	0.03	0.05	0.00	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
20 DEG C RATE				0.04		0.00	1.03			0.00		0.00	0.00	0.00	0.00			0.00	0.11
AVG 20 DEG C RATE			1.10		0.05						0.00								

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
893	63.700	16.00	0.00	8.30	0.00	8.52	1.61	1.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
894	63.600	16.00	0.00	8.30	0.00	8.52	1.63	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
895	63.500	16.00	0.00	8.30	0.00	8.52	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
896	63.400	16.00	0.00	8.30	0.00	8.53	1.67	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
897	63.300	16.00	0.00	8.30	0.00	8.53	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
898	63.200	16.00	0.00	8.30	0.00	8.53	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
899	63.100	16.00	0.00	8.30	0.00	8.53	1.72	1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
900	63.000	16.00	0.00	8.30	0.00	8.53	1.74	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
901	62.900	16.00	0.00	8.30	0.00	8.53	1.76	1.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
902	62.800	16.00	0.00	8.30	0.00	8.53	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
903	62.700	16.00	0.00	8.30	0.00	8.53	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
904	62.600	16.00	0.00	8.30	0.00	8.53	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
905	62.500	16.00	0.00	8.30	0.00	8.53	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
906	62.400	16.00	0.00	8.30	0.00	8.53	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
907	62.300	16.00	0.00	8.30	0.00	8.53	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
908	62.200	16.00	0.00	8.30	0.00	8.53	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
909	62.100	16.00	0.00	8.30	0.00	8.53	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
910	62.000	16.00	0.00	8.30	0.00	8.53	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
911	61.900	16.00	0.00	8.30	0.00	8.53	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
912	61.800	16.00	0.00	8.30	0.00	8.53	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
913	61.700	16.00	0.00	8.30	0.00	8.52	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
914	61.600	16.00	0.00	8.30	0.00	8.52	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
915	61.500	16.00	0.00	8.30	0.00	8.52	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
916	61.400	16.00	0.00	8.30	0.00	8.52	1.97	1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
917	61.300	16.00	0.00	8.30	0.00	8.52	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
918	61.200	16.00	0.00	8.30	0.00	8.52	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
919	61.100	16.00	0.00	8.30	0.00	8.52	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
920	61.000	16.00	0.00	8.30	0.00	8.52	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
921	60.900	16.00	0.00	8.30	0.00	8.52	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
922	60.800	16.00	0.00	8.30	0.00	8.52	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
923	60.700	16.00	0.00	8.30	0.00	8.52	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
924	60.600	16.00	0.00	8.30	0.00	8.52	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
925	60.500	16.00	0.00	8.30	0.00	8.52	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
926	60.400	16.00	0.00	8.30	0.00	8.52	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
927	60.300	16.00	0.00	8.30	0.00	8.52	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
928	60.200	16.00	0.00	8.30	0.00	8.52	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
929	60.100	16.00	0.00	8.30	0.00	8.52	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
930	60.000	16.00	0.00	8.30	0.00	8.52	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
931	59.900	16.00	0.00	8.30	0.00	8.52	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
932	59.800	16.00	0.00	8.30	0.00	8.52	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
933	59.700	16.00	0.00	8.30	0.00	8.52	2.14	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
934	59.600	16.00	0.00	8.30	0.00	8.52	2.14	2.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
935	59.500	16.00	0.00	8.30	0.00	8.52	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
936	59.400	16.00	0.00	8.30	0.00	8.52	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
937	59.300	16.00	0.00	8.30	0.00	8.52	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
938	59.200	16.00	0.00	8.30	0.00	8.52	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48

939	59.100	16.00	0.00	8.30	0.00	8.52	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
940	59.000	16.00	0.00	8.30	0.00	8.52	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
941	58.900	16.00	0.00	8.30	0.00	8.52	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
942	58.800	16.00	0.00	8.30	0.00	8.52	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
943	58.700	16.00	0.00	8.30	0.00	8.52	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
944	58.600	16.00	0.00	8.30	0.00	8.52	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
945	58.500	16.00	0.00	8.30	0.00	8.52	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
946	58.400	16.00	0.00	8.30	0.00	8.52	2.23	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
947	58.300	16.00	0.00	8.30	0.00	8.52	2.23	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
948	58.200	16.00	0.00	8.30	0.00	8.52	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
949	58.100	16.00	0.00	8.30	0.00	8.52	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
950	58.000	16.00	0.00	8.30	0.00	8.52	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
951	57.900	16.00	0.00	8.30	0.00	8.52	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
952	57.800	16.00	0.00	8.30	0.00	8.52	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
953	57.700	16.00	0.00	8.30	0.00	8.52	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
954	57.600	16.00	0.00	8.30	0.00	8.52	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
955	57.500	16.00	0.00	8.30	0.00	8.51	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
956	57.400	16.00	0.00	8.30	0.00	8.51	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
957	57.300	16.00	0.00	8.30	0.00	8.51	2.29	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
958	57.200	16.00	0.00	8.30	0.00	8.51	2.29	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
959	57.100	16.00	0.00	8.30	0.00	8.51	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
960	57.000	16.00	0.00	8.30	0.00	8.51	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
961	56.900	16.00	0.00	8.30	0.00	8.51	2.31	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
962	56.800	16.00	0.00	8.30	0.00	8.51	2.31	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
963	56.700	16.00	0.00	8.30	0.00	8.51	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
964	56.600	16.00	0.00	8.30	0.00	8.51	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
965	56.500	16.00	0.00	8.30	0.00	8.51	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
966	56.400	16.00	0.00	8.30	0.00	8.51	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
967	56.300	16.00	0.00	8.30	0.00	8.51	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
968	56.200	16.00	0.00	8.30	0.00	8.51	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
969	56.100	16.00	0.00	8.30	0.00	8.51	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
970	56.000	16.00	0.00	8.30	0.00	8.51	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
971	55.900	16.00	0.00	8.30	0.00	8.51	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
972	55.800	16.00	0.00	8.30	0.00	8.51	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
973	55.700	16.00	0.00	8.30	0.00	8.51	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
974	55.600	16.00	0.00	8.30	0.00	8.51	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
975	55.500	16.00	0.00	8.30	0.00	8.51	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
976	55.400	16.00	0.00	8.30	0.00	8.51	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
977	55.300	16.00	0.00	8.30	0.00	8.51	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
978	55.200	16.00	0.00	8.30	0.00	8.51	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
979	55.100	16.00	0.00	8.30	0.00	8.51	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
980	55.000	16.00	0.00	8.30	0.00	8.51	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
981	54.900	16.00	0.00	8.30	0.00	8.51	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
982	54.800	16.00	0.00	8.30	0.00	8.51	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
983	54.700	16.00	0.00	8.30	0.00	8.51	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
984	54.600	16.00	0.00	8.30	0.00	8.51	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
985	54.500	16.00	0.00	8.30	0.00	8.51	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
986	54.400	16.00	0.00	8.30	0.00	8.51	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
987	54.300	16.00	0.00	8.30	0.00	8.51	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
988	54.200	16.00	0.00	8.30	0.00	8.51	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 30 PINEY CREEK - BEAUCOUP CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
989	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.51	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.47

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
989	54.20	54.10	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
990	54.10	54.00	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
991	54.00	53.90	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
992	53.90	53.80	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
993	53.80	53.70	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
994	53.70	53.60	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
995	53.60	53.50	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
996	53.50	53.40	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
997	53.40	53.30	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
998	53.30	53.20	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
999	53.20	53.10	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1000	53.10	53.00	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1001	53.00	52.90	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1002	52.90	52.80	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1003	52.80	52.70	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1004	52.70	52.60	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1005	52.60	52.50	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1006	52.50	52.40	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1007	52.40	52.30	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1008	52.30	52.20	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1009	52.20	52.10	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1010	52.10	52.00	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1011	52.00	51.90	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1012	51.90	51.80	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1013	51.80	51.70	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1014	51.70	51.60	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004

1015	51.60	51.50	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1016	51.50	51.40	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1017	51.40	51.30	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
1018	51.30	51.20	0.02800	0.00	0.00432	0.27	0.60	10.72	647.65	1072.39	6.48	0.00	0.000	0.001	0.004
TOT						8.03			19429.36	32171.78					
AVG					0.00432		0.60	10.72			6.48				
CUM						328.28									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
989	54.100	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
990	54.000	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
991	53.900	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
992	53.800	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
993	53.700	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
994	53.600	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
995	53.500	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
996	53.400	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
997	53.300	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
998	53.200	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
999	53.100	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1000	53.000	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1001	52.900	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1002	52.800	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1003	52.700	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1004	52.600	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	

1005	52.500	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1006	52.400	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1007	52.300	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1008	52.200	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1009	52.100	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1010	52.000	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1011	51.900	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1012	51.800	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1013	51.700	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1014	51.600	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1015	51.500	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1016	51.400	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1017	51.300	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1018	51.200	9.87	1.07	0.02	0.05	0.00	0.79	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
20 DEG C RATE				0.03		0.00	1.01			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			1.16		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
989	54.100	16.00	0.00	8.30	0.00	8.52	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
990	54.000	16.00	0.00	8.30	0.00	8.53	2.44	2.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
991	53.900	16.00	0.00	8.30	0.00	8.53	2.46	2.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
992	53.800	16.00	0.00	8.30	0.00	8.54	2.49	2.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
993	53.700	16.00	0.00	8.30	0.00	8.54	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
994	53.600	16.00	0.00	8.30	0.00	8.54	2.53	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
995	53.500	16.00	0.00	8.30	0.00	8.54	2.55	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
996	53.400	16.00	0.00	8.30	0.00	8.55	2.57	2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44

997	53.300	16.00	0.00	8.30	0.00	8.55	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
998	53.200	16.00	0.00	8.30	0.00	8.55	2.61	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
999	53.100	16.00	0.00	8.30	0.00	8.55	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1000	53.000	16.00	0.00	8.30	0.00	8.55	2.65	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1001	52.900	16.00	0.00	8.30	0.00	8.55	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1002	52.800	16.00	0.00	8.30	0.00	8.55	2.69	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1003	52.700	16.00	0.00	8.30	0.00	8.55	2.70	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1004	52.600	16.00	0.00	8.30	0.00	8.55	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1005	52.500	16.00	0.00	8.30	0.00	8.55	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1006	52.400	16.00	0.00	8.30	0.00	8.55	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1007	52.300	16.00	0.00	8.30	0.00	8.55	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1008	52.200	16.00	0.00	8.30	0.00	8.55	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1009	52.100	16.00	0.00	8.30	0.00	8.55	2.80	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1010	52.000	16.00	0.00	8.30	0.00	8.55	2.82	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1011	51.900	16.00	0.00	8.30	0.00	8.55	2.84	2.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1012	51.800	16.00	0.00	8.30	0.00	8.55	2.85	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1013	51.700	16.00	0.00	8.30	0.00	8.55	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1014	51.600	16.00	0.00	8.30	0.00	8.55	2.88	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1015	51.500	16.00	0.00	8.30	0.00	8.55	2.89	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1016	51.400	16.00	0.00	8.30	0.00	8.55	2.91	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1017	51.300	16.00	0.00	8.30	0.00	8.55	2.92	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
1018	51.200	16.00	0.00	8.30	0.00	8.55	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 31 BEAUCOUP CREEK - BANISTER CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1019	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.55	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.39

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1019	51.20	51.10	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1020	51.10	51.00	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1021	51.00	50.90	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1022	50.90	50.80	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004

1023	50.80	50.70	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1024	50.70	50.60	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1025	50.60	50.50	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1026	50.50	50.40	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1027	50.40	50.30	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1028	50.30	50.20	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1029	50.20	50.10	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1030	50.10	50.00	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1031	50.00	49.90	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1032	49.90	49.80	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1033	49.80	49.70	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1034	49.70	49.60	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1035	49.60	49.50	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1036	49.50	49.40	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1037	49.40	49.30	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1038	49.30	49.20	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1039	49.20	49.10	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1040	49.10	49.00	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1041	49.00	48.90	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1042	48.90	48.80	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1043	48.80	48.70	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1044	48.70	48.60	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1045	48.60	48.50	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1046	48.50	48.40	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1047	48.40	48.30	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1048	48.30	48.20	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1049	48.20	48.10	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1050	48.10	48.00	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1051	48.00	47.90	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1052	47.90	47.80	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1053	47.80	47.70	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1054	47.70	47.60	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1055	47.60	47.50	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1056	47.50	47.40	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1057	47.40	47.30	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1058	47.30	47.20	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1059	47.20	47.10	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
1060	47.10	47.00	0.02800	0.00	0.00440	0.26	0.59	10.72	636.92	1072.39	6.37	0.00	0.000	0.001	0.004
TOT						11.06			26750.71	45040.47					
AVG					0.00440		0.59	10.72			6.37				
CUM						339.34									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																			
1019	51.100	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1020	51.000	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1021	50.900	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1022	50.800	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1023	50.700	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1024	50.600	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1025	50.500	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1026	50.400	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1027	50.300	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1028	50.200	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1029	50.100	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1030	50.000	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1031	49.900	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1032	49.800	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1033	49.700	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1034	49.600	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1035	49.500	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1036	49.400	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1037	49.300	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1038	49.200	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1039	49.100	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1040	49.000	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1041	48.900	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
0.05																			
1042	48.800	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

0.05																				
1043	48.700	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1044	48.600	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1045	48.500	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1046	48.400	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1047	48.300	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1048	48.200	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1049	48.100	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1050	48.000	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1051	47.900	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1052	47.800	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1053	47.700	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1054	47.600	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1055	47.500	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1056	47.400	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1057	47.300	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1058	47.200	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1059	47.100	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
1060	47.000	9.87	1.09	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	
0.05																				
20 DEG C RATE				0.03		0.00	0.97			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.18		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

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

1019	51.100	16.00	0.00	8.30	0.00	8.56	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1020	51.000	16.00	0.00	8.30	0.00	8.57	2.98	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1021	50.900	16.00	0.00	8.30	0.00	8.57	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1022	50.800	16.00	0.00	8.30	0.00	8.58	3.03	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1023	50.700	16.00	0.00	8.30	0.00	8.58	3.05	3.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1024	50.600	16.00	0.00	8.30	0.00	8.58	3.07	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1025	50.500	16.00	0.00	8.30	0.00	8.58	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1026	50.400	16.00	0.00	8.30	0.00	8.58	3.11	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1027	50.300	16.00	0.00	8.30	0.00	8.58	3.14	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1028	50.200	16.00	0.00	8.30	0.00	8.59	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1029	50.100	16.00	0.00	8.30	0.00	8.59	3.18	3.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1030	50.000	16.00	0.00	8.30	0.00	8.59	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1031	49.900	16.00	0.00	8.30	0.00	8.58	3.21	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1032	49.800	16.00	0.00	8.30	0.00	8.58	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1033	49.700	16.00	0.00	8.30	0.00	8.58	3.25	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1034	49.600	16.00	0.00	8.30	0.00	8.58	3.27	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1035	49.500	16.00	0.00	8.30	0.00	8.58	3.29	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1036	49.400	16.00	0.00	8.30	0.00	8.58	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1037	49.300	16.00	0.00	8.30	0.00	8.58	3.32	3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1038	49.200	16.00	0.00	8.30	0.00	8.58	3.34	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1039	49.100	16.00	0.00	8.30	0.00	8.58	3.35	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1040	49.000	16.00	0.00	8.30	0.00	8.58	3.37	3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1041	48.900	16.00	0.00	8.30	0.00	8.58	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1042	48.800	16.00	0.00	8.30	0.00	8.58	3.40	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1043	48.700	16.00	0.00	8.30	0.00	8.58	3.42	3.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1044	48.600	16.00	0.00	8.30	0.00E+00	8.58	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1045	48.500	16.00	0.00	8.30	0.00E+00	8.58	3.45	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1046	48.400	16.00	0.00	8.30	0.00E+00	8.58	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1047	48.300	16.00	0.00	8.30	0.00	8.58	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1048	48.200	16.00	0.00	8.30	0.00	8.58	3.49	3.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1049	48.100	16.00	0.00	8.30	0.00	8.58	3.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1050	48.000	16.00	0.00	8.30	0.00	8.58	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1051	47.900	16.00	0.00	8.30	0.00	8.58	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1052	47.800	16.00	0.00	8.30	0.00	8.57	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1053	47.700	16.00	0.00	8.30	0.00	8.57	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1054	47.600	16.00	0.00	8.30	0.00	8.57	3.57	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1055	47.500	16.00	0.00	8.30	0.00	8.57	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1056	47.400	16.00	0.00	8.30	0.00	8.57	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1057	47.300	16.00	0.00	8.30	0.00	8.57	3.61	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1058	47.200	16.00	0.00	8.30	0.00	8.57	3.62	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1059	47.100	16.00	0.00	8.30	0.00	8.57	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1060	47.000	16.00	0.00	8.30	0.00	8.57	3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 32 BANISTER CREEK - BRUSHY CREEK2 CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1061	UPR RCH	0.02800	16.00	0.00	8.30	0.00	8.57	3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.47
EACH	INCR	0.0005	16.00	0.00	6.00	4.20	8.90	3.32	3.32	0.00	0.00	0.00	0.00		0.00	0.13

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1061	47.00	46.90	0.02847	0.00	0.00462	0.25	0.57	10.72	615.65	1072.41	6.16	0.00	0.000	0.001	0.005
1062	46.90	46.80	0.02894	0.00	0.00470	0.25	0.57	10.72	615.83	1072.42	6.16	0.00	0.000	0.001	0.005
1063	46.80	46.70	0.02941	0.00	0.00477	0.24	0.57	10.72	616.01	1072.44	6.16	0.00	0.000	0.002	0.005
1064	46.70	46.60	0.02988	0.00	0.00485	0.24	0.57	10.72	616.19	1072.46	6.16	0.00	0.000	0.002	0.005
1065	46.60	46.50	0.03035	0.00	0.00492	0.24	0.57	10.72	616.36	1072.47	6.16	0.00	0.000	0.002	0.005
1066	46.50	46.40	0.03082	0.00	0.00500	0.23	0.57	10.72	616.53	1072.49	6.17	0.00	0.000	0.002	0.005
1067	46.40	46.30	0.03129	0.00	0.00507	0.23	0.58	10.73	616.70	1072.50	6.17	0.00	0.000	0.002	0.005
1068	46.30	46.20	0.03176	0.00	0.00515	0.22	0.58	10.73	616.87	1072.52	6.17	0.00	0.000	0.002	0.005
1069	46.20	46.10	0.03223	0.00	0.00522	0.22	0.58	10.73	617.04	1072.53	6.17	0.00	0.000	0.002	0.005
1070	46.10	46.00	0.03270	0.00	0.00530	0.22	0.58	10.73	617.20	1072.55	6.17	0.00	0.000	0.002	0.005
1071	46.00	45.90	0.03317	0.00	0.00537	0.22	0.58	10.73	617.37	1072.56	6.17	0.00	0.000	0.002	0.005
1072	45.90	45.80	0.03364	0.00	0.00545	0.21	0.58	10.73	617.53	1072.57	6.18	0.00	0.000	0.002	0.005
1073	45.80	45.70	0.03411	0.00	0.00552	0.21	0.58	10.73	617.69	1072.59	6.18	0.00	0.000	0.002	0.006
1074	45.70	45.60	0.03458	0.00	0.00560	0.21	0.58	10.73	617.86	1072.60	6.18	0.00	0.000	0.002	0.006
1075	45.60	45.50	0.03505	0.00	0.00567	0.20	0.58	10.73	618.01	1072.62	6.18	0.00	0.000	0.002	0.006
1076	45.50	45.40	0.03552	0.00	0.00575	0.20	0.58	10.73	618.17	1072.63	6.18	0.00	0.000	0.002	0.006
1077	45.40	45.30	0.03599	0.00	0.00582	0.20	0.58	10.73	618.33	1072.65	6.18	0.00	0.000	0.002	0.006
1078	45.30	45.20	0.03646	0.00	0.00590	0.20	0.58	10.73	618.49	1072.66	6.18	0.00	0.000	0.002	0.006
1079	45.20	45.10	0.03693	0.00	0.00597	0.19	0.58	10.73	618.64	1072.67	6.19	0.00	0.000	0.002	0.006
1080	45.10	45.00	0.03740	0.00	0.00604	0.19	0.58	10.73	618.79	1072.69	6.19	0.00	0.000	0.002	0.006
1081	45.00	44.90	0.03787	0.00	0.00612	0.19	0.58	10.73	618.94	1072.70	6.19	0.00	0.000	0.002	0.006
1082	44.90	44.80	0.03834	0.00	0.00619	0.19	0.58	10.73	619.10	1072.71	6.19	0.00	0.000	0.002	0.006
1083	44.80	44.70	0.03881	0.00	0.00627	0.18	0.58	10.73	619.25	1072.73	6.19	0.00	0.000	0.002	0.006
1084	44.70	44.60	0.03928	0.00	0.00634	0.18	0.58	10.73	619.39	1072.74	6.19	0.00	0.000	0.002	0.006
1085	44.60	44.50	0.03975	0.00	0.00642	0.18	0.58	10.73	619.54	1072.75	6.20	0.00	0.000	0.002	0.006
1086	44.50	44.40	0.04022	0.00	0.00649	0.18	0.58	10.73	619.69	1072.77	6.20	0.00	0.000	0.002	0.006
1087	44.40	44.30	0.04069	0.00	0.00656	0.18	0.58	10.73	619.83	1072.78	6.20	0.00	0.000	0.002	0.007
1088	44.30	44.20	0.04116	0.00	0.00664	0.17	0.58	10.73	619.98	1072.79	6.20	0.00	0.000	0.002	0.007
1089	44.20	44.10	0.04163	0.00	0.00671	0.17	0.58	10.73	620.12	1072.80	6.20	0.00	0.000	0.002	0.007
1090	44.10	44.00	0.04210	0.00	0.00679	0.17	0.58	10.73	620.27	1072.82	6.20	0.00	0.000	0.002	0.007
1091	44.00	43.90	0.04257	0.00	0.00686	0.17	0.58	10.73	620.41	1072.83	6.20	0.00	0.000	0.002	0.007
1092	43.90	43.80	0.04304	0.00	0.00694	0.17	0.58	10.73	620.55	1072.84	6.21	0.00	0.000	0.002	0.007
1093	43.80	43.70	0.04351	0.00	0.00701	0.17	0.58	10.73	620.69	1072.85	6.21	0.00	0.000	0.002	0.007

1094	43.70	43.60	0.04398	0.00	0.00708	0.16	0.58	10.73	620.83	1072.87	6.21	0.00	0.000	0.002	0.007
1095	43.60	43.50	0.04445	0.00	0.00716	0.16	0.58	10.73	620.96	1072.88	6.21	0.00	0.000	0.002	0.007
1096	43.50	43.40	0.04492	0.00	0.00723	0.16	0.58	10.73	621.10	1072.89	6.21	0.00	0.000	0.002	0.007
1097	43.40	43.30	0.04539	0.00	0.00731	0.16	0.58	10.73	621.24	1072.90	6.21	0.00	0.000	0.002	0.007
1098	43.30	43.20	0.04586	0.00	0.00738	0.16	0.58	10.73	621.37	1072.91	6.21	0.00	0.000	0.002	0.007
1099	43.20	43.10	0.04633	0.00	0.00745	0.16	0.58	10.73	621.51	1072.93	6.22	0.00	0.000	0.002	0.007
1100	43.10	43.00	0.04680	0.00	0.00753	0.15	0.58	10.73	621.64	1072.94	6.22	0.00	0.000	0.002	0.008
1101	43.00	42.90	0.04727	0.00	0.00760	0.15	0.58	10.73	621.78	1072.95	6.22	0.00	0.000	0.002	0.008
1102	42.90	42.80	0.04774	0.00	0.00768	0.15	0.58	10.73	621.91	1072.96	6.22	0.00	0.000	0.002	0.008
1103	42.80	42.70	0.04821	0.00	0.00775	0.15	0.58	10.73	622.04	1072.97	6.22	0.00	0.000	0.002	0.008
1104	42.70	42.60	0.04868	0.00	0.00782	0.15	0.58	10.73	622.17	1072.98	6.22	0.00	0.000	0.002	0.008
1105	42.60	42.50	0.04915	0.00	0.00790	0.15	0.58	10.73	622.30	1073.00	6.22	0.00	0.000	0.003	0.008
1106	42.50	42.40	0.04962	0.00	0.00797	0.15	0.58	10.73	622.43	1073.01	6.22	0.00	0.000	0.003	0.008
1107	42.40	42.30	0.05009	0.00	0.00805	0.14	0.58	10.73	622.56	1073.02	6.23	0.00	0.000	0.003	0.008
1108	42.30	42.20	0.05056	0.00	0.00812	0.14	0.58	10.73	622.69	1073.03	6.23	0.00	0.000	0.003	0.008
1109	42.20	42.10	0.05103	0.00	0.00819	0.14	0.58	10.73	622.81	1073.04	6.23	0.00	0.000	0.003	0.008
1110	42.10	42.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
TOT						9.23			30975.30	53637.46					
AVG					0.00627		0.58	10.73			6.20				
CUM						348.57									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1061	46.900	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1062	46.800	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1063	46.700	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1064	46.600	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1065	46.500	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1066	46.400	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1067	46.300	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1068	46.200	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1069	46.100	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05

1070	46.000	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1071	45.900	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1072	45.800	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1073	45.700	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1074	45.600	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1075	45.500	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1076	45.400	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1077	45.300	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1078	45.200	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1079	45.100	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1080	45.000	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1081	44.900	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1082	44.800	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1083	44.700	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1084	44.600	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1085	44.500	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1086	44.400	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1087	44.300	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1088	44.200	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1089	44.100	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1090	44.000	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1091	43.900	9.87	1.12	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1092	43.800	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1093	43.700	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1094	43.600	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05

1095	43.500	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1096	43.400	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1097	43.300	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1098	43.200	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1099	43.100	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1100	43.000	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1101	42.900	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1102	42.800	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1103	42.700	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1104	42.600	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1105	42.500	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1106	42.400	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1107	42.300	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1108	42.200	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1109	42.100	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
1110	42.000	9.87	1.11	0.02	0.05	0.00	0.75	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
20 DEG C RATE				0.03		0.00	0.96			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.21		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1061	46.900	16.00	0.00	8.26	0.07	8.58	3.65	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1062	46.800	16.00	0.00	8.23	0.14	8.58	3.66	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1063	46.700	16.00	0.00	8.19	0.20	8.59	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1064	46.600	16.00	0.00	8.16	0.26	8.59	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1065	46.500	16.00	0.00	8.12	0.33	8.59	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48

1066	46.400	16.00	0.00	8.09	0.38	8.60	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1067	46.300	16.00	0.00	8.06	0.44	8.60	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1068	46.200	16.00	0.00	8.03	0.50	8.60	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1069	46.100	16.00	0.00	8.00	0.55	8.60	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1070	46.000	16.00	0.00	7.97	0.60	8.60	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1071	45.900	16.00	0.00	7.94	0.65	8.60	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1072	45.800	16.00	0.00	7.91	0.70	8.60	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1073	45.700	16.00	0.00	7.89	0.75	8.60	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1074	45.600	16.00	0.00	7.86	0.80	8.60	3.76	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1075	45.500	16.00	0.00	7.84	0.84	8.60	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1076	45.400	16.00	0.00	7.81	0.89	8.60	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1077	45.300	16.00	0.00	7.79	0.93	8.60	3.78	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1078	45.200	16.00	0.00	7.77	0.97	8.60	3.78	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1079	45.100	16.00	0.00	7.74	1.02	8.60	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1080	45.000	16.00	0.00	7.72	1.06	8.60	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1081	44.900	16.00	0.00	7.70	1.09	8.60	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1082	44.800	16.00	0.00	7.68	1.13	8.60	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1083	44.700	16.00	0.00	7.66	1.17	8.60	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1084	44.600	16.00	0.00	7.64	1.21	8.60	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1085	44.500	16.00	0.00	7.62	1.24	8.60	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1086	44.400	16.00	0.00	7.60	1.28	8.60	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1087	44.300	16.00	0.00	7.58	1.31	8.60	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1088	44.200	16.00	0.00	7.56	1.34	8.60	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1089	44.100	16.00	0.00	7.55	1.38	8.60	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1090	44.000	16.00	0.00	7.53	1.41	8.60	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1091	43.900	16.00	0.00	7.51	1.44	8.60	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1092	43.800	16.00	0.00	7.50	1.47	8.60	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1093	43.700	16.00	0.00	7.48	1.50	8.60	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1094	43.600	16.00	0.00	7.46	1.53	8.60	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1095	43.500	16.00	0.00	7.45	1.55	8.60	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1096	43.400	16.00	0.00	7.43	1.58	8.60	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1097	43.300	16.00	0.00	7.42	1.61	8.60	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1098	43.200	16.00	0.00	7.40	1.64	8.60	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1099	43.100	16.00	0.00	7.39	1.66	8.60	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1100	43.000	16.00	0.00	7.38	1.69	8.60	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1101	42.900	16.00	0.00	7.36	1.71	8.60	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1102	42.800	16.00	0.00	7.35	1.74	8.60	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1103	42.700	16.00	0.00	7.34	1.76	8.60	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1104	42.600	16.00	0.00	7.32	1.78	8.60	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1105	42.500	16.00	0.00	7.31	1.81	8.60	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1106	42.400	16.00	0.00	7.30	1.83	8.60	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1107	42.300	16.00	0.00	7.29	1.85	8.60	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1108	42.200	16.00	0.00	7.27	1.87	8.60	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1109	42.100	16.00	0.00	7.26	1.90	8.60	3.88	3.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1110	42.000	16.00	0.00	7.25	1.92	8.60	3.88	3.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 33 BRUSHY CREEK2 - MCCLELLEN BR CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1111	UPR RCH	0.05150	16.00	0.00	7.25	1.92	8.60	3.88	3.88	0.00	0.00	0.00	0.00	0.00	0.00	0.48

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1111	42.00	41.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1112	41.90	41.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1113	41.80	41.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1114	41.70	41.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1115	41.60	41.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1116	41.50	41.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1117	41.40	41.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1118	41.30	41.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1119	41.20	41.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1120	41.10	41.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1121	41.00	40.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1122	40.90	40.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1123	40.80	40.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1124	40.70	40.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1125	40.60	40.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1126	40.50	40.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1127	40.40	40.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1128	40.30	40.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1129	40.20	40.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1130	40.10	40.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1131	40.00	39.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1132	39.90	39.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1133	39.80	39.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1134	39.70	39.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1135	39.60	39.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1136	39.50	39.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1137	39.40	39.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1138	39.30	39.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1139	39.20	39.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1140	39.10	39.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1141	39.00	38.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008

1142	38.90	38.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1143	38.80	38.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1144	38.70	38.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1145	38.60	38.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1146	38.50	38.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1147	38.40	38.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1148	38.30	38.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1149	38.20	38.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1150	38.10	38.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1151	38.00	37.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1152	37.90	37.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1153	37.80	37.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1154	37.70	37.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1155	37.60	37.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1156	37.50	37.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1157	37.40	37.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1158	37.30	37.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1159	37.20	37.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1160	37.10	37.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1161	37.00	36.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1162	36.90	36.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1163	36.80	36.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1164	36.70	36.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1165	36.60	36.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1166	36.50	36.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1167	36.40	36.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1168	36.30	36.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1169	36.20	36.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1170	36.10	36.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1171	36.00	35.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1172	35.90	35.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1173	35.80	35.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1174	35.70	35.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1175	35.60	35.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1176	35.50	35.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1177	35.40	35.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1178	35.30	35.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1179	35.20	35.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1180	35.10	35.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1181	35.00	34.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1182	34.90	34.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1183	34.80	34.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1184	34.70	34.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1185	34.60	34.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1186	34.50	34.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1187	34.40	34.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1188	34.30	34.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1189	34.20	34.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1190	34.10	34.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1191	34.00	33.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008

1192	33.90	33.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1193	33.80	33.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1194	33.70	33.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1195	33.60	33.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
TOT						11.90			52949.79	91209.59					
AVG					0.00827		0.58	10.73			6.23				
CUM						360.47									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1111	41.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1112	41.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1113	41.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1114	41.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1115	41.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1116	41.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1117	41.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1118	41.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1119	41.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1120	41.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1121	40.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1122	40.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1123	40.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1124	40.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1125	40.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1126	40.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

1127	40.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1128	40.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1129	40.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1130	40.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1131	39.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1132	39.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1133	39.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1134	39.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1135	39.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1136	39.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1137	39.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1138	39.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1139	39.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1140	39.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1141	38.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1142	38.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1143	38.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1144	38.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1145	38.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1146	38.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1147	38.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1148	38.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1149	38.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1150	38.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1151	37.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

1152	37.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1153	37.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1154	37.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1155	37.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1156	37.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1157	37.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1158	37.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1159	37.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1160	37.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1161	36.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1162	36.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1163	36.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1164	36.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1165	36.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1166	36.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1167	36.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1168	36.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1169	36.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1170	36.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1171	35.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1172	35.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1173	35.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1174	35.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1175	35.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
1176	35.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

0.05																				
1177	35.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1178	35.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1179	35.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1180	35.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1181	34.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1182	34.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1183	34.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1184	34.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1185	34.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1186	34.400	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1187	34.300	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1188	34.200	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1189	34.100	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1190	34.000	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1191	33.900	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1192	33.800	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1193	33.700	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1194	33.600	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1195	33.500	9.87	1.11	0.02	0.05	0.00	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
20 DEG C RATE				0.03		0.00	1.05			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.21		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM	ENDING	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	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	µg/L	**	#/100mL	*
1111	41.900	16.00	0.00	7.25	1.92	8.58	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1112	41.800	16.00	0.00	7.25	1.92	8.57	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1113	41.700	16.00	0.00	7.25	1.92	8.56	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1114	41.600	16.00	0.00	7.25	1.92	8.55	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1115	41.500	16.00	0.00	7.25	1.92	8.55	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1116	41.400	16.00	0.00	7.25	1.92	8.54	3.84	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1117	41.300	16.00	0.00	7.25	1.92	8.53	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1118	41.200	16.00	0.00	7.25	1.92	8.53	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1119	41.100	16.00	0.00	7.25	1.92	8.53	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1120	41.000	16.00	0.00	7.25	1.92	8.52	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1121	40.900	16.00	0.00	7.25	1.92	8.52	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1122	40.800	16.00	0.00	7.25	1.92	8.52	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1123	40.700	16.00	0.00	7.25	1.92	8.51	3.80	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1124	40.600	16.00	0.00	7.25	1.92	8.51	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1125	40.500	16.00	0.00	7.25	1.92	8.51	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1126	40.400	16.00	0.00	7.25	1.92	8.51	3.78	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1127	40.300	16.00	0.00	7.25	1.92	8.51	3.78	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1128	40.200	16.00	0.00	7.25	1.92	8.51	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1129	40.100	16.00	0.00	7.25	1.92	8.51	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1130	40.000	16.00	0.00	7.25	1.92	8.51	3.76	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1131	39.900	16.00	0.00	7.25	1.92	8.50	3.76	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1132	39.800	16.00	0.00	7.25	1.92	8.50	3.75	3.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1133	39.700	16.00	0.00	7.25	1.92	8.50	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1134	39.600	16.00	0.00	7.25	1.92	8.50	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1135	39.500	16.00	0.00	7.25	1.92	8.50	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1136	39.400	16.00	0.00	7.25	1.92	8.50	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1137	39.300	16.00	0.00	7.25	1.92	8.50	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1138	39.200	16.00	0.00	7.25	1.92	8.50	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1139	39.100	16.00	0.00	7.25	1.92	8.50	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1140	39.000	16.00	0.00	7.25	1.92	8.50	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1141	38.900	16.00	0.00	7.25	1.92	8.50	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1142	38.800	16.00	0.00	7.25	1.92	8.50	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1143	38.700	16.00	0.00	7.25	1.92	8.50	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1144	38.600	16.00	0.00	7.25	1.92	8.50	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1145	38.500	16.00	0.00	7.25	1.92	8.50	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1146	38.400	16.00	0.00	7.25	1.92	8.50	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1147	38.300	16.00	0.00	7.25	1.92	8.50	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1148	38.200	16.00	0.00	7.25	1.92	8.50	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1149	38.100	16.00	0.00	7.25	1.92	8.50	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1150	38.000	16.00	0.00	7.25	1.92	8.50	3.66	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1151	37.900	16.00	0.00	7.25	1.92	8.50	3.66	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1152	37.800	16.00	0.00	7.25	1.92	8.50	3.65	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1153	37.700	16.00	0.00	7.25	1.92	8.50	3.65	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1154	37.600	16.00	0.00	7.25	1.92	8.50	3.65	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1155	37.500	16.00	0.00	7.25	1.92	8.50	3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1156	37.400	16.00	0.00	7.25	1.92	8.50	3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1157	37.300	16.00	0.00	7.25	1.92	8.50	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1158	37.200	16.00	0.00	7.25	1.92	8.50	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45

1159	37.100	16.00	0.00	7.25	1.92	8.50	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1160	37.000	16.00	0.00	7.25	1.92	8.50	3.62	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1161	36.900	16.00	0.00	7.25	1.92	8.50	3.62	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1162	36.800	16.00	0.00	7.25	1.92	8.50	3.61	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1163	36.700	16.00	0.00	7.25	1.92	8.50	3.61	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1164	36.600	16.00	0.00	7.25	1.92	8.50	3.61	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1165	36.500	16.00	0.00	7.25	1.92	8.50	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1166	36.400	16.00	0.00	7.25	1.92	8.50	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1167	36.300	16.00	0.00	7.25	1.92	8.50	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1168	36.200	16.00	0.00	7.25	1.92	8.50	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1169	36.100	16.00	0.00	7.25	1.92	8.50	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1170	36.000	16.00	0.00	7.25	1.92	8.50	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1171	35.900	16.00	0.00	7.25	1.92	8.50	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1172	35.800	16.00	0.00	7.25	1.92	8.50	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
1173	35.700	16.00	0.00	7.25	1.92	8.50	3.57	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1174	35.600	16.00	0.00	7.25	1.92	8.51	3.57	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1175	35.500	16.00	0.00	7.25	1.92	8.51	3.57	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1176	35.400	16.00	0.00	7.25	1.92	8.51	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1177	35.300	16.00	0.00	7.25	1.92	8.51	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1178	35.200	16.00	0.00	7.25	1.92	8.51	3.56	3.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1179	35.100	16.00	0.00	7.25	1.92	8.51	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1180	35.000	16.00	0.00	7.25	1.92	8.51	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1181	34.900	16.00	0.00	7.25	1.92	8.51	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1182	34.800	16.00	0.00	7.25	1.92	8.51	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1183	34.700	16.00	0.00	7.25	1.92	8.51	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1184	34.600	16.00	0.00	7.25	1.92	8.51	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1185	34.500	16.00	0.00	7.25	1.92	8.51	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1186	34.400	16.00	0.00	7.25	1.92	8.51	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1187	34.300	16.00	0.00	7.25	1.92	8.51	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1188	34.200	16.00	0.00	7.25	1.92	8.51	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1189	34.100	16.00	0.00	7.25	1.92	8.51	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1190	34.000	16.00	0.00	7.25	1.92	8.51	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1191	33.900	16.00	0.00	7.25	1.92	8.51	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1192	33.800	16.00	0.00	7.25	1.92	8.51	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1193	33.700	16.00	0.00	7.25	1.92	8.51	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1194	33.600	16.00	0.00	7.25	1.92	8.51	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
1195	33.500	16.00	0.00	7.25	1.92	8.51	3.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 34 MCCLELLEN BR - FLAT CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

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

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
1196	UPR RCH	0.05150	16.00	0.00	7.25	1.92	8.51	3.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.44

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1196	33.50	33.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1197	33.40	33.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1198	33.30	33.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1199	33.20	33.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1200	33.10	33.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1201	33.00	32.90	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1202	32.90	32.80	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1203	32.80	32.70	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1204	32.70	32.60	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1205	32.60	32.50	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1206	32.50	32.40	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1207	32.40	32.30	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1208	32.30	32.20	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1209	32.20	32.10	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
1210	32.10	32.00	0.05150	0.00	0.00827	0.14	0.58	10.73	622.94	1073.05	6.23	0.00	0.000	0.003	0.008
TOT						2.10			9344.09	16095.79					
AVG					0.00827		0.58	10.73			6.23				
CUM						362.57									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1196	33.400	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1197	33.300	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1198	33.200	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1199	33.100	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1200	33.000	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	

0.05																				
1201	32.900	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1202	32.800	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1203	32.700	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1204	32.600	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1205	32.500	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1206	32.400	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1207	32.300	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1208	32.200	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1209	32.100	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
1210	32.000	9.87	1.11	0.02	0.05	0.00	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
0.05																				
20 DEG C RATE				0.03		0.00	0.95			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.21		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1196	33.400	16.00	0.00	7.25	1.92	8.52	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1197	33.300	16.00	0.00	7.25	1.92	8.54	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
1198	33.200	16.00	0.00	7.25	1.92	8.55	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1199	33.100	16.00	0.00	7.25	1.92	8.56	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
1200	33.000	16.00	0.00	7.25	1.92	8.57	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1201	32.900	16.00	0.00	7.25	1.92	8.58	3.65	3.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
1202	32.800	16.00	0.00	7.25	1.92	8.58	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1203	32.700	16.00	0.00	7.25	1.92	8.59	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
1204	32.600	16.00	0.00	7.25	1.92	8.59	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
1205	32.500	16.00	0.00	7.25	1.92	8.60	3.74	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
1206	32.400	16.00	0.00	7.25	1.92	8.60	3.77	3.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
1207	32.300	16.00	0.00	7.25	1.92	8.60	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
1208	32.200	16.00	0.00	7.25	1.92	8.61	3.81	3.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
1209	32.100	16.00	0.00	7.25	1.92	8.61	3.83	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
1210	32.000	16.00	0.00	7.24	1.91	8.61	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 35 FLAT CREEK - SANDY CREEK CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1211	UPR RCH	0.05150	16.00	0.00	7.24	1.91	8.61	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.36
1211	WSTLD	0.02800	16.00	0.00	0.00	0.00	8.90	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.13

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1211	32.00	31.90	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1212	31.90	31.80	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1213	31.80	31.70	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1214	31.70	31.60	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1215	31.60	31.50	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1216	31.50	31.40	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1217	31.40	31.30	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1218	31.30	31.20	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1219	31.20	31.10	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1220	31.10	31.00	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1221	31.00	30.90	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1222	30.90	30.80	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1223	30.80	30.70	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1224	30.70	30.60	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1225	30.60	30.50	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1226	30.50	30.40	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1227	30.40	30.30	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1228	30.30	30.20	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1229	30.20	30.10	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1230	30.10	30.00	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1231	30.00	29.90	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1232	29.90	29.80	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1233	29.80	29.70	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
TOT						2.11			14478.32	24693.54					
AVG					0.01263		0.59	10.74			6.29				

CUM 364.68

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
1211	31.900	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1212	31.800	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1213	31.700	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1214	31.600	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1215	31.500	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1216	31.400	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1217	31.300	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1218	31.200	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1219	31.100	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1220	31.000	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1221	30.900	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1222	30.800	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1223	30.700	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1224	30.600	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1225	30.500	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1226	30.400	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1227	30.300	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1228	30.200	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1229	30.100	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05

1230	30.000	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1231	29.900	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1232	29.800	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
1233	29.700	9.87	1.10	0.02	0.05	0.00	0.73	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05
20 DEG C RATE				0.03		0.00	0.94			0.00		0.00	0.00	0.00	0.00			0.00	0.07	
AVG 20 DEG C RATE			1.19		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1211	31.900	16.00	0.00	4.70	1.24	8.71	3.25	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
1212	31.800	16.00	0.00	4.70	1.24	8.70	3.26	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
1213	31.700	16.00	0.00	4.70	1.24	8.70	3.28	3.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
1214	31.600	16.00	0.00	4.70	1.24	8.69	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
1215	31.500	16.00	0.00	4.70	1.24	8.69	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
1216	31.400	16.00	0.00	4.70	1.24	8.68	3.33	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
1217	31.300	16.00	0.00	4.70	1.24	8.68	3.35	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
1218	31.200	16.00	0.00	4.70	1.24	8.68	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
1219	31.100	16.00	0.00	4.70	1.24	8.67	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
1220	31.000	16.00	0.00	4.70	1.24	8.67	3.40	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
1221	30.900	16.00	0.00	4.70	1.24	8.67	3.41	3.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
1222	30.800	16.00	0.00	4.70	1.24	8.67	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
1223	30.700	16.00	0.00	4.70	1.24	8.66	3.44	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
1224	30.600	16.00	0.00	4.70	1.24	8.66	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
1225	30.500	16.00	0.00	4.70	1.24	8.66	3.47	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
1226	30.400	16.00	0.00	4.70	1.24	8.66	3.49	3.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
1227	30.300	16.00	0.00	4.70	1.24	8.66	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
1228	30.200	16.00	0.00	4.70	1.24	8.66	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
1229	30.100	16.00	0.00	4.70	1.24	8.65	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
1230	30.000	16.00	0.00	4.70	1.24	8.65	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
1231	29.900	16.00	0.00	4.70	1.24	8.65	3.57	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
1232	29.800	16.00	0.00	4.70	1.24	8.65	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
1233	29.700	16.00	0.00	4.70	1.24	8.65	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 36 SANDY CREEK - HWY 124 CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1234	UPR RCH	0.07950	16.00	0.00	4.70	1.24	8.65	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.36

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1234	29.70	29.60	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1235	29.60	29.50	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1236	29.50	29.40	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1237	29.40	29.30	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1238	29.30	29.20	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1239	29.20	29.10	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1240	29.10	29.00	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1241	29.00	28.90	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1242	28.90	28.80	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1243	28.80	28.70	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
1244	28.70	28.60	0.07950	35.22	0.01263	0.09	0.59	10.74	629.49	1073.63	6.29	0.00	0.000	0.004	0.013
TOT						1.01			6924.41	11809.95					
AVG					0.01263		0.59	10.74			6.29				
CUM						365.69									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
1234	29.600	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1235	29.500	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1236	29.400	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05

1237	29.300	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1238	29.200	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1239	29.100	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1240	29.000	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1241	28.900	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1242	28.800	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1243	28.700	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1244	28.600	9.87	1.10	0.02	0.05	0.00	0.91	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
20 DEG C RATE				0.03		0.00	1.17			0.00		0.00	0.00	0.00	0.00			0.00	0.09	
AVG 20 DEG C RATE			1.19		0.05						0.00									0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1234	29.600	16.00	0.00	4.70	1.24	8.62	3.60	3.60	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.36
1235	29.500	16.00	0.00	4.70	1.24	8.60	3.60	3.60	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.35
1236	29.400	16.00	0.00	4.70	1.24	8.58	3.61	3.61	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.35
1237	29.300	16.00	0.00	4.70	1.24	8.56	3.61	3.61	0.00	0.00	0.01	0.01	0.03	0.00	0.00	0.00	0.34
1238	29.200	16.00	0.00	4.70	1.24	8.54	3.61	3.61	0.00	0.00	0.01	0.01	0.04	0.00	0.00	0.00	0.34
1239	29.100	16.00	0.00	4.70	1.24	8.52	3.61	3.61	0.00	0.00	0.02	0.02	0.05	0.00	0.00	0.00	0.34
1240	29.000	16.00	0.00	4.70	1.24	8.51	3.62	3.62	0.00	0.00	0.02	0.02	0.06	0.00	0.00	0.00	0.33
1241	28.900	16.00	0.00	4.70	1.24	8.49	3.62	3.62	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.33
1242	28.800	16.00	0.00	4.70	1.24	8.48	3.62	3.62	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.33
1243	28.700	16.00	0.00	4.70	1.24	8.47	3.63	3.63	0.00	0.00	0.03	0.03	0.08	0.00	0.00	0.00	0.32
1244	28.600	16.00	0.00	4.70	1.24	8.46	3.63	3.63	0.00	0.00	0.03	0.03	0.09	0.00	0.00	0.00	0.32

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM =

** g/m³

STREAM SUMMARY
HEADWATER

CASTOR CREEK WATERSHED MODEL
CASTOR CREEK WINTER NO MAN-MADE AND 40% REDUCTION IN BACKGROUND

TRAVEL TIME = 365.69 DAYS

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MAXIMUM EFFLUENT =          35.22 PERCENT

FLOW             =   0.02800 TO    0.07950 m³/s
DISPERSION       =   0.0013  TO    0.0041  m²/s
VELOCITY         =   0.00282 TO    0.01263 m/s
DEPTH            =   0.55    TO    0.88    m
WIDTH            =  10.72    TO   11.92    m

BOD DECAY        =    0.02   TO    0.06    per day
NH3 DECAY        =    0.00   TO    0.00    per day
SDMNT OXYGEN DMND=    0.73   TO    0.91    g/m²/d
NH3 SOURCE       =    0.00   TO    0.00    g/m²/d
REAERATION       =    0.73   TO    1.16    per day
BOD SETTLING     =    0.05   TO    0.05    per day
ORGN DECAY       =    0.00   TO    0.00    per day
ORGN SETTLING    =    0.00   TO    0.00    per day

TEMPERATURE      =   16.00   TO   16.00    deg C
DISSOLVED OXYGEN =    8.43   TO    8.79    mg/L


    .....EXECUTION COMPLETED
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APPENDIX B5 - Current winter projection model justifications

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
2	McDowell Branch - Horse Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
3	Horse Creek - Guice Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
4	Guice Branch - Curr Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
5	Curr Creek - Poplar Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
6	Poplar Branch - White Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
7	White Branch - Colston Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
8	White Branch - Colston Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
9	Fourmile Creek - Pool Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
10	Pool Branch - Ginney Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
11	Ginney Branch - Edwards Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
12	Edwards Branch - Little Flat	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
13	Little Flat - Glade Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
14	Glade Creek - Cub Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
15	Cub Creek - Cow Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
16	Cow Creek - Bear Creek Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
17	Bear Creek Branch - Biles Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
18	Biles Branch - Hurricane Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
19	Hurricane Creek - Indian Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
20	Indian Branch - Moody Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
21	Moody Creek - Bull Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
22	Bull Creek - Sweetwater Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
23	Sweetwater Creek - Brushy Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
24	Brushy Creek - White Oak Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
25	White Oak Creek - Bills Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
26	Bills Creek - Lost Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
27	Lost Creek - Messer Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
28	Messer Creek - Richland Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
29	Richland Creek - Piney Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
30	Piney Creek - Beaucoup Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
31	Beaucoup Creek - Banister Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
32	Banister Creek - Brushy Creek2	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
33	Brushy Creek 2 - McClellen Branch	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
34	McClellen Branch - Flat Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
35	Flat Creek - Sandy Creek	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
36	Sandy Creek - Hwy 124	Temperature	°Celcius	16	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 3, Program Constants			
Description of Constant	**Value**	**Result**	**Source/Justification**
Maximum iteration limit	1000.0		Standard
KL Minimum	0.7	Minimum KL to be used.	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
Inhibition control value	3.0	Inhibits all decay rate except SOD for low DO.	Standard LA modeling procedure.
Ocean exchange ratio	0.0	Set 0% tidal exchange at lower boundary.	This was done to allow dispersion in the model but not to force the bottom element through the boundary conditions.
Hydraulic calculation method	2.0	Sets the Hydraulic calc. to width and depth coef.	The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions, making the Leopold relationships inaccurate. This method allows the model to predict a more accurate depth and width during low flow conditions.
Settled rate units.	2.0	Sets the settled rate to a velocity (m/day).	By making the settling rate a velocity the rate becomes dependent upon the depth.
K2 Max	25.0	Max K2 at 20 C allowed for any computational element	EPA Policy in the absence of a measured value.
NCM Oxygen Uptake	1.0	Oxygen Uptake Rate per Unit of NBOD decay.	Standard LA modeling procedure

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 27, Lower Boundary Conditions					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
36	Sandy Creek - Hwy 124	Temperature	^{o}Celcius	16	Winter Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	10.4	Site 1
		Conservative Matl. II		5	Site 1
		Dissolved O_2	mg/l	8.9	Winter Season 90 percent DO Sat
		BOD	mg/l	9.58	Site 1
		Org.- N	mg/l	0	
		NH_3-N	mg/l	0	
		NO_{2+3}-N	mg/l	0.03	
		Chlorophyll a	ug/l	0	
		Nonconservative	mg/l	0.62	Site 1

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 26, Wastewater Data for DO, BOD, and Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		NCM	mg/l	0.132	60% Background Reference Stream Data

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 25, Wastewater Data for DO, BOD, and Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Dissolved O_2	mg/l	8.9	90 percent of DO Sat at Winter 90th Percentile Temperature
		CBOD	mg/l	3.32	60% Background Reference Stream Data

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 24, Wastewater Data for Flow, Temperature, Salinity, and Conservatives					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Wasteload inflow	cms	0.028	LTP Winter Projection Value
		Temperature	^{o}Celcius	16	90th percentile Temperature for Winter Season
		Salinity	ppt		
		Conservative Matl. I	mg/l		
		Conservative Matl. II	mg/l		

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 22, Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		NCM	mg/l	0.132	60% Background per reference stream data

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 21, Headwater Data for DO, BOD, and Nitrogen					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		Dissolved O_2	mg/l	8.9	Winter Season 90 percent DO Sat
		BOD	mg/l	3.32	60% Background per reference stream data

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 20, Headwater Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Element # of input		1	
		Headwater name		Castor Creek	
		Headwater flow	cms	0.0280	Per LTP
		Temperature	°Celcius	16.00	Winter Season 90th Percentile Temperature
		Conservative Matl. I	mg/l	8.30	Site 5
		Conservative Matl. II	mg/l	0.00	Site 5

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	BOD	kg/day	6	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
2	McDowell Branch - Horse Creek	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
3	Horse Creek - Guice Branch	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
4	Guice Branch - Curr Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
5	Curr Creek - Poplar Branch	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
6	Poplar Branch - White Branch	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
7	White Branch - Colston Creek	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
8	White Branch - Colston Creek	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
9	Fourmile Creek - Pool Branch	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
10	Pool Branch - Ginney Branch	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
11	Ginney Branch - Edwards Branch	BOD	kg/day	7	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
12	Edwards Branch - Little Flat	BOD	kg/day	7	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
13	Little Flat - Glade Creek	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
14	Glade Creek - Cub Creek	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		4	100% reduction man-made + 40% reduction backgroun
15	Cub Creek - Cow Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
16	Cow Creek - Bear Creek Branch	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
17	Bear Creek Branch - Biles Branch	BOD	kg/day	0	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
18	Biles Branch - Hurricane Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
19	Hurricane Creek - Indian Branch	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
20	Indian Branch - Moody Creek	BOD	kg/day	5	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
21	Moody Creek - Bull Creek	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
22	Bull Creek - Sweetwater Creek	BOD	kg/day	4	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
23	Sweetwater Creek - Brushy Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
24	Brushy Creek - White Oak Creek	BOD	kg/day	4	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
25	White Oak Creek - Bills Creek	BOD	kg/day	13	100% reduction man-made + 40% reduction background
		Nonconservative matl.		4	100% reduction man-made + 40% reduction backgroun
26	Bills Creek - Lost Creek	BOD	kg/day	3	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
27	Lost Creek - Messer Creek	BOD	kg/day	9	100% reduction man-made + 40% reduction background
		Nonconservative matl.		7	100% reduction man-made + 40% reduction backgroun
28	Messer Creek - Richland Creek	BOD	kg/day	1	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun
29	Richland Creek - Piney Creek	BOD	kg/day	13	100% reduction man-made + 40% reduction background
		Nonconservative matl.		4	100% reduction man-made + 40% reduction backgroun
30	Piney Creek - Beaucoup Creek	BOD	kg/day	5	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
31	Beaucoup Creek - Banister Creek	BOD	kg/day	8	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
32	Banister Creek - Brushy Creek2	BOD	kg/day	10	100% reduction man-made + 40% reduction background
		Nonconservative matl.		3	100% reduction man-made + 40% reduction backgroun
33	Brushy Creek 2 - McClellen Branch	BOD	kg/day	12	100% reduction man-made + 40% reduction background
		Nonconservative matl.		2	100% reduction man-made + 40% reduction backgroun
34	McClellen Branch - Flat Creek	BOD	kg/day	4	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
35	Flat Creek - Sandy Creek	BOD	kg/day	6	100% reduction man-made + 40% reduction background
		Nonconservative matl.		1	100% reduction man-made + 40% reduction backgroun
36	Sandy Creek - Hwy 124	BOD	kg/day	2	100% reduction man-made + 40% reduction background
		Nonconservative matl.		0	100% reduction man-made + 40% reduction backgroun

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 18, Incremetal Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Reach 32	NCM	mg/l	0.132	60% Background from reference streams

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 17, Incremetal Data for DO, BOD, Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Reach 32	Dissolved O_2	mg/l	8.9	Winter Season 90 percent DO Sat
		BOD	mg/l	3.32	60% Background from reference streams
		Org.-N	mg/l		
		NH_3-N	mg/l		
		NO_{2+3} - N	mg/l		

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 16, Incremental Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
32	Reach 32	Incremental Outflow	m^3/s		
		Incremental Inflow	m^3/s	0.0235	
		Temperature	$^oCelcius$	16	Winter Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	6	Site 3
		Conservative Matl. II	mg/l	4.2	Site 3

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
8	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
15	Cub Creek - Cow Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		NCM Settling Rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
22	Bull Creek - Sweetwater Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	NCM Decay	1/day	0.1	Interpolation of Bottle Rates from sites 4-5
		NCM Settling Rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	NCM Decay	1/day	0.09	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
29	Richland Creek - Piney Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	NCM Decay	1/day	0.07	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
36	Sandy Creek - Hwy 124	NCM Decay	1/day	0.09	Bottle Rate Site 1
		NCM Settling Rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.11	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.10	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
15	Cub Creek - Cow Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.10	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.09	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.04	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.00	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.00	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
22	Bull Creek - Sweetwater Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.02	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.03	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.03	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.04	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.06	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.07	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 4 and 5
		BOD Settling rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.04	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
29	Richland Creek - Piney Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.03	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.01	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.97	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.96	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.05	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	0.95	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	0.94	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.17	100% reduction man-made + 40% reduction background
		Aerobic BOD decay	1/day	0.03	Bottle Rate for Site 1
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
2	McDowell Branch - Horse Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
3	Horse Creek - Guice Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
4	Guice Branch - Curr Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
5	Curr Creek - Poplar Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
6	Poplar Branch - White Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
			Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
7	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
8	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
9	Fourmile Creek - Pool Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
10	Pool Branch - Ginney Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
11	Ginney Branch - Edwards Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
12	Edwards Branch - Little Flat	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.20	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.86	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
13	Little Flat - Glade Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.84	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
14	Glade Creek - Cub Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.82	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
15	Cub Creek - Cow Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.81	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
16	Cow Creek - Bear Creek Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.8	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
17	Bear Creek Branch - Biles Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
18	Biles Branch - Hurricane Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
19	Hurricane Creek - Indian Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.78	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
20	Indian Branch - Moody Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.77	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
21	Moody Creek - Bull Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.76	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
22	Bull Creek - Sweetwater Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.75	Zero flow cross section

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
23	Sweetwater Creek - Brushy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.74	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
24	Brushy Creek - White Oak Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.73	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
25	White Oak Creek - Bills Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.71	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
26	Bills Creek - Lost Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.68	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
27	Lost Creek - Messer Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.65	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
28	Messer Creek - Richland Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.63	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
29	Richland Creek - Piney Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.61	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
30	Piney Creek - Beaucoup Creek	Width Coef "A"	Unitless	0.10	Calibration

Castor Creek Water Quality Current Standard Winter Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.58	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
31	Beaucoup Creek - Banister Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.57	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
32	Banister Creek - Brushy Creek2	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
33	Brushy Creek 2 - McClellen Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
34	McClellen Branch - Flat Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
35	Flat Creek - Sandy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
36	Sandy Creek - Hwy 124	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

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APPENDIX B6 - Current winter loading calculations

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

Modeled stream or water body:	Castor Creek - Current Standards Loading

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

	Calibration Model Values									Projection Model Equivalents				Projected Model Loads			
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calb. Benthic Load (TCBL)	Reach Length	Proj. Model Avg. Reach Width	Proj. Temp.	Percentage Reduction of man-made sources	TCBL adjusted for % reduction (Reduced TCBL)	Reduced TCBL adjusted for MOS	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Total Projection Benthic Load (LA+MOS)
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A, (note 1)	B, (note 1)	C, (note 1)	D, (note 1)	E, (note 1)	G	I	H	J, (note 2)	K, (note 3)	L = (K)(A / D)	M = (K)(B / D)	N = (K)(C / D)	O = (E)(G)(L)	P = (E)(G)(M)	Q, (note 4)	O + P + Q
1	0.271	0.031	3.65	3.952	5.90	11.90	16.00	75.0%	0.99	1.23	0.085	0.010	1.14	6	1	62	68.88
2	0.263	0.032	3.65	3.944	1.60	11.90	16.00	75.0%	0.99	1.23	0.082	0.010	1.14	2	0	17	18.63
3	0.261	0.031	3.65	3.942	0.90	11.90	16.00	75.0%	0.99	1.23	0.082	0.010	1.14	1	0	9	10.47
4	0.259	0.030	3.65	3.938	1.30	11.90	16.00	75.0%	0.98	1.23	0.081	0.009	1.14	1	0	14	15.11
5	0.261	0.030	3.65	3.941	2.80	11.90	16.00	75.0%	0.99	1.23	0.082	0.009	1.14	3	0	30	32.57
6	0.261	0.029	3.65	3.940	0.10	11.90	16.00	75.0%	0.98	1.23	0.081	0.009	1.14	0	0	1	1.16
7	0.250	0.031	3.65	3.931	3.80	11.90	16.00	75.0%	0.98	1.23	0.078	0.010	1.14	4	0	40	44.06
8	0.252	0.030	3.65	3.932	0.50	11.90	16.00	75.0%	0.98	1.23	0.079	0.009	1.14	0	0	5	5.80
9	0.252	0.030	3.65	3.932	3.10	11.90	16.00	75.0%	0.98	1.23	0.079	0.009	1.14	3	0	33	35.96
10	0.252	0.032	3.65	3.934	0.20	11.90	16.00	75.0%	0.98	1.23	0.079	0.010	1.14	0	0	2	2.32
11	0.251	0.031	3.65	3.932	7.70	11.90	16.00	75.0%	0.98	1.23	0.078	0.010	1.14	7	1	81	89.30
12	0.326	0.117	4.30	4.743	7.40	11.20	16.00	75.0%	1.19	1.48	0.102	0.037	1.34	8	3	87	98.04
13	0.146	0.219	4.30	4.665	3.70	11.10	16.00	75.0%	1.17	1.46	0.046	0.068	1.34	2	3	43	47.59
14	0.131	0.246	4.20	4.577	5.50	11.10	16.00	75.0%	1.14	1.43	0.041	0.077	1.31	3	5	62	69.47
15	0.150	0.255	4.10	4.505	1.20	11.10	16.00	75.0%	1.13	1.41	0.047	0.080	1.28	1	1	13	14.95
16	0.141	0.253	4.10	4.494	3.20	11.10	16.00	75.0%	1.12	1.40	0.044	0.079	1.28	2	3	35	39.75
17	0.136	0.250	4.10	4.486	0.40	11.00	16.00	75.0%	1.12	1.40	0.043	0.078	1.28	0	0	4	4.91
18	0.144	0.254	4.10	4.497	1.90	11.00	16.00	75.0%	1.12	1.41	0.045	0.079	1.28	1	2	21	23.41
19	0.455	0.198	4.10	4.752	2.30	11.00	16.00	75.0%	1.19	1.49	0.142	0.062	1.28	4	2	25	30.35
20	0.515	0.242	3.70	4.458	3.00	11.00	16.00	75.0%	1.11	1.39	0.161	0.076	1.16	5	3	30	37.47
21	0.519	0.241	3.70	4.459	1.70	11.00	16.00	75.0%	1.11	1.39	0.162	0.075	1.16	3	1	17	21.24
22	0.506	0.146	3.70	4.353	2.80	11.00	16.00	75.0%	1.09	1.36	0.158	0.046	1.16	5	1	28	33.96
23	0.473	0.136	3.70	4.309	1.00	11.00	16.00	75.0%	1.08	1.35	0.148	0.043	1.16	2	0	10	11.98
24	0.470	0.125	3.70	4.296	2.90	11.00	16.00	75.0%	1.07	1.34	0.147	0.039	1.16	5	1	29	34.61
25	0.435	0.123	3.70	4.258	9.70	10.90	16.00	75.0%	1.06	1.33	0.136	0.038	1.16	14	4	95	113.47
26	0.374	0.112	3.75	4.236	2.70	10.90	16.00	75.0%	1.06	1.32	0.117	0.035	1.17	3	1	27	31.28
27	0.264	0.192	3.75	4.206	11.10	10.80	16.00	75.0%	1.05	1.31	0.083	0.060	1.17	10	7	109	126.30
28	0.347	0.116	3.10	3.563	0.80	10.80	16.00	75.0%	0.89	1.11	0.109	0.036	0.97	1	0	7	7.76
29	0.386	0.125	3.10	3.611	9.60	10.80	16.00	75.0%	0.90	1.13	0.121	0.039	0.97	13	4	78	94.64
30	0.467	0.125	3.10	3.692	3.00	10.70	16.00	75.0%	0.92	1.15	0.146	0.039	0.97	5	1	24	30.11
31	0.512	0.122	2.70	3.334	4.20	10.70	16.00	75.0%	0.83	1.04	0.160	0.038	0.84	7	2	29	38.38
32	0.505	0.125	2.55	3.180	5.00	10.70	16.00	75.0%	0.79	0.99	0.158	0.039	0.80	8	2	33	43.67
33	0.462	0.071	3.65	4.183	8.50	10.70	16.00	75.0%	1.05	1.31	0.144	0.022	1.14	13	2	81	95.80
34	0.623	0.062	2.60	3.285	1.50	10.70	16.00	75.0%	0.82	1.03	0.195	0.019	0.81	3	0	10	13.57
35	0.610	0.081	2.50	3.191	2.30	10.70	16.00	75.0%	0.80	1.00	0.190	0.025	0.78	5	1	15	20.26
36	0.060	0.005	2.40	2.465	6.20	10.70	16.00	75.0%	0.62	0.77	0.019	0.001	0.75	1	0	39	40.02
Sub-Total									36.28					150	53	1245	**1447**

	Margin of Safety Loads						Man-made Model equivalents				Man-made Model loads				Background Model loads			
Reach Number and Description	MOS Total Benthic Load @ 20°C	MOS SOD @ 20°C	Non-Point UCBOD MOS Loads	Non-Point UNBOD MOS Loads	Adjusted SOD MOS @ Proj. temp	Adjusted Total MOS @ Proj. temp	Mannmade portion of TCBL	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load
	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	R = (K-J)(E)(G)	S = (R)(C/D)	T = (R)(A/D)	U = (R)(B/D)	V, (note 5)	T + U + V	W = K - F	X = (W)(A / D)	Y = (W)(B / D)	Z = (W)(C / D)	AA = (E)(G)(X)	AB = (E)(G)(Y)	AC, (note 6)	AA + AB + AC	AD = O - AA	AE = P - AB	AF = Q - AC	AD + AE + AF
1	17	16	1	0	12	14	1.23	0.085	0.010	1.14	6	1	62	68.88	0	0	0	0.00
2	5	4	0	0	3	4	1.23	0.082	0.010	1.14	2	0	17	18.63	0	0	0	0.00
3	3	2	0	0	2	2	1.23	0.082	0.010	1.14	1	0	9	10.47	0	0	0	0.00
4	4	4	0	0	3	3	1.23	0.081	0.009	1.14	1	0	14	15.11	0	0	0	0.00
5	8	8	1	0	6	7	1.23	0.082	0.009	1.14	3	0	30	32.57	0	0	0	0.00
6	0	0	0	0	0	0	1.23	0.081	0.009	1.14	0	0	1	1.16	0	0	0	0.00
7	11	10	1	0	8	9	1.23	0.078	0.010	1.14	4	0	40	44.06	0	0	0	0.00
8	1	1	0	0	1	1	1.23	0.079	0.009	1.14	0	0	5	5.80	0	0	0	0.00
9	9	8	1	0	7	7	1.23	0.079	0.009	1.14	3	0	33	35.96	0	0	0	0.00
10	1	1	0	0	0	0	1.23	0.079	0.010	1.14	0	0	2	2.32	0	0	0	0.00
11	23	21	1	0	16	18	1.23	0.078	0.010	1.14	7	1	81	89.30	0	0	0	0.00
12	25	22	2	1	17	20	1.48	0.102	0.037	1.34	8	3	87	98.04	0	0	0	0.00
13	12	11	0	1	9	10	1.46	0.046	0.068	1.34	2	3	43	47.59	0	0	0	0.00
14	17	16	1	1	12	14	1.43	0.041	0.077	1.31	3	5	62	69.47	0	0	0	0.00
15	4	3	0	0	3	3	1.41	0.047	0.080	1.28	1	1	13	14.95	0	0	0	0.00
16	10	9	0	1	7	8	1.40	0.044	0.079	1.28	2	3	35	39.75	0	0	0	0.00
17	1	1	0	0	1	1	1.40	0.043	0.078	1.28	0	0	4	4.91	0	0	0	0.00
18	6	5	0	0	4	5	1.41	0.045	0.079	1.28	1	2	21	23.41	0	0	0	0.00
19	8	6	1	0	5	6	1.49	0.142	0.062	1.28	4	2	25	30.35	0	0	0	0.00
20	9	8	1	1	6	7	1.39	0.161	0.076	1.16	5	3	30	37.47	0	0	0	0.00
21	5	4	1	0	3	4	1.39	0.162	0.075	1.16	3	1	17	21.24	0	0	0	0.00
22	8	7	1	0	6	7	1.36	0.158	0.046	1.16	5	1	28	33.96	0	0	0	0.00
23	3	3	0	0	2	2	1.35	0.148	0.043	1.16	2	0	10	11.98	0	0	0	0.00
24	9	7	1	0	6	7	1.34	0.147	0.039	1.16	5	1	29	34.61	0	0	0	0.00
25	28	24	3	1	19	23	1.33	0.136	0.038	1.16	14	4	95	113.47	0	0	0	0.00
26	8	7	1	0	5	6	1.32	0.117	0.035	1.17	3	1	27	31.28	0	0	0	0.00
27	32	28	2	1	22	25	1.31	0.083	0.060	1.17	10	7	109	126.30	0	0	0	0.00
28	2	2	0	0	1	2	1.11	0.109	0.036	0.97	1	0	7	7.76	0	0	0	0.00
29	23	20	3	1	16	19	1.13	0.121	0.039	0.97	13	4	78	94.64	0	0	0	0.00
30	7	6	1	0	5	6	1.15	0.146	0.039	0.97	5	1	24	30.11	0	0	0	0.00
31	9	8	1	0	6	8	1.04	0.160	0.038	0.84	7	2	29	38.38	0	0	0	0.00
32	11	9	2	0	7	9	0.99	0.158	0.039	0.80	8	2	33	43.67	0	0	0	0.00
33	24	21	3	0	16	19	1.31	0.144	0.022	1.14	13	2	81	95.80	0	0	0	0.00
34	3	3	1	0	2	3	1.03	0.195	0.019	0.81	3	0	10	13.57	0	0	0	0.00
35	5	4	1	0	3	4	1.00	0.190	0.025	0.78	5	1	15	20.26	0	0	0	0.00
36	10	10	0	0	8	8	0.77	0.019	0.001	0.75	1	0	39	40.02	0	0	0	0.00
Sub-Total	361		30	11	249	**289**					150	53	1245	**1447**	0	0	0	**0**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.
Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]
Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]
Note 4, **Q** = **E** x **G** x **N** x $1.065^{(I-20)}$
Note 5, **V** = **S** x $1.065^{(I-20)}$
Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(I-20)}$

EXPLICIT MARGINS:

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

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

Castor Creek - Current Standards Loading

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

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Headwater	0.0280	14.74	3.44	35.66	8.32	75%	8.91	2.08	11.14	2.60	4.61	1.08	**2.75**	**11.00**
Flat Creek	0.0280	3.46	0.50	8.37	1.21	75%	2.09	0.30	2.62	0.38	1.08	0.16	**0.60**	**2.40**
SUB-TOTAL TMDL LOADING				**44**	**10**		**11**	**2**	**14**	**3**			**3**	**13**

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

Winter TMDL calculations and Projection model calculations for Incremental loads:

Castor Creek - Current Standards Loading

Incremental Load Determinations:

Reach Description and #	Calibration Load determinations:					Percentage Reduction calculations:			Projection Model Input determinations:				Projection Model Input determinations:			
	Projection Flow (cms)	Calb. UCBOD conc. (mg/l)	Unadjusted UCBOD (kg/day)	Calb. UNBOD conc. (mg/l)	Unadjusted UNBOD (kg/day)	Actual % Reduction of Man Made Loads	Increm. UCBOD Load Adjusted For % Reduction **(LA load)**	Increm. UNBOD Load Adjusted For % Reduction **(LA load)**	Increm. UCBOD Adjusted for MOS (kg/day) (1)	Increm. UNBOD Adjusted for MOS (kg/day) (1)	Projection UCBOD conc. (mg/l)	Projection UNBOD conc. (mg/l)	Proj. UCBOD MOS load (kg/day)	Proj. UNBOD MOS load (kg/day)	**Sub-total MOS load (kg/day)**	**Sub-total LA load (kg/day)**
	A	**B**	**C** = (86.4)(**A**)(**B**)	**D**	**E** = (86.4)(**A**)(**D**)	**J,** Note 1	**K** = (**C-H**)(1-**J**) + **H**	**L** = (**E-I**)(1-**J**) + **I**	**M** = (**K-H**) / (1-**MOS**) + H	**N** = (**L-I**) / (1-**MOS**) + I	**M** / [(**A**)(86.4)]	**N** / [(**A**)(86.4)]	**O** = **M** - **K**	**P** = **N** - **L**	**O + P**	**K + L**
1						75%										
2						75%										
3						75%										
4						75%										
5						75%										
6						75%										
7						75%										
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28						75%										
29						75%										
30						75%										
31						75%										
32	0.02350	9.19	18.66	0.84	1.71	75%	4.664844	0.426384	6	1	2.87	0.26	1	0	1	5
33						75%										
34						75%										
35						75%										
36						75%										
Sub-Total benthic loading							**5**	**0**	**6**	**1**			**1**	**0**	**1**	**5**

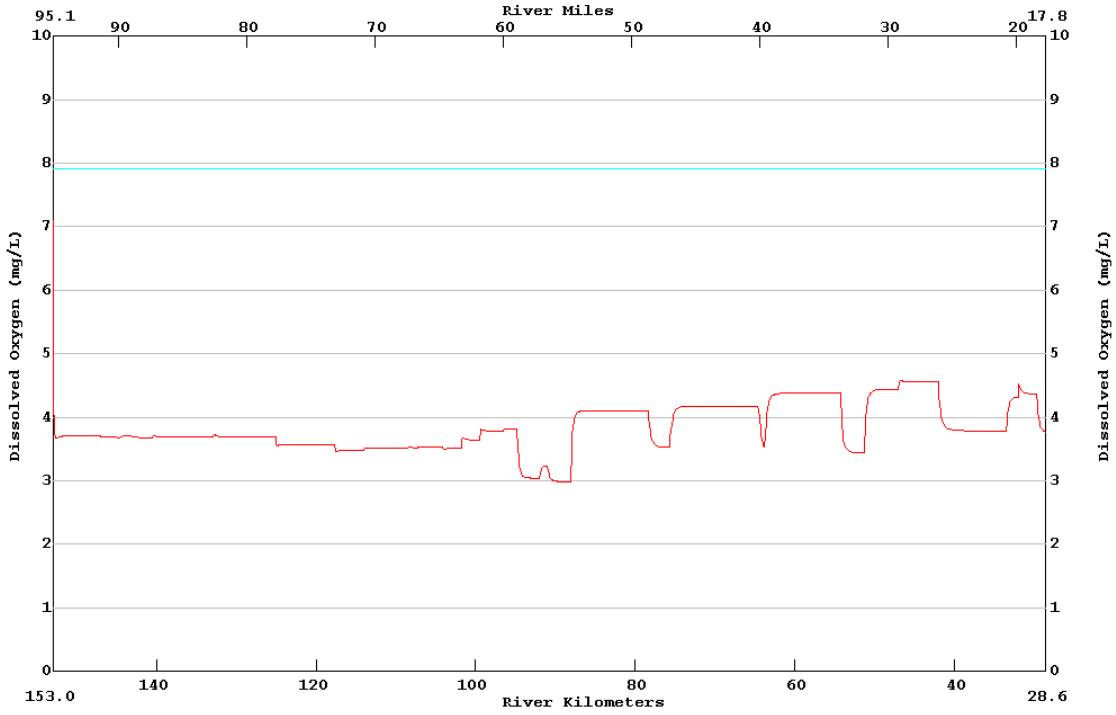
Note 1: The percentage reduction values are taken from the "Non-Point Benthic Load Input and TMDL Calculations" worksheet.

EXPLICIT MARGINS:

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

APPENDIX B7 - Proposed 3.0 summer projection model input/output

LA-QUAL Version 5.02 Run at 14:54 on 02/22/2002 File D:\Castor\Input Files\castorsum390.txt
CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE min= 2.99 max= 7.10
CASTOR CREEK WATERSHED MODEL



```
LA-QUAL Version 5.02
Louisiana Department of Environmental Quality

Input file is D:\Castor\Input Files\castorsum390.txt
Output produced at 14:54 on 02/22/2002

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

CARD TYPE       CONTROL TITLES

TITLE01         CASTOR CREEK WATERSHED MODEL
TITLE02         CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE
CNTROL04  YES   METRIC UNITS
CNTROL05  YES   OXYGEN DEPENDENT RATES
ENDATA01

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

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = SULFATES                  IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   NITROGEN
MODOPT08   NO   PHOSPHORUS
MODOPT09   NO   CHLOROPHYLL A
MODOPT10   NO   MACROPHYTES
MODOPT11   NO   COLIFORM
MODOPT12  YES   NONCONSERVATIVE MATERIAL = NBOD                      IN MG/L
ENDATA02

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

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         MAXIMUM ITERATION LIMIT            =      1000.00000
PROGRAM         PLOT TYPE                          =         4.00000
PROGRAM         FINAL REPORT TYPE                  =         1.00000
PROGRAM         SPECIAL REPORT TYPE                =         3.00000
PROGRAM         KL MINIMUM                         =         0.70000 meters/day
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
PROGRAM         INHIBITION CONTROL VALUE           =         3.00000
PROGRAM         NH3 OXYGEN UPTAKE RATE             =         4.30000 mg O/mg N
PROGRAM         K2 MAXIMUM                         =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS                =         2.00000 (per day)
PROGRAM         OCEAN EXCHANGE RATIO               =         0.00000
ENDATA03

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

CARD TYPE RATE CODE THETA VALUE

ENDATA04

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA05

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA06

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

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA07

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

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	CC	HEADWATER CC - MCDOWELL BRANCH	153.00	TO	147.10	0.1000	5.90	59	1	59
REACH ID	2	CC	MCDOWELL BRANCH - HORSE CREEK	147.10	TO	145.50	0.1000	1.60	16	60	75
REACH ID	3	CC	HORSE CREEK - GUICE BRANCH	145.50	TO	144.60	0.1000	0.90	9	76	84
REACH ID	4	CC	GUICE BRANCH - CURR CREEK	144.60	TO	143.30	0.1000	1.30	13	85	97
REACH ID	5	CC	CURR CREEK - POPLAR BRANCH	143.30	TO	140.50	0.1000	2.80	28	98	125
REACH ID	6	CC	POPLAR BRANCH - WHITE BRANCH	140.50	TO	140.40	0.1000	0.10	1	126	126
REACH ID	7	CC	WHITE BRANCH - COLSTON CREEK	140.40	TO	136.60	0.1000	3.80	38	127	164
REACH ID	8	CC	COLSTON CREEK - FOURMILE CREEK	136.60	TO	136.10	0.1000	0.50	5	165	169
REACH ID	9	CC	FOURMILE CREEK - POOL BRANCH	136.10	TO	133.00	0.1000	3.10	31	170	200
REACH ID	10	CC	POOL BRANCH - GINNEY BRANCH	133.00	TO	132.80	0.1000	0.20	2	201	202
REACH ID	11	CC	GINNEY BRANCH - EDWARDS BRANCH	132.80	TO	125.10	0.1000	7.70	77	203	279
REACH ID	12	CC	EDWARDS BRANCH - LITTLE FLAT	125.10	TO	117.70	0.1000	7.40	74	280	353
REACH ID	13	CC	LITTLE FLAT - GLADE CREEK	117.70	TO	114.00	0.1000	3.70	37	354	390
REACH ID	14	CC	GLADE CREEK - CUB CREEK	114.00	TO	108.50	0.1000	5.50	55	391	445
REACH ID	15	CC	CUB CREEK - COW CREEK	108.50	TO	107.30	0.1000	1.20	12	446	457
REACH ID	16	CC	COW CREEK - BEAR CREEK BRANCH	107.30	TO	104.10	0.1000	3.20	32	458	489
REACH ID	17	CC	BEAR CREEK BRANCH - BILES BR	104.10	TO	103.70	0.1000	0.40	4	490	493
REACH ID	18	CC	BILES BRANCH - HURRICANE CR	103.70	TO	101.80	0.1000	1.90	19	494	512
REACH ID	19	CC	HURRICANE CR - INDIAN BRANCH	101.80	TO	99.50	0.1000	2.30	23	513	535
REACH ID	20	CC	INDIAN BRANCH - MOODY CREEK	99.50	TO	96.50	0.1000	3.00	30	536	565
REACH ID	21	CC	MOODY CREEK - BULL CREEK	96.50	TO	94.80	0.1000	1.70	17	566	582
REACH ID	22	CC	BULL CREEK - SWEETWATER CREEK	94.80	TO	92.00	0.1000	2.80	28	583	610
REACH ID	23	CC	SWEETWATER CREEK - BRUSHY CREEK	92.00	TO	91.00	0.1000	1.00	10	611	620
REACH ID	24	CC	BRUSHY CREEK - WHITE OAK CREEK	91.00	TO	88.10	0.1000	2.90	29	621	649
REACH ID	25	CC	WHITE OAK CREEK - BILLS CREEK	88.10	TO	78.40	0.1000	9.70	97	650	746
REACH ID	26	CC	BILLS CREEK - LOST CREEK	78.40	TO	75.70	0.1000	2.70	27	747	773
REACH ID	27	CC	LOST CREEK - MESSER CREEK	75.70	TO	64.60	0.1000	11.10	111	774	884

REACH ID	28	CC	MESSER CREEK - RICHLAND CREEK	64.60	TO	63.80	0.1000	0.80	8	885	892
REACH ID	29	CC	RICHLAND CREEK - PINEY CREEK	63.80	TO	54.20	0.1000	9.60	96	893	988
REACH ID	30	CC	PINEY CREEK - BEAUCOUP CREEK	54.20	TO	51.20	0.1000	3.00	30	989	1018
REACH ID	31	CC	BEAUCOUP CREEK - BANISTER CREEK	51.20	TO	47.00	0.1000	4.20	42	1019	1060
REACH ID	32	CC	BANISTER CREEK - BRUSHY CREEK2	47.00	TO	42.00	0.1000	5.00	50	1061	1110
REACH ID	33	CC	BRUSHY CREEK2 - MCCLELLEN BR	42.00	TO	33.50	0.1000	8.50	85	1111	1195
REACH ID	34	CC	MCCLELLEN BR - FLAT CREEK	33.50	TO	32.00	0.1000	1.50	15	1196	1210
REACH ID	35	CC	FLAT CREEK - SANDY CREEK	32.00	TO	29.70	0.1000	2.30	23	1211	1233
REACH ID	36	CC	SANDY CREEK - HWY 124	29.70	TO	28.60	0.1000	1.10	11	1234	1244

ENDATA08

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

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	2	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	3	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	4	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	5	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	6	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	7	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	8	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	9	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	10	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	11	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	12	CC	0.100	0.400	11.200	0.100	0.400	0.860	0.00000	0.027
HYDR-1	13	CC	0.100	0.400	11.100	0.100	0.400	0.840	0.00000	0.027
HYDR-1	14	CC	0.100	0.400	11.100	0.100	0.400	0.820	0.00000	0.027
HYDR-1	15	CC	0.100	0.400	11.100	0.100	0.400	0.810	0.00000	0.027
HYDR-1	16	CC	0.100	0.400	11.100	0.100	0.400	0.800	0.00000	0.027
HYDR-1	17	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	18	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	19	CC	0.100	0.400	11.000	0.100	0.400	0.780	0.00000	0.027
HYDR-1	20	CC	0.100	0.400	11.000	0.100	0.400	0.770	0.00000	0.027
HYDR-1	21	CC	0.100	0.400	11.000	0.100	0.400	0.760	0.00000	0.027
HYDR-1	22	CC	0.100	0.400	11.000	0.100	0.400	0.750	0.00000	0.027
HYDR-1	23	CC	0.100	0.400	11.000	0.100	0.400	0.740	0.00000	0.027
HYDR-1	24	CC	0.100	0.400	11.000	0.100	0.400	0.730	0.00000	0.027
HYDR-1	25	CC	0.100	0.400	10.900	0.100	0.400	0.710	0.00000	0.027
HYDR-1	26	CC	0.100	0.400	10.900	0.100	0.400	0.680	0.00000	0.027
HYDR-1	27	CC	0.100	0.400	10.800	0.100	0.400	0.650	0.00000	0.027
HYDR-1	28	CC	0.100	0.400	10.800	0.100	0.400	0.630	0.00000	0.027
HYDR-1	29	CC	0.100	0.400	10.800	0.100	0.400	0.610	0.00000	0.027
HYDR-1	30	CC	0.100	0.400	10.700	0.100	0.400	0.580	0.00000	0.027
HYDR-1	31	CC	0.100	0.400	10.700	0.100	0.400	0.570	0.00000	0.027
HYDR-1	32	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	33	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	34	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	35	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	36	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027

ENDATA09

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

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

ENDATA10

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

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	2	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	3	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	4	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	5	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	8	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	9	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	10	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	11	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	12	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	13	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	14	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	15	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	16	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	17	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	18	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	19	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	20	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	22	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	23	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	24	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	25	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	26	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	27	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	28	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	29	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	30	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	31	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	32	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	33	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	34	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	35	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	36	CC	27.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00

ENDATA11

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

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	AEROB BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD DECAY

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COEF-1       1   CC  20 K2=a/D           0.700     0.000     0.000     2.070     0.040     0.050     0.000     0.000
COEF-1       2   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       3   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       4   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       5   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       6   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       7   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       8   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       9   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1      10   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1      11   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1      12   CC  20 K2=a/D           0.700     0.000     0.000     2.120     0.030     0.050     0.000     0.000
COEF-1      13   CC  20 K2=a/D           0.700     0.000     0.000     2.150     0.040     0.050     0.000     0.000
COEF-1      14   CC  20 K2=a/D           0.700     0.000     0.000     2.130     0.050     0.050     0.000     0.000
COEF-1      15   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.060     0.050     0.000     0.000
COEF-1      16   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.060     0.050     0.000     0.000
COEF-1      17   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.070     0.050     0.000     0.000
COEF-1      18   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.070     0.050     0.000     0.000
COEF-1      19   CC  20 K2=a/D           0.700     0.000     0.000     2.020     0.070     0.050     0.000     0.000
COEF-1      20   CC  20 K2=a/D           0.700     0.000     0.000     1.920     0.060     0.050     0.000     0.000
COEF-1      21   CC  20 K2=a/D           0.700     0.000     0.000     1.910     0.060     0.050     0.000     0.000
COEF-1      22   CC  20 K2=a/D           0.700     0.000     0.000     1.980     0.060     0.050     0.000     0.000
COEF-1      23   CC  20 K2=a/D           0.700     0.000     0.000     2.020     0.050     0.050     0.000     0.000
COEF-1      24   CC  20 K2=a/D           0.700     0.000     0.000     2.030     0.050     0.050     0.000     0.000
COEF-1      25   CC  20 K2=a/D           0.700     0.000     0.000     1.910     0.040     0.050     0.000     0.000
COEF-1      26   CC  20 K2=a/D           0.700     0.000     0.000     1.890     0.030     0.050     0.000     0.000
COEF-1      27   CC  20 K2=a/D           0.700     0.000     0.000     1.860     0.040     0.050     0.000     0.000
COEF-1      28   CC  20 K2=a/D           0.700     0.000     0.000     1.750     0.040     0.050     0.000     0.000
COEF-1      29   CC  20 K2=a/D           0.700     0.000     0.000     1.720     0.040     0.050     0.000     0.000
COEF-1      30   CC  20 K2=a/D           0.700     0.000     0.000     1.980     0.030     0.050     0.000     0.000
COEF-1      31   CC  20 K2=a/D           0.700     0.000     0.000     1.710     0.030     0.050     0.000     0.000
COEF-1      32   CC  20 K2=a/D           0.700     0.000     0.000     1.680     0.030     0.050     0.000     0.000
COEF-1      33   CC  20 K2=a/D           0.700     0.000     0.000     2.000     0.030     0.050     0.000     0.000
COEF-1      34   CC  20 K2=a/D           0.700     0.000     0.000     1.710     0.030     0.050     0.000     0.000
COEF-1      35   CC  20 K2=a/D           0.700     0.000     0.000     1.680     0.030     0.050     0.000     0.000
COEF-1      36   CC  20 K2=a/D           0.700     0.000     0.000     2.000     0.030     0.050     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

ENDATA13

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

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

ENDATA14

$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
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CARD TYPE	REACH	ID	COLIFORM DIE-OFF	NCM DECAY	NCM SETT	NCM CONV TO SOD
COEF-4	1	CC	0.00	0.04	0.05	0.00
COEF-4	2	CC	0.00	0.04	0.05	0.00
COEF-4	3	CC	0.00	0.04	0.05	0.00
COEF-4	4	CC	0.00	0.04	0.05	0.00
COEF-4	5	CC	0.00	0.04	0.05	0.00
COEF-4	6	CC	0.00	0.04	0.05	0.00
COEF-4	7	CC	0.00	0.04	0.05	0.00
COEF-4	8	CC	0.00	0.04	0.05	0.00
COEF-4	9	CC	0.00	0.04	0.05	0.00
COEF-4	10	CC	0.00	0.04	0.05	0.00
COEF-4	11	CC	0.00	0.04	0.05	0.00
COEF-4	12	CC	0.00	0.18	0.05	0.00
COEF-4	13	CC	0.00	0.18	0.05	0.00
COEF-4	14	CC	0.00	0.17	0.05	0.00
COEF-4	15	CC	0.00	0.17	0.05	0.00
COEF-4	16	CC	0.00	0.17	0.05	0.00
COEF-4	17	CC	0.00	0.17	0.05	0.00
COEF-4	18	CC	0.00	0.17	0.05	0.00
COEF-4	19	CC	0.00	0.17	0.05	0.00
COEF-4	20	CC	0.00	0.16	0.05	0.00
COEF-4	21	CC	0.00	0.16	0.05	0.00
COEF-4	22	CC	0.00	0.15	0.05	0.00
COEF-4	23	CC	0.00	0.15	0.05	0.00
COEF-4	24	CC	0.00	0.14	0.05	0.00
COEF-4	25	CC	0.00	0.13	0.05	0.00
COEF-4	26	CC	0.00	0.11	0.05	0.00
COEF-4	27	CC	0.00	0.10	0.05	0.00
COEF-4	28	CC	0.00	0.09	0.05	0.00
COEF-4	29	CC	0.00	0.11	0.05	0.00
COEF-4	30	CC	0.00	0.13	0.05	0.00
COEF-4	31	CC	0.00	0.14	0.05	0.00
COEF-4	32	CC	0.00	0.14	0.05	0.00
COEF-4	33	CC	0.00	0.06	0.05	0.00
COEF-4	34	CC	0.00	0.06	0.05	0.00
COEF-4	35	CC	0.00	0.07	0.05	0.00
COEF-4	36	CC	0.00	0.09	0.05	0.00

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	32	CC	0.00000	0.02350	27.40	0.00	6.00	4.20	0.00470	0.00000

ENDATA16

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

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3	NO3+2
INCR-2	32	CC	7.10	5.53	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	32	CC	0.00	0.00	0.00	0.22

ENDATA18

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

CARD TYPE	REACH	ID	BOD	ORG-N	COLI	NCM	DO
NONPOINT	1	CC	11.00	0.00	0.00	1.00	0.00
NONPOINT	2	CC	3.00	0.00	0.00	0.00	0.00
NONPOINT	3	CC	2.00	0.00	0.00	0.00	0.00
NONPOINT	4	CC	2.00	0.00	0.00	0.00	0.00
NONPOINT	5	CC	5.00	0.00	0.00	1.00	0.00
NONPOINT	6	CC	0.00	0.00	0.00	0.00	0.00
NONPOINT	7	CC	6.00	0.00	0.00	1.00	0.00
NONPOINT	8	CC	1.00	0.00	0.00	0.00	0.00
NONPOINT	9	CC	5.00	0.00	0.00	1.00	0.00
NONPOINT	10	CC	0.00	0.00	0.00	0.00	0.00
NONPOINT	11	CC	13.00	0.00	0.00	2.00	0.00
NONPOINT	12	CC	13.00	0.00	0.00	5.00	0.00
NONPOINT	13	CC	3.00	0.00	0.00	5.00	0.00
NONPOINT	14	CC	4.00	0.00	0.00	8.00	0.00
NONPOINT	15	CC	1.00	0.00	0.00	2.00	0.00
NONPOINT	16	CC	3.00	0.00	0.00	5.00	0.00
NONPOINT	17	CC	0.00	0.00	0.00	1.00	0.00
NONPOINT	18	CC	2.00	0.00	0.00	3.00	0.00
NONPOINT	19	CC	6.00	0.00	0.00	2.00	0.00
NONPOINT	20	CC	9.00	0.00	0.00	4.00	0.00
NONPOINT	21	CC	5.00	0.00	0.00	2.00	0.00
NONPOINT	22	CC	29.00	0.00	0.00	8.00	0.00
NONPOINT	23	CC	8.00	0.00	0.00	2.00	0.00
NONPOINT	24	CC	31.00	0.00	0.00	8.00	0.00
NONPOINT	25	CC	2.00	0.00	0.00	1.00	0.00
NONPOINT	26	CC	24.00	0.00	0.00	7.00	0.00
NONPOINT	27	CC	5.00	0.00	0.00	4.00	0.00
NONPOINT	28	CC	10.00	0.00	0.00	3.00	0.00
NONPOINT	29	CC	14.00	0.00	0.00	5.00	0.00
NONPOINT	30	CC	23.00	0.00	0.00	6.00	0.00
NONPOINT	31	CC	5.00	0.00	0.00	1.00	0.00
NONPOINT	32	CC	8.00	0.00	0.00	2.00	0.00
NONPOINT	33	CC	26.00	0.00	0.00	4.00	0.00
NONPOINT	34	CC	7.00	0.00	0.00	1.00	0.00
NONPOINT	35	CC	10.00	0.00	0.00	1.00	0.00
NONPOINT	36	CC	3.00	0.00	0.00	0.00	0.00

ENDATA19

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

CARD TYPE	ELEMENT	NAME	UNIT	FLOW	FLOW	TEMP	SALIN	CM-I	CM-II

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                                                   m³/s      cfs   deg C      ppt  MG/L      MG/L

HDWTR-1           1     HEADWATER               0   0.00280    0.099   27.40     0.00     8.300     0.000
ENDATA20

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

CARD TYPE     ELEMENT   NAME                          DO       BOD     ORG-N       NH3     NO3+2

HDWTR-2           1     HEADWATER                   7.10      5.53      0.00      0.00      0.00
ENDATA21

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

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM

HDWTR-3           1     HEADWATER                    0.00      0.00      0.00      0.22
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     1211      32.00  FLAT CREEK             0.00280    0.09887    0.064   27.40     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    NITRIF     NO3+2

WSTLD-2        1211     FLAT CREEK                  7.10      3.46      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

WSTLD-3        1211     FLAT CREEK                   0.00      0.00      0.00      0.22
ENDATA26

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

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                        =     27.400 deg C
LOWER BC     SALINITY                           =      0.000 ppt
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LOWER BC     CONSERVATIVE MATERIAL I            =     10.400 MG/L
LOWER BC     CONSERVATIVE MATERIAL II           =      5.000 MG/L
LOWER BC     DISSOLVED OXYGEN                   =      7.100 mg/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND          =      9.580 mg/L
LOWER BC     ORGANIC NITROGEN                   =      0.000 mg/L
LOWER BC     AMMONIA NITROGEN                   =      0.000 mg/L
LOWER BC     NITRATE + NITRITE                  =      0.030 mg/L
LOWER BC     PHOSPHORUS                         =      0.090 mg/L
LOWER BC     CHLOROPHYLL A                      =      0.000 µg/L
LOWER BC     COLIFORM                           =      0.000 #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL           =      0.620 MG/L
ENDATA27

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

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

ENDATA28

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

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

ENDATA29

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


NUMBER OF PLOTS =  6
NUMBER OF REACHES IN PLOT 1 =  36
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
         25 26 27 28 29 30 31 32 33 34 35 36
NUMBER OF REACHES IN PLOT 2 =  12
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12
NUMBER OF REACHES IN PLOT 3 =   9
PLOT RCH 12 13 14 15 16 17 18 19 20
NUMBER OF REACHES IN PLOT 4 =  10
PLOT RCH 19 20 21 22 23 24 25 26 27 28
NUMBER OF REACHES IN PLOT 5 =   8
PLOT RCH 26 27 28 29 30 31 32 33
NUMBER OF REACHES IN PLOT 6 =   6
PLOT RCH 31 32 33 34 35 36
ENDATA30

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


ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
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     .....OXYGEN DEPENDENT RATES CONVERGENT IN   1 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
     .....GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
     .....GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14
     .....GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 15
     .....GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 16
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FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 1 HEADWATER CC - MCDOWELL BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1	HDWTR	0.00280	27.40	0.00	8.30	0.00	7.10	5.53	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.22

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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	153.00	152.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
2	152.90	152.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
3	152.80	152.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
4	152.70	152.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
5	152.60	152.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
6	152.50	152.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
7	152.40	152.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
8	152.30	152.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
9	152.20	152.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

10	152.10	152.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
11	152.00	151.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
12	151.90	151.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
13	151.80	151.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
14	151.70	151.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
15	151.60	151.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
16	151.50	151.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
17	151.40	151.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
18	151.30	151.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
19	151.20	151.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
20	151.10	151.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
21	151.00	150.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
22	150.90	150.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
23	150.80	150.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
24	150.70	150.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
25	150.60	150.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
26	150.50	150.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
27	150.40	150.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
28	150.30	150.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
29	150.20	150.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
30	150.10	150.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
31	150.00	149.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
32	149.90	149.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
33	149.80	149.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
34	149.70	149.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
35	149.60	149.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
36	149.50	149.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

37	149.40	149.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
38	149.30	149.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
39	149.20	149.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
40	149.10	149.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
41	149.00	148.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
42	148.90	148.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
43	148.80	148.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
44	148.70	148.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
45	148.60	148.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
46	148.50	148.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
47	148.40	148.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
48	148.30	148.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
49	148.20	148.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
50	148.10	148.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
51	148.00	147.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
52	147.90	147.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
53	147.80	147.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
54	147.70	147.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
55	147.60	147.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
56	147.50	147.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
57	147.40	147.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
58	147.30	147.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
59	147.20	147.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
TOT						156.71			37910.36	70266.22				
AVG					0.00044		0.54	11.91			6.43			
CUM						156.71								

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
1	152.900	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	152.800	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	152.700	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	152.600	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	152.500	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	152.400	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	152.300	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	152.200	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	152.100	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	152.000	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	151.900	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	151.800	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	151.700	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	151.600	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	151.500	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	151.400	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	151.300	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	151.200	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	151.100	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	151.000	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	150.900	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	150.800	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	150.700	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

24	150.600	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
25	150.500	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
26	150.400	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
27	150.300	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
28	150.200	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
29	150.100	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
30	150.000	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
31	149.900	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
32	149.800	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
33	149.700	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
34	149.600	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
35	149.500	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
36	149.400	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
37	149.300	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
38	149.200	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
39	149.100	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
40	149.000	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
41	148.900	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
42	148.800	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
43	148.700	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
44	148.600	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
45	148.500	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
46	148.400	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
47	148.300	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
48	148.200	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
49	148.100	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
50	148.000	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07

51	147.900	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
52	147.800	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
53	147.700	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
54	147.600	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
55	147.500	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
56	147.400	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
57	147.300	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
58	147.200	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
59	147.100	7.91	1.49	0.06	0.06	0.00	3.30	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
20 DEG C RATE				0.04		0.00	2.07			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1	152.900	27.40	0.00	8.30	0.00	4.32	4.82	4.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
2	152.800	27.40	0.00	8.30	0.00	3.78	4.27	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
3	152.700	27.40	0.00	8.30	0.00	3.68	3.86	3.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
4	152.600	27.40	0.00	8.30	0.00	3.67	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
5	152.500	27.40	0.00	8.30	0.00	3.68	3.30	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
6	152.400	27.40	0.00	8.30	0.00	3.68	3.11	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
7	152.300	27.40	0.00	8.30	0.00	3.69	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
8	152.200	27.40	0.00	8.30	0.00	3.69	2.86	2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
9	152.100	27.40	0.00	8.30	0.00	3.70	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
10	152.000	27.40	0.00	8.30	0.00	3.70	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.21																
11	151.900	27.40	0.00	8.30	0.00	3.70	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
12	151.800	27.40	0.00	8.30	0.00	3.70	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
13	151.700	27.40	0.00	8.30	0.00	3.70	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
14	151.600	27.40	0.00	8.30	0.00	3.70	2.58	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
15	151.500	27.40	0.00	8.30	0.00	3.70	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
16	151.400	27.40	0.00	8.30	0.00	3.71	2.55	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
17	151.300	27.40	0.00	8.30	0.00	3.71	2.54	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
18	151.200	27.40	0.00	8.30	0.00	3.71	2.53	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
19	151.100	27.40	0.00	8.30	0.00	3.71	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
20	151.000	27.40	0.00	8.30	0.00	3.71	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
21	150.900	27.40	0.00	8.30	0.00	3.71	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
22	150.800	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
23	150.700	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
24	150.600	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
25	150.500	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
26	150.400	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
27	150.300	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
28	150.200	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
29	150.100	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
30	150.000	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
31	149.900	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
32	149.800	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
33	149.700	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
34	149.600	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
35	149.500	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
36	149.400	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
37	149.300	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.21																
38	149.200	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
39	149.100	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
40	149.000	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
41	148.900	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
42	148.800	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
43	148.700	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
44	148.600	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
45	148.500	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
46	148.400	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
47	148.300	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
48	148.200	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
49	148.100	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
50	148.000	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
51	147.900	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
52	147.800	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
53	147.700	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
54	147.600	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
55	147.500	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
56	147.400	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
57	147.300	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
58	147.200	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																
59	147.100	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.21																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
60	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.71	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.21

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
60	147.10	147.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
61	147.00	146.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
62	146.90	146.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
63	146.80	146.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
64	146.70	146.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
65	146.60	146.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
66	146.50	146.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
67	146.40	146.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
68	146.30	146.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
69	146.20	146.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
70	146.10	146.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
71	146.00	145.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
72	145.90	145.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
73	145.80	145.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
74	145.70	145.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
75	145.60	145.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	

0.000

TOT								42.50					10280.78	19055.24							
AVG							0.00044			0.54	11.91						6.43				
CUM								199.20													

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
60	147.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
61	146.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
62	146.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
63	146.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
64	146.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
65	146.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
66	146.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
67	146.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
68	146.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
69	146.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
70	146.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
71	145.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
72	145.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
73	145.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
74	145.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
75	145.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
60	147.000	27.40	0.00	8.30	0.00	3.69	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
61	146.900	27.40	0.00	8.30	0.00	3.69	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
62	146.800	27.40	0.00	8.30	0.00	3.69	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
63	146.700	27.40	0.00	8.30	0.00	3.69	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
64	146.600	27.40	0.00	8.30	0.00	3.69	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
65	146.500	27.40	0.00	8.30	0.00	3.69	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
66	146.400	27.40	0.00	8.30	0.00	3.69	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
67	146.300	27.40	0.00	8.30	0.00	3.69	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
68	146.200	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
69	146.100	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
70	146.000	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
71	145.900	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
72	145.800	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	145.700	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	145.600	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	145.500	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 3 HORSE CREEK - GUICE BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL
76	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.70	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
76	145.50	145.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
77	145.40	145.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
78	145.30	145.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
79	145.20	145.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
80	145.10	145.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
81	145.00	144.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
82	144.90	144.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
83	144.80	144.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
84	144.70	144.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
TOT						23.90			5782.94	10718.57				
AVG					0.00044		0.54	11.91			6.43			
CUM						223.11								

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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	NCM SETT

1/da	1/da																				
76	145.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
77	145.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
78	145.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
79	145.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
80	145.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
81	144.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
82	144.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
83	144.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
84	144.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
76	145.400	27.40	0.00	8.30	0.00	3.69	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	145.300	27.40	0.00	8.30	0.00	3.69	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	145.200	27.40	0.00	8.30	0.00	3.69	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	145.100	27.40	0.00	8.30	0.00	3.68	2.83	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	145.000	27.40	0.00	8.30	0.00	3.68	2.86	2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	144.900	27.40	0.00	8.30	0.00	3.68	2.89	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	144.800	27.40	0.00	8.30	0.00	3.68	2.92	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	144.700	27.40	0.00	8.30	0.00	3.68	2.93	2.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	144.600	27.40	0.00	8.30	0.00	3.68	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 4 GUICE BRANCH - CURR CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
85	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.68	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
85	144.60	144.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
86	144.50	144.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
87	144.40	144.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
88	144.30	144.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
89	144.20	144.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
90	144.10	144.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
91	144.00	143.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
92	143.90	143.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
93	143.80	143.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
94	143.70	143.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
95	143.60	143.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	

0.000															
96	143.50	143.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	
0.000															
97	143.40	143.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	
0.000															
TOT						34.53			8353.13	15482.38					
AVG					0.00044		0.54	11.91			6.43				
CUM						257.64									

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
85	144.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
86	144.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
87	144.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
88	144.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
89	144.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
90	144.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
91	143.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
92	143.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
93	143.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
94	143.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
95	143.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
96	143.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
97	143.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
85	144.500	27.40	0.00	8.30	0.00	3.69	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	144.400	27.40	0.00	8.30	0.00	3.69	2.58	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	144.300	27.40	0.00	8.30	0.00	3.70	2.46	2.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	144.200	27.40	0.00	8.30	0.00	3.70	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	144.100	27.40	0.00	8.30	0.00	3.70	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	144.000	27.40	0.00	8.30	0.00	3.71	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	143.900	27.40	0.00	8.30	0.00	3.71	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	143.800	27.40	0.00	8.30	0.00	3.71	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	143.700	27.40	0.00	8.30	0.00	3.71	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	143.600	27.40	0.00	8.30	0.00	3.71	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	143.500	27.40	0.00	8.30	0.00	3.71	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	143.400	27.40	0.00	8.30	0.00	3.71	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	143.300	27.40	0.00	8.30	0.00	3.71	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 5 CURR CREEK - POPLAR BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

98	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.71	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
98	143.30	143.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
99	143.20	143.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
100	143.10	143.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
101	143.00	142.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
102	142.90	142.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
103	142.80	142.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
104	142.70	142.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
105	142.60	142.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
106	142.50	142.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
107	142.40	142.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
108	142.30	142.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
109	142.20	142.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
110	142.10	142.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
111	142.00	141.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
112	141.90	141.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
113	141.80	141.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
114	141.70	141.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
115	141.60	141.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
116	141.50	141.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
117	141.40	141.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

118	141.30	141.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
119	141.20	141.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
120	141.10	141.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
121	141.00	140.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
122	140.90	140.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
123	140.80	140.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
124	140.70	140.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
125	140.60	140.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
TOT						74.37			17991.37	33346.68				
AVG					0.00044		0.54	11.91			6.43			
CUM						332.00								

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																	
98	143.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
99	143.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
100	143.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
101	142.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
102	142.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
103	142.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
104	142.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
105	142.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
106	142.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
107	142.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
108	142.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	

109	142.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
110	142.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
111	141.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
112	141.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
113	141.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
114	141.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
115	141.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
116	141.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
117	141.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
118	141.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
119	141.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
120	141.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
121	140.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
122	140.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
123	140.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
124	140.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
125	140.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
98	143.200	27.40	0.00	8.30	0.00	3.71	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
99	143.100	27.40	0.00	8.30	0.00	3.70	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

100	143.000	27.40	0.00	8.30	0.00	3.70	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
101	142.900	27.40	0.00	8.30	0.00	3.69	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
102	142.800	27.40	0.00	8.30	0.00	3.69	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
103	142.700	27.40	0.00	8.30	0.00	3.69	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
104	142.600	27.40	0.00	8.30	0.00	3.69	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
105	142.500	27.40	0.00	8.30	0.00	3.68	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
106	142.400	27.40	0.00	8.30	0.00	3.68	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
107	142.300	27.40	0.00	8.30	0.00	3.68	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
108	142.200	27.40	0.00	8.30	0.00	3.68	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
109	142.100	27.40	0.00	8.30	0.00	3.68	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
110	142.000	27.40	0.00	8.30	0.00	3.68	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
111	141.900	27.40	0.00	8.30	0.00	3.68	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
112	141.800	27.40	0.00	8.30	0.00	3.68	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
113	141.700	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
114	141.600	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
115	141.500	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
116	141.400	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
117	141.300	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
118	141.200	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
119	141.100	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
120	141.000	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
121	140.900	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
122	140.800	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
123	140.700	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
124	140.600	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
125	140.500	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 6 POPLAR BRANCH - WHITE BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
126	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.68	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.44

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
126	140.50	140.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						2.66			642.55	1190.95					
AVG					0.00044		0.54	11.91			6.43				
CUM						334.66									

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

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
126	140.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	

AVG 20 DEG C RATE 1.30 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
126	140.400	27.40	0.00	8.30	0.00	3.70	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 7 WHITE BRANCH - COLSTON CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
127	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.70	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.33

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
127	140.40	140.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
128	140.30	140.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
129	140.20	140.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

130	140.10	140.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
131	140.00	139.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
132	139.90	139.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
133	139.80	139.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
134	139.70	139.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
135	139.60	139.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
136	139.50	139.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
137	139.40	139.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
138	139.30	139.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
139	139.20	139.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
140	139.10	139.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
141	139.00	138.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
142	138.90	138.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
143	138.80	138.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
144	138.70	138.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
145	138.60	138.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
146	138.50	138.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
147	138.40	138.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
148	138.30	138.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
149	138.20	138.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
150	138.10	138.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
151	138.00	137.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
152	137.90	137.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
153	137.80	137.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
154	137.70	137.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
155	137.60	137.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
156	137.50	137.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

157	137.40	137.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
158	137.30	137.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
159	137.20	137.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
160	137.10	137.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
161	137.00	136.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
162	136.90	136.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
163	136.80	136.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
164	136.70	136.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
TOT						100.93			24416.85	45256.21				
AVG					0.00044		0.54	11.91			6.43			
CUM						435.59								

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

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																	
127	140.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
128	140.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
129	140.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
130	140.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
131	139.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
132	139.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
133	139.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
134	139.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
135	139.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
136	139.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	
137	139.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.06																	

138	139.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
139	139.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
140	139.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
141	138.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
142	138.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
143	138.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
144	138.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
145	138.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
146	138.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
147	138.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
148	138.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
149	138.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
150	138.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
151	137.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
152	137.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
153	137.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
154	137.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
155	137.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
156	137.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
157	137.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
158	137.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
159	137.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
160	137.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
161	136.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
162	136.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
163	136.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
164	136.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			

20 DEG C RATE 0.04 0.00 2.08 0.00 0.00 0.00 0.00 0.00 0.00
0.04
AVG 20 DEG C RATE 1.30 0.05 0.00
0.05

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
127	140.300	27.40	0.00	8.30	0.00	3.70	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
128	140.200	27.40	0.00	8.30	0.00	3.70	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
129	140.100	27.40	0.00	8.30	0.00	3.70	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
130	140.000	27.40	0.00	8.30	0.00	3.70	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
131	139.900	27.40	0.00	8.30	0.00	3.70	2.05	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
132	139.800	27.40	0.00	8.30	0.00	3.70	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
133	139.700	27.40	0.00	8.30	0.00	3.70	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
134	139.600	27.40	0.00	8.30	0.00	3.70	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
135	139.500	27.40	0.00	8.30	0.00	3.70	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
136	139.400	27.40	0.00	8.30	0.00	3.70	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
137	139.300	27.40	0.00	8.30	0.00	3.70	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
138	139.200	27.40	0.00	8.30	0.00	3.70	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
139	139.100	27.40	0.00	8.30	0.00	3.70	2.11	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
140	139.000	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
141	138.900	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
142	138.800	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
143	138.700	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
144	138.600	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
145	138.500	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.33																
146	138.400	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
147	138.300	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
148	138.200	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
149	138.100	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
150	138.000	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
151	137.900	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
152	137.800	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
153	137.700	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
154	137.600	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
155	137.500	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
156	137.400	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
157	137.300	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
158	137.200	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
159	137.100	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
160	137.000	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
161	136.900	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
162	136.800	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
163	136.700	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																
164	136.600	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 8 COLSTON CREEK - FOURMILE CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

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

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
165	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.33

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

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
165	136.60	136.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
166	136.50	136.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
167	136.40	136.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
168	136.30	136.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
169	136.20	136.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						13.28			3212.74	5954.76					
AVG					0.00044		0.54	11.91			6.43				
CUM						448.87									

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
165	136.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
166	136.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
167	136.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
168	136.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
169	136.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

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 20 DEG C RATE                0.04         0.00  2.08               0.00         0.00  0.00   0.00  0.00               0.00
0.04
 AVG 20 DEG C RATE     1.30         0.05                                  0.00
0.05

 * g/m²/d              ** mg/L/day


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

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

 165  136.500  27.40  0.00     8.30     0.00   3.70   2.26   2.26   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.24
 166  136.400  27.40  0.00     8.30     0.00   3.69   2.36   2.36   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.18
 167  136.300  27.40  0.00     8.30     0.00   3.69   2.44   2.44   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.14
 168  136.200  27.40  0.00     8.30     0.00   3.69   2.49   2.49   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.10
 169  136.100  27.40  0.00     8.30     0.00   3.69   2.54   2.54   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.08

 * CM-I = CHLORIDES                        CM-II = SULFATES                          NCM = NBOD
         MG/L                                     MG/L                                    MG/L
 ** g/m³


FINAL REPORT    HEADWATER                                        CASTOR CREEK WATERSHED MODEL
REACH NO.  9    FOURMILE CREEK - POOL BRANCH                     CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE


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

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II    DO     BOD   EBOD   ORGN    NH3  NO3+2   PHOS  CHL A     COLI
NCM
 NO.               m³/     DEG C      PPT       *        *    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    #/100mL
*

  170   UPR RCH   0.00280   27.40     0.00     8.30     0.00   3.69   2.54   2.54   0.00   0.00   0.00   0.00   0.00     0.00
0.08


 ***************************************************** 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/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
170	136.10	136.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
171	136.00	135.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
172	135.90	135.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
173	135.80	135.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
174	135.70	135.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
175	135.60	135.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
176	135.50	135.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
177	135.40	135.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
178	135.30	135.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
179	135.20	135.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
180	135.10	135.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
181	135.00	134.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
182	134.90	134.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
183	134.80	134.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
184	134.70	134.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
185	134.60	134.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
186	134.50	134.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
187	134.40	134.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
188	134.30	134.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
189	134.20	134.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
190	134.10	134.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
191	134.00	133.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
192	133.90	133.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
193	133.80	133.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
194	133.70	133.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

195	133.60	133.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
196	133.50	133.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
197	133.40	133.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
198	133.30	133.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
199	133.20	133.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
200	133.10	133.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
TOT						82.34			19919.01	36919.54				
AVG					0.00044		0.54	11.91			6.43			
CUM						531.21								

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

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
170	136.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
171	135.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
172	135.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
173	135.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
174	135.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
175	135.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
176	135.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
177	135.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
178	135.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
179	135.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
180	135.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
181	134.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
182	134.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

183	134.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
184	134.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
185	134.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
186	134.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
187	134.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
188	134.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
189	134.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
190	134.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
191	133.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
192	133.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
193	133.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
194	133.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
195	133.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
196	133.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
197	133.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
198	133.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
199	133.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
200	133.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
170	136.000	27.40	0.00	8.30	0.00	3.69	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.16																
171	135.900	27.40	0.00	8.30	0.00	3.69	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
172	135.800	27.40	0.00	8.30	0.00	3.69	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.26																
173	135.700	27.40	0.00	8.30	0.00	3.69	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30																
174	135.600	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
175	135.500	27.40	0.00	8.30	0.00	3.69	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.34																
176	135.400	27.40	0.00	8.30	0.00	3.69	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.36																
177	135.300	27.40	0.00	8.30	0.00	3.69	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.37																
178	135.200	27.40	0.00	8.30	0.00	3.69	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38																
179	135.100	27.40	0.00	8.30	0.00	3.69	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38																
180	135.000	27.40	0.00	8.30	0.00	3.69	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.39																
181	134.900	27.40	0.00	8.30	0.00	3.69	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.39																
182	134.800	27.40	0.00	8.30	0.00	3.69	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.39																
183	134.700	27.40	0.00	8.30	0.00	3.69	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.39																
184	134.600	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
185	134.500	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
186	134.400	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
187	134.300	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
188	134.200	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
189	134.100	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
190	134.000	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
191	133.900	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
192	133.800	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
193	133.700	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
194	133.600	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
195	133.500	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
196	133.400	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
197	133.300	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

198	133.200	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
199	133.100	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
200	133.000	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 10 POOL BRANCH - GINNEY BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

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

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
201	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.69	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.40

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

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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 MEAN VELO m²/s	m/s
201	133.00	132.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
202	132.90	132.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						5.31			1285.10	2381.91					
AVG					0.00044		0.54	11.91			6.43				
CUM						536.52									

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

ELEM	ENDING	SAT	REAER	CBOD	CBOD	ANBOD	BKGD	FULL	CORR	ORGN	ORGN	NH3	NH3	DENIT	PO4	ALG	MAC	COLI	NCM	NCM

NO.	DIST	D.O.	RATE	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
201	132.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
202	132.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

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

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
201	132.900	27.40	0.00	8.30	0.00	3.71	1.66	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
202	132.800	27.40	0.00	8.30	0.00	3.73	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 11 GINNEY BRANCH - EDWARDS BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
203	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.73	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.22

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
203	132.80	132.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
204	132.70	132.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
205	132.60	132.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
206	132.50	132.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
207	132.40	132.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
208	132.30	132.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
209	132.20	132.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
210	132.10	132.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
211	132.00	131.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
212	131.90	131.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
213	131.80	131.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
214	131.70	131.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
215	131.60	131.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
216	131.50	131.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
217	131.40	131.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
218	131.30	131.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
219	131.20	131.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
220	131.10	131.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
221	131.00	130.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
222	130.90	130.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
223	130.80	130.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
224	130.70	130.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
225	130.60	130.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

226	130.50	130.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
227	130.40	130.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
228	130.30	130.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
229	130.20	130.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
230	130.10	130.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
231	130.00	129.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
232	129.90	129.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
233	129.80	129.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
234	129.70	129.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
235	129.60	129.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
236	129.50	129.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
237	129.40	129.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
238	129.30	129.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
239	129.20	129.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
240	129.10	129.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
241	129.00	128.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
242	128.90	128.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
243	128.80	128.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
244	128.70	128.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
245	128.60	128.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
246	128.50	128.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
247	128.40	128.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
248	128.30	128.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
249	128.20	128.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
250	128.10	128.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
251	128.00	127.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
252	127.90	127.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000

253	127.80	127.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
254	127.70	127.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
255	127.60	127.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
256	127.50	127.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
257	127.40	127.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
258	127.30	127.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
259	127.20	127.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
260	127.10	127.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
261	127.00	126.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
262	126.90	126.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
263	126.80	126.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
264	126.70	126.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
265	126.60	126.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
266	126.50	126.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
267	126.40	126.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
268	126.30	126.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
269	126.20	126.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
270	126.10	126.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
271	126.00	125.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
272	125.90	125.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
273	125.80	125.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
274	125.70	125.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
275	125.60	125.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
276	125.50	125.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
277	125.40	125.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
278	125.30	125.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
279	125.20	125.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

TOT							204.51				49476.21	91703.38							
AVG						0.00044		0.54	11.91						6.43				
CUM							741.04												

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
203	132.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
204	132.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
205	132.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
206	132.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
207	132.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
208	132.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
209	132.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
210	132.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
211	131.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
212	131.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
213	131.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
214	131.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
215	131.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
216	131.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
217	131.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
218	131.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
219	131.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
220	131.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06
221	130.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06

222	130.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
223	130.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
224	130.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
225	130.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
226	130.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
227	130.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
228	130.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
229	130.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
230	130.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
231	129.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
232	129.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
233	129.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
234	129.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
235	129.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
236	129.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
237	129.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
238	129.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
239	129.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
240	129.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
241	128.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
242	128.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
243	128.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
244	128.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
245	128.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
246	128.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
247	128.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			
248	128.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.06																			

249	128.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
250	128.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
251	127.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
252	127.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
253	127.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
254	127.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
255	127.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
256	127.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
257	127.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
258	127.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
259	127.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
260	127.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
261	126.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
262	126.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
263	126.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
264	126.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
265	126.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
266	126.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
267	126.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
268	126.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
269	126.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
270	126.000	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
271	125.900	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
272	125.800	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
273	125.700	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
274	125.600	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
275	125.500	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07

276	125.400	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07 0.06
277	125.300	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07 0.06
278	125.200	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07 0.06
279	125.100	7.91	1.49	0.06	0.06	0.00	3.31	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07 0.06
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
203	132.700	27.40	0.00	8.30	0.00	3.72	1.50	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
204	132.600	27.40	0.00	8.30	0.00	3.72	1.68	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
205	132.500	27.40	0.00	8.30	0.00	3.71	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
206	132.400	27.40	0.00	8.30	0.00	3.71	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
207	132.300	27.40	0.00	8.30	0.00	3.70	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
208	132.200	27.40	0.00	8.30	0.00	3.70	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
209	132.100	27.40	0.00	8.30	0.00	3.70	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
210	132.000	27.40	0.00	8.30	0.00	3.70	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
211	131.900	27.40	0.00	8.30	0.00	3.70	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
212	131.800	27.40	0.00	8.30	0.00	3.69	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
213	131.700	27.40	0.00	8.30	0.00	3.69	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
214	131.600	27.40	0.00	8.30	0.00	3.69	2.23	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
215	131.500	27.40	0.00	8.30	0.00	3.69	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
216	131.400	27.40	0.00	8.30	0.00	3.69	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
217	131.300	27.40	0.00	8.30	0.00	3.69	2.25	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.32																
218	131.200	27.40	0.00	8.30	0.00	3.69	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
219	131.100	27.40	0.00	8.30	0.00	3.69	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
220	131.000	27.40	0.00	8.30	0.00	3.69	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
221	130.900	27.40	0.00	8.30	0.00	3.69	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
222	130.800	27.40	0.00	8.30	0.00	3.69	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
223	130.700	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
224	130.600	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
225	130.500	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
226	130.400	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
227	130.300	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
228	130.200	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
229	130.100	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
230	130.000	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
231	129.900	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
232	129.800	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
233	129.700	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
234	129.600	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
235	129.500	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
236	129.400	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
237	129.300	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
238	129.200	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
239	129.100	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
240	129.000	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
241	128.900	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
242	128.800	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
243	128.700	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
244	128.600	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.32																
245	128.500	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
246	128.400	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
247	128.300	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
248	128.200	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
249	128.100	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
250	128.000	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
251	127.900	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
252	127.800	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
253	127.700	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
254	127.600	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
255	127.500	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
256	127.400	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
257	127.300	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
258	127.200	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
259	127.100	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
260	127.000	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
261	126.900	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
262	126.800	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
263	126.700	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
264	126.600	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
265	126.500	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
266	126.400	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
267	126.300	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
268	126.200	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
269	126.100	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
270	126.000	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
271	125.900	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

272	125.800	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
273	125.700	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
274	125.600	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
275	125.500	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
276	125.400	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
277	125.300	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
278	125.200	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
279	125.100	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 12 EDWARDS BRANCH - LITTLE FLAT CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO. *	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
280	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.69	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.32

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
280	125.10	125.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
281	125.00	124.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
282	124.90	124.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	

283	124.80	124.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
284	124.70	124.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
285	124.60	124.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
286	124.50	124.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
287	124.40	124.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
288	124.30	124.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
289	124.20	124.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
290	124.10	124.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
291	124.00	123.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
292	123.90	123.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
293	123.80	123.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
294	123.70	123.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
295	123.60	123.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
296	123.50	123.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
297	123.40	123.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
298	123.30	123.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
299	123.20	123.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
300	123.10	123.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
301	123.00	122.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
302	122.90	122.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
303	122.80	122.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
304	122.70	122.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
305	122.60	122.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
306	122.50	122.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
307	122.40	122.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
308	122.30	122.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
309	122.20	122.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000

310	122.10	122.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
311	122.00	121.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
312	121.90	121.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
313	121.80	121.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
314	121.70	121.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
315	121.60	121.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
316	121.50	121.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
317	121.40	121.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
318	121.30	121.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
319	121.20	121.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
320	121.10	121.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
321	121.00	120.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
322	120.90	120.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
323	120.80	120.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
324	120.70	120.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
325	120.60	120.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
326	120.50	120.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
327	120.40	120.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
328	120.30	120.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
329	120.20	120.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
330	120.10	120.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
331	120.00	119.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
332	119.90	119.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
333	119.80	119.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
334	119.70	119.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
335	119.60	119.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
336	119.50	119.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000

0.000															
337	119.40	119.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
338	119.30	119.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
339	119.20	119.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
340	119.10	119.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
341	119.00	118.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
342	118.90	118.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
343	118.80	118.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
344	118.70	118.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
345	118.60	118.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
346	118.50	118.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
347	118.40	118.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
348	118.30	118.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
349	118.20	118.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
350	118.10	118.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
351	118.00	117.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
352	117.90	117.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
353	117.80	117.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
TOT						298.15			72127.47	82950.52					
AVG					0.00029		0.87	11.21			9.75				
CUM						1039.18									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
280	125.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.06
281	124.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.30	0.06																		
282	124.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
283	124.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
284	124.600	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
285	124.500	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
286	124.400	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
287	124.300	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
288	124.200	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
289	124.100	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
290	124.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
291	123.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
292	123.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
293	123.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
294	123.600	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
295	123.500	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
296	123.400	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
297	123.300	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
298	123.200	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
299	123.100	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
300	123.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
301	122.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
302	122.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
303	122.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
304	122.600	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
305	122.500	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
306	122.400	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
307	122.300	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
308	122.200	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.30	0.06																		
309	122.100	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
310	122.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
311	121.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
312	121.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
313	121.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
314	121.600	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
315	121.500	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
316	121.400	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
317	121.300	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
318	121.200	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
319	121.100	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
320	121.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
321	120.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
322	120.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
323	120.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
324	120.600	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
325	120.500	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
326	120.400	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
327	120.300	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
328	120.200	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
329	120.100	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
330	120.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
331	119.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
332	119.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
333	119.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
334	119.600	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
335	119.500	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.30	0.06																		
336	119.400	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
337	119.300	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
338	119.200	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
339	119.100	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
340	119.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
341	118.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
342	118.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
343	118.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
344	118.600	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
345	118.500	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
346	118.400	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
347	118.300	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
348	118.200	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
349	118.100	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
350	118.000	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
351	117.900	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
352	117.800	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
353	117.700	7.91	0.93	0.04	0.06	0.00	3.38	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.30	0.06																		
20 DEG C RATE				0.03		0.00	2.12			0.00		0.00	0.00	0.00	0.00			0.00	
0.18																			
AVG 20 DEG C RATE			0.81		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *

280	125.000	27.40	0.00	8.30	0.00	3.57	2.12	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25																
281	124.900	27.40	0.00	8.30	0.00	3.55	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
282	124.800	27.40	0.00	8.30	0.00	3.56	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20																
283	124.700	27.40	0.00	8.30	0.00	3.56	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20																
284	124.600	27.40	0.00	8.30	0.00	3.56	1.86	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20																
285	124.500	27.40	0.00	8.30	0.00	3.57	1.84	1.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20																
286	124.400	27.40	0.00	8.30	0.00	3.57	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
287	124.300	27.40	0.00	8.30	0.00	3.57	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
288	124.200	27.40	0.00	8.30	0.00	3.57	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
289	124.100	27.40	0.00	8.30	0.00	3.57	1.79	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
290	124.000	27.40	0.00	8.30	0.00	3.57	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
291	123.900	27.40	0.00	8.30	0.00	3.57	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
292	123.800	27.40	0.00	8.30	0.00	3.57	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
293	123.700	27.40	0.00	8.30	0.00	3.57	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
294	123.600	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
295	123.500	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
296	123.400	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
297	123.300	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
298	123.200	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
299	123.100	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
300	123.000	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
301	122.900	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
302	122.800	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
303	122.700	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
304	122.600	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
305	122.500	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
306	122.400	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																

307	122.300	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
308	122.200	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
309	122.100	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
310	122.000	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
311	121.900	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
312	121.800	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
313	121.700	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
314	121.600	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
315	121.500	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
316	121.400	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
317	121.300	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
318	121.200	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
319	121.100	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
320	121.000	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
321	120.900	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
322	120.800	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
323	120.700	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
324	120.600	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
325	120.500	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
326	120.400	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
327	120.300	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
328	120.200	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
329	120.100	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
330	120.000	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
331	119.900	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
332	119.800	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
333	119.700	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																

334	119.600	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
335	119.500	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
336	119.400	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
337	119.300	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
338	119.200	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
339	119.100	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
340	119.000	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
341	118.900	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
342	118.800	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
343	118.700	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
344	118.600	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
345	118.500	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
346	118.400	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
347	118.300	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
348	118.200	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
349	118.100	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
350	118.000	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
351	117.900	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
352	117.800	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																
353	117.700	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.19																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m^3

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 13 LITTLE FLAT - GLADE CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM	TYPE	FLOW	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	ORGN	NH3	NO3+2	PHOS	CHL A	COLI

NCM NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
354	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.57	1.77	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.19

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
354	117.70	117.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
355	117.60	117.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
356	117.50	117.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
357	117.40	117.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
358	117.30	117.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
359	117.20	117.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
360	117.10	117.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
361	117.00	116.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
362	116.90	116.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
363	116.80	116.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
364	116.70	116.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
365	116.60	116.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
366	116.50	116.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
367	116.40	116.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
368	116.30	116.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
369	116.20	116.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
370	116.10	116.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
371	116.00	115.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000

372	115.90	115.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
373	115.80	115.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
374	115.70	115.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
375	115.60	115.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
376	115.50	115.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
377	115.40	115.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
378	115.30	115.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
379	115.20	115.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
380	115.10	115.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
381	115.00	114.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
382	114.90	114.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
383	114.80	114.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
384	114.70	114.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
385	114.60	114.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
386	114.50	114.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
387	114.40	114.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
388	114.30	114.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
389	114.20	114.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
390	114.10	114.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
TOT						144.34			34919.92	41105.25					
AVG					0.00030		0.85	11.11			9.44				
CUM						1183.53									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

354	117.600	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
355	117.500	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
356	117.400	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
357	117.300	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
358	117.200	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
359	117.100	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
360	117.000	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
361	116.900	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
362	116.800	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
363	116.700	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
364	116.600	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
365	116.500	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
366	116.400	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
367	116.300	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
368	116.200	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
369	116.100	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
370	116.000	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
371	115.900	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
372	115.800	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
373	115.700	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
374	115.600	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
375	115.500	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
376	115.400	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
377	115.300	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
378	115.200	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
379	115.100	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			
380	115.000	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
0.06																			

381	114.900	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
382	114.800	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
383	114.700	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
384	114.600	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
385	114.500	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
386	114.400	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
387	114.300	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
388	114.200	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
389	114.100	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
390	114.000	7.91	0.95	0.06	0.06	0.00	3.43	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30 0.06
20 DEG C RATE				0.04		0.00	2.15			0.00		0.00	0.00	0.00	0.00			0.00	0.18
AVG 20 DEG C RATE			0.82		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
354	117.600	27.40	0.00	8.30	0.00	3.49	1.45	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
355	117.500	27.40	0.00	8.30	0.00	3.47	1.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
356	117.400	27.40	0.00	8.30	0.00	3.47	1.08	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
357	117.300	27.40	0.00	8.30	0.00	3.47	0.97	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
358	117.200	27.40	0.00	8.30	0.00	3.47	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
359	117.100	27.40	0.00	8.30	0.00	3.48	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
360	117.000	27.40	0.00	8.30	0.00	3.48	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
361	116.900	27.40	0.00	8.30	0.00	3.48	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
362	116.800	27.40	0.00	8.30	0.00	3.48	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

363	116.700	27.40	0.00	8.30	0.00	3.48	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
364	116.600	27.40	0.00	8.30	0.00	3.48	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
365	116.500	27.40	0.00	8.30	0.00	3.48	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
366	116.400	27.40	0.00	8.30	0.00	3.48	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
367	116.300	27.40	0.00	8.30	0.00	3.48	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
368	116.200	27.40	0.00	8.30	0.00	3.48	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
369	116.100	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
370	116.000	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
371	115.900	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
372	115.800	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
373	115.700	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
374	115.600	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
375	115.500	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
376	115.400	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
377	115.300	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
378	115.200	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
379	115.100	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
380	115.000	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
381	114.900	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
382	114.800	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
383	114.700	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
384	114.600	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
385	114.500	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
386	114.400	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
387	114.300	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
388	114.200	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
389	114.100	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.40																	
390	114.000	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																	

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 14 GLADE CREEK - CUB CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
391	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.48	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.40

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
391	114.00	113.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
392	113.90	113.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
393	113.80	113.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
394	113.70	113.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
395	113.60	113.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
396	113.50	113.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
397	113.40	113.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
398	113.30	113.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
399	113.20	113.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
400	113.10	113.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	

401	113.00	112.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
402	112.90	112.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
403	112.80	112.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
404	112.70	112.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
405	112.60	112.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
406	112.50	112.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
407	112.40	112.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
408	112.30	112.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
409	112.20	112.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
410	112.10	112.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
411	112.00	111.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
412	111.90	111.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
413	111.80	111.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
414	111.70	111.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
415	111.60	111.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
416	111.50	111.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
417	111.40	111.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
418	111.30	111.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
419	111.20	111.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
420	111.10	111.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
421	111.00	110.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
422	110.90	110.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
423	110.80	110.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
424	110.70	110.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
425	110.60	110.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
426	110.50	110.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
427	110.40	110.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000

0.000															
428	110.30	110.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
429	110.20	110.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
430	110.10	110.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
431	110.00	109.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
432	109.90	109.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
433	109.80	109.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
434	109.70	109.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
435	109.60	109.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
436	109.50	109.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
437	109.40	109.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
438	109.30	109.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
439	109.20	109.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
440	109.10	109.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
441	109.00	108.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
442	108.90	108.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
443	108.80	108.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
444	108.70	108.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
445	108.60	108.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
TOT						209.52			50685.94	61102.41					
AVG					0.00030		0.83	11.11			9.22				
CUM						1393.04									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
391	113.900	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

392	113.800	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
393	113.700	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
394	113.600	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
395	113.500	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
396	113.400	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
397	113.300	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
398	113.200	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
399	113.100	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
400	113.000	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
401	112.900	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
402	112.800	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
403	112.700	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
404	112.600	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
405	112.500	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
406	112.400	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
407	112.300	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
408	112.200	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
409	112.100	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
410	112.000	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
411	111.900	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
412	111.800	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
413	111.700	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
414	111.600	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
415	111.500	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
416	111.400	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
417	111.300	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
418	111.200	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28

0.28	0.06																		
419	111.100	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
420	111.000	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
421	110.900	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
422	110.800	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
423	110.700	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
424	110.600	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
425	110.500	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
426	110.400	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
427	110.300	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
428	110.200	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
429	110.100	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
430	110.000	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
431	109.900	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
432	109.800	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
433	109.700	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
434	109.600	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
435	109.500	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
436	109.400	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
437	109.300	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
438	109.200	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
439	109.100	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
440	109.000	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
441	108.900	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
442	108.800	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
443	108.700	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
444	108.600	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
445	108.500	7.91	0.97	0.07	0.06	0.00	3.39	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.28 0.06

20 DEG C RATE 0.05 0.00 2.13 0.00 0.00 0.00 0.00 0.00 0.00
0.17
AVG 20 DEG C RATE 0.84 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
391	113.900	27.40	0.00	8.30	0.00	3.51	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
392	113.800	27.40	0.00	8.30	0.00	3.51	0.67	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
393	113.700	27.40	0.00	8.30	0.00	3.51	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
394	113.600	27.40	0.00	8.30	0.00	3.51	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
395	113.500	27.40	0.00	8.30	0.00	3.51	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
396	113.400	27.40	0.00	8.30	0.00	3.51	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
397	113.300	27.40	0.00	8.30	0.00	3.51	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
398	113.200	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
399	113.100	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
400	113.000	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
401	112.900	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
402	112.800	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
403	112.700	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
404	112.600	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
405	112.500	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
406	112.400	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
407	112.300	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
408	112.200	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46

409	112.100	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
410	112.000	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
411	111.900	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
412	111.800	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
413	111.700	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
414	111.600	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
415	111.500	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
416	111.400	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
417	111.300	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
418	111.200	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
419	111.100	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
420	111.000	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
421	110.900	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
422	110.800	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
423	110.700	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
424	110.600	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
425	110.500	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
426	110.400	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
427	110.300	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
428	110.200	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
429	110.100	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
430	110.000	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
431	109.900	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
432	109.800	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
433	109.700	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
434	109.600	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
435	109.500	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																

436	109.400	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
437	109.300	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
438	109.200	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
439	109.100	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
440	109.000	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
441	108.900	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
442	108.800	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
443	108.700	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
444	108.600	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
445	108.500	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 15 CUB CREEK - COW CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
446	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.51	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.46

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
446	108.50	108.40	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000

447	108.40	108.30	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
448	108.30	108.20	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
449	108.20	108.10	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
450	108.10	108.00	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
451	108.00	107.90	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
452	107.90	107.80	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
453	107.80	107.70	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
454	107.70	107.60	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
455	107.60	107.50	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
456	107.50	107.40	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
457	107.40	107.30	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
TOT						45.16			10925.44	13331.43					
AVG					0.00031		0.82	11.11			9.10				
CUM						1438.20									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
446	108.400	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
447	108.300	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
448	108.200	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
449	108.100	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
450	108.000	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
451	107.900	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
452	107.800	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
453	107.700	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06

454	107.600	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
455	107.500	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
456	107.400	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
457	107.300	7.91	0.98	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
20 DEG C RATE				0.06		0.00	2.11			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.85		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
446	108.400	27.40	0.00	8.30	0.00	3.53	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
447	108.300	27.40	0.00	8.30	0.00	3.53	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
448	108.200	27.40	0.00	8.30	0.00	3.53	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
449	108.100	27.40	0.00	8.30	0.00	3.52	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
450	108.000	27.40	0.00	8.30	0.00	3.52	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
451	107.900	27.40	0.00	8.30	0.00	3.52	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
452	107.800	27.40	0.00	8.30	0.00	3.52	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
453	107.700	27.40	0.00	8.30	0.00	3.52	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
454	107.600	27.40	0.00	8.30	0.00	3.52	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
455	107.500	27.40	0.00	8.30	0.00	3.52	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
456	107.400	27.40	0.00	8.30	0.00	3.52	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
457	107.300	27.40	0.00	8.30	0.00	3.52	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 16 COW CREEK - BEAR CREEK BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
458	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.52	0.64	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.54

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
458	107.30	107.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
459	107.20	107.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
460	107.10	107.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
461	107.00	106.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
462	106.90	106.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
463	106.80	106.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
464	106.70	106.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
465	106.60	106.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
466	106.50	106.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
467	106.40	106.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
468	106.30	106.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
469	106.20	106.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
470	106.10	106.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
471	106.00	105.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	

472	105.90	105.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
473	105.80	105.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
474	105.70	105.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
475	105.60	105.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
476	105.50	105.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
477	105.40	105.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
478	105.30	105.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
479	105.20	105.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
480	105.10	105.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
481	105.00	104.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
482	104.90	104.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
483	104.80	104.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
484	104.70	104.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
485	104.60	104.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
486	104.50	104.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
487	104.40	104.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
488	104.30	104.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
489	104.20	104.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
TOT						118.96			28779.00	35550.49					
AVG					0.00031		0.81	11.11			8.99				
CUM						1557.16									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
458	107.200	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.28	0.06																		
459	107.100	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
460	107.000	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
461	106.900	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
462	106.800	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
463	106.700	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
464	106.600	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
465	106.500	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
466	106.400	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
467	106.300	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
468	106.200	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
469	106.100	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
470	106.000	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
471	105.900	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
472	105.800	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
473	105.700	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
474	105.600	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
475	105.500	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
476	105.400	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
477	105.300	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
478	105.200	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
479	105.100	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
480	105.000	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
481	104.900	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
482	104.800	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
483	104.700	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
484	104.600	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.28	0.06																		
485	104.500	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.28	0.06																			
486	104.400	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.28	0.06																			
487	104.300	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.28	0.06																			
488	104.200	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.28	0.06																			
489	104.100	7.91	0.99	0.08	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.28	0.06																			
20 DEG C RATE				0.06		0.00	2.11			0.00		0.00	0.00	0.00	0.00			0.00		
0.17																				
AVG 20 DEG C RATE			0.86		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
458	107.200	27.40	0.00	8.30	0.00	3.53	0.67	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
459	107.100	27.40	0.00	8.30	0.00	3.53	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
460	107.000	27.40	0.00	8.30	0.00	3.53	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
461	106.900	27.40	0.00	8.30	0.00	3.53	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
462	106.800	27.40	0.00	8.30	0.00	3.53	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
463	106.700	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
464	106.600	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
465	106.500	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
466	106.400	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
467	106.300	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
468	106.200	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
469	106.100	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
470	106.000	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
471	105.900	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51

472	105.800	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
473	105.700	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
474	105.600	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
475	105.500	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
476	105.400	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
477	105.300	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
478	105.200	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
479	105.100	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
480	105.000	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
481	104.900	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
482	104.800	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
483	104.700	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
484	104.600	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
485	104.500	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
486	104.400	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
487	104.300	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
488	104.200	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
489	104.100	27.40	0.00	8.30	0.00	3.53	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 17 BEAR CREEK BRANCH - BILES BR CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

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  490   UPR RCH   0.00280   27.40     0.00     8.30     0.00   3.53   0.72   0.72   0.00   0.00   0.00   0.00   0.00     0.00
0.51


 ************************************************** 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/           m/s      days      m      m      m³         m²      m²         m³      m/s    m²/s
m/s

  490  104.10  104.00    0.00280   0.00  0.00032     3.64   0.80  11.01    880.24    1100.95    8.80      0.00  0.000     0.000
0.000
  491  104.00  103.90    0.00280   0.00  0.00032     3.64   0.80  11.01    880.24    1100.95    8.80      0.00  0.000     0.000
0.000
  492  103.90  103.80    0.00280   0.00  0.00032     3.64   0.80  11.01    880.24    1100.95    8.80      0.00  0.000     0.000
0.000
  493  103.80  103.70    0.00280   0.00  0.00032     3.64   0.80  11.01    880.24    1100.95    8.80      0.00  0.000     0.000
0.000

  TOT                                              14.55                  3520.96    4403.81
  AVG                                     0.00032            0.80  11.01                         8.80
  CUM                                            1571.72


 ********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS
**********************************************

 ELEM  ENDING  SAT    REAER   CBOD  CBOD  ANBOD  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI
NCM   NCM
 NO.     DIST  D.O.    RATE  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

 490  104.000  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 491  103.900  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 492  103.800  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 493  103.700  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06

 20 DEG C RATE                 0.07         0.00  2.11               0.00         0.00  0.00   0.00  0.00               0.00
0.17
 AVG 20 DEG C RATE     0.88         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day
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********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
490	104.000	27.40	0.00	8.30	0.00	3.50	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
491	103.900	27.40	0.00	8.30	0.00	3.49	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
492	103.800	27.40	0.00	8.30	0.00	3.49	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
493	103.700	27.40	0.00	8.30	0.00	3.49	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 18 BILES BRANCH - HURRICANE CR CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS
****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
494	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.49	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.82

********** HYDRAULIC PARAMETER VALUES
****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
494	103.70	103.60	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
495	103.60	103.50	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
496	103.50	103.40	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	

497	103.40	103.30	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
498	103.30	103.20	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
499	103.20	103.10	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
500	103.10	103.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
501	103.00	102.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
502	102.90	102.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
503	102.80	102.70	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
504	102.70	102.60	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
505	102.60	102.50	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
506	102.50	102.40	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
507	102.40	102.30	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
508	102.30	102.20	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
509	102.20	102.10	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
510	102.10	102.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
511	102.00	101.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
512	101.90	101.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
TOT						69.13			16724.54	20918.10					
AVG					0.00032		0.80	11.01			8.80				
CUM						1640.85									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
494	103.600	7.91	1.01	0.10	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
495	103.500	7.91	1.01	0.10	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
496	103.400	7.91	1.01	0.10	0.06	0.00	3.36	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

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0.28  0.06
 497  103.300  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 498  103.200  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 499  103.100  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 500  103.000  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 501  102.900  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 502  102.800  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 503  102.700  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 504  102.600  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 505  102.500  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 506  102.400  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 507  102.300  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 508  102.200  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 509  102.100  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 510  102.000  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 511  101.900  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06
 512  101.800  7.91    1.01   0.10  0.06   0.00  3.36  3.36  3.36   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.28  0.06

 20 DEG C RATE                 0.07         0.00  2.11               0.00         0.00  0.00   0.00  0.00                0.00
0.17
 AVG 20 DEG C RATE     0.88         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day


 ************************************************** WATER QUALITY CONSTITUENT VALUES
**************************************************

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

 494  103.600  27.40  0.00     8.30     0.00   3.51   0.35   0.35   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.66
 495  103.500  27.40  0.00     8.30     0.00   3.52   0.50   0.50   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.59
```

496	103.400	27.40	0.00	8.30	0.00	3.52	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
497	103.300	27.40	0.00	8.30	0.00	3.52	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
498	103.200	27.40	0.00	8.30	0.00	3.52	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
499	103.100	27.40	0.00	8.30	0.00	3.51	0.72	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
500	103.000	27.40	0.00	8.30	0.00	3.51	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
501	102.900	27.40	0.00	8.30	0.00	3.51	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
502	102.800	27.40	0.00	8.30	0.00	3.51	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
503	102.700	27.40	0.00	8.30	0.00	3.51	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
504	102.600	27.40	0.00	8.30	0.00	3.51	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
505	102.500	27.40	0.00	8.30	0.00	3.51	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
506	102.400	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
507	102.300	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
508	102.200	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
509	102.100	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
510	102.000	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
511	101.900	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
512	101.800	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 19 HURRICANE CR - INDIAN BRANCH CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
513	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.51	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.53

********** HYDRAULIC PARAMETER VALUES
****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
513	101.80	101.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
514	101.70	101.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
515	101.60	101.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
516	101.50	101.40	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
517	101.40	101.30	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
518	101.30	101.20	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
519	101.20	101.10	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
520	101.10	101.00	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
521	101.00	100.90	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
522	100.90	100.80	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
523	100.80	100.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
524	100.70	100.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
525	100.60	100.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
526	100.50	100.40	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
527	100.40	100.30	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
528	100.30	100.20	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
529	100.20	100.10	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
530	100.10	100.00	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
531	100.00	99.90	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
532	99.90	99.80	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
533	99.80	99.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000

534	99.70	99.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
535	99.60	99.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
TOT						82.64			19992.27	25321.91					
AVG					0.00032		0.79	11.01			8.69				
CUM						1723.49									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
513	101.700	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
514	101.600	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
515	101.500	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
516	101.400	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
517	101.300	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
518	101.200	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
519	101.100	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
520	101.000	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
521	100.900	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
522	100.800	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
523	100.700	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
524	100.600	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
525	100.500	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
526	100.400	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
527	100.300	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
528	100.200	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
529	100.100	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06

530	100.000	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
531	99.900	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
532	99.800	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
533	99.700	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
534	99.600	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
535	99.500	7.91	1.02	0.10	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.06
20 DEG C RATE				0.07		0.00	2.02			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.89		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
513	101.700	27.40	0.00	8.30	0.00	3.65	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
514	101.600	27.40	0.00	8.30	0.00	3.67	1.43	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
515	101.500	27.40	0.00	8.30	0.00	3.67	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
516	101.400	27.40	0.00	8.30	0.00	3.66	1.71	1.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
517	101.300	27.40	0.00	8.30	0.00	3.66	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
518	101.200	27.40	0.00	8.30	0.00	3.65	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
519	101.100	27.40	0.00	8.30	0.00	3.65	1.85	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
520	101.000	27.40	0.00	8.30	0.00	3.65	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
521	100.900	27.40	0.00	8.30	0.00	3.65	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
522	100.800	27.40	0.00	8.30	0.00	3.65	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
523	100.700	27.40	0.00	8.30	0.00	3.65	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
524	100.600	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
525	100.500	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

526	100.400	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
527	100.300	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
528	100.200	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
529	100.100	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
530	100.000	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
531	99.900	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
532	99.800	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
533	99.700	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
534	99.600	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
535	99.500	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 20 INDIAN BRANCH - MOODY CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
536	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.65	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.29

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
536	99.50	99.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	

537	99.40	99.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
538	99.30	99.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
539	99.20	99.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
540	99.10	99.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
541	99.00	98.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
542	98.90	98.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
543	98.80	98.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
544	98.70	98.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
545	98.60	98.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
546	98.50	98.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
547	98.40	98.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
548	98.30	98.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
549	98.20	98.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
550	98.10	98.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
551	98.00	97.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
552	97.90	97.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
553	97.80	97.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
554	97.70	97.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
555	97.60	97.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
556	97.50	97.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
557	97.40	97.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
558	97.30	97.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
559	97.20	97.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
560	97.10	97.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
561	97.00	96.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
562	96.90	96.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
563	96.80	96.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000

564	96.70	96.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
565	96.60	96.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
TOT						106.43			25746.60	33028.58					
AVG					0.00033		0.78	11.01			8.58				
CUM						1829.91									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
536	99.400	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
537	99.300	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
538	99.200	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
539	99.100	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
540	99.000	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
541	98.900	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
542	98.800	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
543	98.700	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
544	98.600	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
545	98.500	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
546	98.400	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
547	98.300	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
548	98.200	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
549	98.100	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
550	98.000	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
551	97.900	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
552	97.800	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.26	0.06																			
553	97.700	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
554	97.600	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
555	97.500	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
556	97.400	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
557	97.300	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
558	97.200	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
559	97.100	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
560	97.000	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
561	96.900	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
562	96.800	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
563	96.700	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
564	96.600	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
565	96.500	7.91	1.03	0.08	0.06	0.00	3.06	3.06	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
0.26	0.06																			
20 DEG C RATE				0.06		0.00	1.92			0.00		0.00	0.00	0.00	0.00			0.00		
0.16																				
AVG 20 DEG C RATE			0.90		0.05						0.00									
0.05																				

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
536	99.400	27.40	0.00	8.30	0.00	3.80	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
537	99.300	27.40	0.00	8.30	0.00	3.81	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
538	99.200	27.40	0.00	8.30	0.00	3.81	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
539	99.100	27.40	0.00	8.30	0.00	3.80	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
540	99.000	27.40	0.00	8.30	0.00	3.79	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48

541	98.900	27.40	0.00	8.30	0.00	3.79	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
542	98.800	27.40	0.00	8.30	0.00	3.79	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
543	98.700	27.40	0.00	8.30	0.00	3.79	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
544	98.600	27.40	0.00	8.30	0.00	3.79	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
545	98.500	27.40	0.00	8.30	0.00	3.79	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
546	98.400	27.40	0.00	8.30	0.00	3.79	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
547	98.300	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
548	98.200	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
549	98.100	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
550	98.000	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
551	97.900	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
552	97.800	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
553	97.700	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
554	97.600	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
555	97.500	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
556	97.400	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
557	97.300	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
558	97.200	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
559	97.100	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
560	97.000	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
561	96.900	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
562	96.800	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
563	96.700	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
564	96.600	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
565	96.500	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 21 MOODY CREEK - BULL CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
566	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.79	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.48

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
566	96.50	96.40	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
567	96.40	96.30	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
568	96.30	96.20	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
569	96.20	96.10	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
570	96.10	96.00	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
571	96.00	95.90	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
572	95.90	95.80	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
573	95.80	95.70	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
574	95.70	95.60	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
575	95.60	95.50	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
576	95.50	95.40	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
577	95.40	95.30	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
578	95.30	95.20	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000

579	95.20	95.10	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
580	95.10	95.00	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
581	95.00	94.90	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
582	94.90	94.80	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
TOT						59.53			14402.57	18716.19				
AVG					0.00033		0.77	11.01			8.47			
CUM						1889.45								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
566	96.400	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
567	96.300	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
568	96.200	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
569	96.100	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
570	96.000	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
571	95.900	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
572	95.800	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
573	95.700	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
574	95.600	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
575	95.500	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
576	95.400	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
577	95.300	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
578	95.200	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
579	95.100	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06
580	95.000	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.06

581	94.900	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26 0.06
582	94.800	7.91	1.05	0.08	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26 0.06
20 DEG C RATE				0.06		0.00	1.91			0.00		0.00	0.00	0.00	0.00			0.00	0.16
AVG 20 DEG C RATE			0.91		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
566	96.400	27.40	0.00	8.30	0.00	3.81	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
567	96.300	27.40	0.00	8.30	0.00	3.82	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
568	96.200	27.40	0.00	8.30	0.00	3.82	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
569	96.100	27.40	0.00	8.30	0.00	3.82	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
570	96.000	27.40	0.00	8.30	0.00	3.82	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
571	95.900	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
572	95.800	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
573	95.700	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
574	95.600	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
575	95.500	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
576	95.400	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
577	95.300	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
578	95.200	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
579	95.100	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
580	95.000	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
581	94.900	27.40	0.00	8.30	0.00	3.82	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
582	94.800	27.40	0.00	8.30	0.00	3.82	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.43

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 22 BULL CREEK - SWEETWATER CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
583	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.82	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.43

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
583	94.80	94.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
584	94.70	94.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
585	94.60	94.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
586	94.50	94.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
587	94.40	94.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
588	94.30	94.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
589	94.20	94.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
590	94.10	94.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
591	94.00	93.90	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
592	93.90	93.80	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
593	93.80	93.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	

594	93.70	93.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
595	93.60	93.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
596	93.50	93.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
597	93.40	93.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
598	93.30	93.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
599	93.20	93.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
600	93.10	93.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
601	93.00	92.90	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
602	92.90	92.80	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
603	92.80	92.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
604	92.70	92.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
605	92.60	92.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
606	92.50	92.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
607	92.40	92.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
608	92.30	92.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
609	92.20	92.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
610	92.10	92.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
TOT						96.78			23413.63	30826.68					
AVG					0.00033		0.76	11.01			8.36				
CUM						1986.23									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
583	94.700	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
584	94.600	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

585	94.500	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
586	94.400	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
587	94.300	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
588	94.200	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
589	94.100	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
590	94.000	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
591	93.900	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
592	93.800	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
593	93.700	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
594	93.600	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
595	93.500	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
596	93.400	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
597	93.300	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
598	93.200	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
599	93.100	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
600	93.000	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
601	92.900	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
602	92.800	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
603	92.700	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
604	92.600	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
605	92.500	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
606	92.400	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
607	92.300	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
608	92.200	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
609	92.100	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
610	92.000	7.91	1.06	0.08	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25

20 DEG C RATE				0.06	0.00	1.98			0.00		0.00	0.00	0.00	0.00		0.00
0.15																
AVG 20 DEG C RATE			0.92		0.05					0.00						
0.05																

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
583	94.700	27.40	0.00	8.30	0.00	3.53	4.47	4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78
584	94.600	27.40	0.00	8.30	0.00	3.35	5.85	5.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
585	94.500	27.40	0.00	8.30	0.00	3.24	6.76	6.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
586	94.400	27.40	0.00	8.30	0.00	3.17	7.37	7.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
587	94.300	27.40	0.00	8.30	0.00	3.13	7.78	7.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09
588	94.200	27.40	0.00	8.30	0.00	3.10	8.06	8.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
589	94.100	27.40	0.00	8.30	0.00	3.08	8.24	8.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
590	94.000	27.40	0.00	8.30	0.00	3.07	8.36	8.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
591	93.900	27.40	0.00	8.30	0.00	3.06	8.44	8.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
592	93.800	27.40	0.00	8.30	0.00	3.05	8.50	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
593	93.700	27.40	0.00	8.30	0.00	3.05	8.54	8.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
594	93.600	27.40	0.00	8.30	0.00	3.05	8.56	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
595	93.500	27.40	0.00	8.30	0.00	3.05	8.58	8.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
596	93.400	27.40	0.00	8.30	0.00	3.05	8.59	8.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
597	93.300	27.40	0.00	8.30	0.00	3.05	8.59	8.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
598	93.200	27.40	0.00	8.30	0.00	3.04	8.60	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
599	93.100	27.40	0.00	8.30	0.00	3.04	8.60	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
600	93.000	27.40	0.00	8.30	0.00	3.04	8.60	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
601	92.900	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11

602	92.800	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
603	92.700	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
604	92.600	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
605	92.500	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
606	92.400	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
607	92.300	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
608	92.200	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
609	92.100	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
610	92.000	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 23 SWEETWATER CREEK - BRUSHY CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
611	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.04	8.61	8.61	0.00	0.00	0.00	0.00	0.00	0.00	1.11

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
611	92.00	91.90	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
612	91.90	91.80	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000

613	91.80	91.70	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
614	91.70	91.60	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
615	91.60	91.50	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
616	91.50	91.40	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
617	91.40	91.30	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
618	91.30	91.20	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
619	91.20	91.10	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
620	91.10	91.00	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
TOT						34.11			8251.91	11009.52				
AVG					0.00034		0.75	11.01			8.25			
CUM						2020.34								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
611	91.900	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
612	91.800	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
613	91.700	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
614	91.600	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
615	91.500	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
616	91.400	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
617	91.300	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
618	91.200	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
619	91.100	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
620	91.000	7.91	1.07	0.07	0.06	0.00	3.22	3.22	3.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06
20 DEG C RATE				0.05		0.00	2.02			0.00		0.00	0.00	0.00	0.00			0.00		

0.15
AVG 20 DEG C RATE 0.93 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
611	91.900	27.40	0.00	8.30	0.00	3.13	8.26	8.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
612	91.800	27.40	0.00	8.30	0.00	3.17	8.02	8.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
613	91.700	27.40	0.00	8.30	0.00	3.20	7.85	7.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
614	91.600	27.40	0.00	8.30	0.00	3.21	7.73	7.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
615	91.500	27.40	0.00	8.30	0.00	3.22	7.65	7.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80
616	91.400	27.40	0.00	8.30	0.00	3.23	7.59	7.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
617	91.300	27.40	0.00	8.30	0.00	3.23	7.56	7.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
618	91.200	27.40	0.00	8.30	0.00	3.23	7.53	7.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
619	91.100	27.40	0.00	8.30	0.00	3.24	7.51	7.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
620	91.000	27.40	0.00	8.30	0.00	3.24	7.50	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 24 BRUSHY CREEK - WHITE OAK CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS
****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
621	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.24	7.50	7.50	0.00	0.00	0.00	0.00	0.00	0.00	

0.79

********** HYDRAULIC PARAMETER VALUES
****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
621	91.00	90.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
622	90.90	90.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
623	90.80	90.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
624	90.70	90.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
625	90.60	90.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
626	90.50	90.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
627	90.40	90.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
628	90.30	90.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
629	90.20	90.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
630	90.10	90.00	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
631	90.00	89.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
632	89.90	89.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
633	89.80	89.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
634	89.70	89.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
635	89.60	89.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
636	89.50	89.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
637	89.40	89.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
638	89.30	89.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
639	89.20	89.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
640	89.10	89.00	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
641	89.00	88.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	

0.000														
642	88.90	88.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
643	88.80	88.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
644	88.70	88.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
645	88.60	88.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
646	88.50	88.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
647	88.40	88.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
648	88.30	88.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
649	88.20	88.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
TOT						97.60			23611.27	31927.63				
AVG					0.00034		0.74	11.01			8.14			
CUM						2117.94								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
621	90.900	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
622	90.800	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
623	90.700	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
624	90.600	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
625	90.500	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
626	90.400	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
627	90.300	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
628	90.200	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
629	90.100	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
630	90.000	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
631	89.900	7.91	1.09	0.07	0.06	0.00	3.24	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

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0.23  0.06
 632   89.800  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 633   89.700  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 634   89.600  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 635   89.500  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 636   89.400  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 637   89.300  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 638   89.200  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 639   89.100  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 640   89.000  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 641   88.900  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 642   88.800  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 643   88.700  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 644   88.600  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 645   88.500  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 646   88.400  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 647   88.300  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 648   88.200  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06
 649   88.100  7.91    1.09   0.07  0.06   0.00  3.24  3.24  3.24   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.23  0.06

 20 DEG C RATE                 0.05         0.00  2.03               0.00         0.00  0.00   0.00  0.00               0.00
0.14
 AVG 20 DEG C RATE     0.95         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day


 ************************************************ WATER QUALITY CONSTITUENT VALUES
************************************************

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*
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621	90.900	27.40	0.00	8.30	0.00	3.17	8.29	8.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.98																
622	90.800	27.40	0.00	8.30	0.00	3.11	8.85	8.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.07																
623	90.700	27.40	0.00	8.30	0.00	3.07	9.23	9.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.12																
624	90.600	27.40	0.00	8.30	0.00	3.04	9.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.14																
625	90.500	27.40	0.00	8.30	0.00	3.02	9.69	9.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.15																
626	90.400	27.40	0.00	8.30	0.00	3.01	9.82	9.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.16																
627	90.300	27.40	0.00	8.30	0.00	3.01	9.91	9.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.16																
628	90.200	27.40	0.00	8.30	0.00	3.00	9.97	9.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.16																
629	90.100	27.40	0.00	8.30	0.00	3.00	10.01	10.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
630	90.000	27.40	0.00	8.30	0.00	2.99	10.04	10.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
631	89.900	27.40	0.00	8.30	0.00	2.99	10.06	10.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
632	89.800	27.40	0.00	8.30	0.00	2.99	10.08	10.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
633	89.700	27.40	0.00	8.30	0.00	2.99	10.09	10.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
634	89.600	27.40	0.00	8.30	0.00	2.99	10.10	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
635	89.500	27.40	0.00	8.30	0.00	2.99	10.10	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
636	89.400	27.40	0.00	8.30	0.00	2.99	10.10	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
637	89.300	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
638	89.200	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
639	89.100	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
640	89.000	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
641	88.900	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
642	88.800	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
643	88.700	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
644	88.600	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
645	88.500	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
646	88.400	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																
647	88.300	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.17																

648	88.200	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17
649	88.100	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 25 WHITE OAK CREEK - BILLS CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
650	UPR RCH	0.00280	27.40	0.00	8.30	0.00	2.99	10.11	10.11	0.00	0.00	0.00	0.00	0.00	0.00	1.17

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
650	88.10	88.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
651	88.00	87.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
652	87.90	87.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
653	87.80	87.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
654	87.70	87.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
655	87.60	87.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
656	87.50	87.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
657	87.40	87.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
658	87.30	87.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000

659	87.20	87.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
660	87.10	87.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
661	87.00	86.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
662	86.90	86.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
663	86.80	86.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
664	86.70	86.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
665	86.60	86.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
666	86.50	86.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
667	86.40	86.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
668	86.30	86.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
669	86.20	86.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
670	86.10	86.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
671	86.00	85.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
672	85.90	85.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
673	85.80	85.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
674	85.70	85.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
675	85.60	85.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
676	85.50	85.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
677	85.40	85.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
678	85.30	85.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
679	85.20	85.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
680	85.10	85.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
681	85.00	84.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
682	84.90	84.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
683	84.80	84.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
684	84.70	84.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
685	84.60	84.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000

686	84.50	84.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
687	84.40	84.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
688	84.30	84.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
689	84.20	84.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
690	84.10	84.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
691	84.00	83.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
692	83.90	83.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
693	83.80	83.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
694	83.70	83.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
695	83.60	83.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
696	83.50	83.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
697	83.40	83.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
698	83.30	83.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
699	83.20	83.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
700	83.10	83.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
701	83.00	82.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
702	82.90	82.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
703	82.80	82.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
704	82.70	82.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
705	82.60	82.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
706	82.50	82.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
707	82.40	82.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
708	82.30	82.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
709	82.20	82.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
710	82.10	82.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
711	82.00	81.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
712	81.90	81.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000

713	81.80	81.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
714	81.70	81.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
715	81.60	81.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
716	81.50	81.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
717	81.40	81.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
718	81.30	81.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
719	81.20	81.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
720	81.10	81.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
721	81.00	80.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
722	80.90	80.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
723	80.80	80.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
724	80.70	80.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
725	80.60	80.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
726	80.50	80.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
727	80.40	80.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
728	80.30	80.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
729	80.20	80.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
730	80.10	80.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
731	80.00	79.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
732	79.90	79.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
733	79.80	79.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
734	79.70	79.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
735	79.60	79.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
736	79.50	79.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
737	79.40	79.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
738	79.30	79.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
739	79.20	79.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000

740	79.10	79.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
741	79.00	78.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
742	78.90	78.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
743	78.80	78.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
744	78.70	78.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
745	78.60	78.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
746	78.50	78.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
TOT						314.74			76141.91	105822.44					
AVG					0.00036		0.72	10.91			7.85				
CUM						2432.67									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
650	88.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
651	87.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
652	87.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
653	87.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
654	87.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
655	87.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
656	87.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
657	87.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
658	87.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
659	87.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
660	87.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
661	86.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06

662	86.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
663	86.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
664	86.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
665	86.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
666	86.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
667	86.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
668	86.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
669	86.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
670	86.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
671	85.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
672	85.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
673	85.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
674	85.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
675	85.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
676	85.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
677	85.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
678	85.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
679	85.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
680	85.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
681	84.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
682	84.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
683	84.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
684	84.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
685	84.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
686	84.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
687	84.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
688	84.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06

689	84.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
690	84.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
691	83.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
692	83.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
693	83.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
694	83.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
695	83.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
696	83.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
697	83.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
698	83.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
699	83.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
700	83.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
701	82.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
702	82.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
703	82.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
704	82.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
705	82.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
706	82.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
707	82.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
708	82.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
709	82.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
710	82.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
711	81.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
712	81.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
713	81.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
714	81.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
715	81.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

716	81.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
717	81.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
718	81.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
719	81.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
720	81.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
721	80.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
722	80.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
723	80.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
724	80.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
725	80.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
726	80.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
727	80.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
728	80.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
729	80.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
730	80.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
731	79.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
732	79.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
733	79.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
734	79.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
735	79.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
736	79.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
737	79.300	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
738	79.200	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
739	79.100	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
740	79.000	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
741	78.900	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
742	78.800	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21

743	78.700	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
744	78.600	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
745	78.500	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
746	78.400	7.91	1.12	0.06	0.06	0.00	3.04	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
20 DEG C RATE				0.04		0.00	1.91			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			0.97		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
650	88.000	27.40	0.00	8.30	0.00	3.49	7.41	7.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
651	87.900	27.40	0.00	8.30	0.00	3.72	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
652	87.800	27.40	0.00	8.30	0.00	3.85	4.02	4.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
653	87.700	27.40	0.00	8.30	0.00	3.93	2.99	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
654	87.600	27.40	0.00	8.30	0.00	3.98	2.23	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
655	87.500	27.40	0.00	8.30	0.00	4.02	1.69	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
656	87.400	27.40	0.00	8.30	0.00	4.04	1.29	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
657	87.300	27.40	0.00	8.30	0.00	4.06	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
658	87.200	27.40	0.00	8.30	0.00	4.07	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
659	87.100	27.40	0.00	8.30	0.00	4.08	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
660	87.000	27.40	0.00	8.30	0.00	4.09	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
661	86.900	27.40	0.00	8.30	0.00	4.09	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
662	86.800	27.40	0.00	8.30	0.00	4.10	0.38	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
663	86.700	27.40	0.00	8.30	0.00	4.10	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
664	86.600	27.40	0.00	8.30	0.00	4.10	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.05																
665	86.500	27.40	0.00	8.30	0.00	4.10	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
666	86.400	27.40	0.00	8.30	0.00	4.10	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
667	86.300	27.40	0.00	8.30	0.00	4.11	0.26	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
668	86.200	27.40	0.00	8.30	0.00	4.11	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
669	86.100	27.40	0.00	8.30	0.00	4.11	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
670	86.000	27.40	0.00	8.30	0.00	4.11	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
671	85.900	27.40	0.00	8.30	0.00	4.11	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
672	85.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
673	85.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
674	85.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
675	85.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
676	85.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
677	85.300	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
678	85.200	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
679	85.100	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
680	85.000	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
681	84.900	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
682	84.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
683	84.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
684	84.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
685	84.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
686	84.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
687	84.300	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
688	84.200	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
689	84.100	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
690	84.000	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
691	83.900	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.05																
692	83.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
693	83.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
694	83.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
695	83.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
696	83.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
697	83.300	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
698	83.200	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
699	83.100	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
700	83.000	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
701	82.900	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
702	82.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
703	82.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
704	82.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
705	82.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
706	82.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
707	82.300	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
708	82.200	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
709	82.100	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
710	82.000	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
711	81.900	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
712	81.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
713	81.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
714	81.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
715	81.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
716	81.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
717	81.300	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
718	81.200	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.05																
719	81.100	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
720	81.000	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
721	80.900	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
722	80.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
723	80.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
724	80.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
725	80.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
726	80.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
727	80.300	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
728	80.200	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
729	80.100	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
730	80.000	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
731	79.900	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
732	79.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
733	79.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
734	79.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
735	79.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
736	79.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
737	79.300	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
738	79.200	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
739	79.100	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
740	79.000	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
741	78.900	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
742	78.800	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
743	78.700	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
744	78.600	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05																
745	78.500	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.05																	
746	78.400	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.05																	

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL

REACH NO. 26 BILLS CREEK - LOST CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
747	UPR RCH	0.00280	27.40	0.00	8.30	0.00	4.11	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.05

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
747	78.40	78.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
748	78.30	78.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
749	78.20	78.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
750	78.10	78.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
751	78.00	77.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
752	77.90	77.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
753	77.80	77.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
754	77.70	77.60	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
755	77.60	77.50	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
756	77.50	77.40	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	

757	77.40	77.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
758	77.30	77.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
759	77.20	77.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
760	77.10	77.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
761	77.00	76.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
762	76.90	76.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
763	76.80	76.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
764	76.70	76.60	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
765	76.60	76.50	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
766	76.50	76.40	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
767	76.40	76.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
768	76.30	76.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
769	76.20	76.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
770	76.10	76.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
771	76.00	75.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
772	75.90	75.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
773	75.80	75.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
TOT						83.96			20310.45	29455.72					
AVG					0.00037		0.69	10.91			7.52				
CUM						2516.62									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
747	78.300	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
748	78.200	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.18	0.06																		
749	78.100	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
750	78.000	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
751	77.900	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
752	77.800	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
753	77.700	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
754	77.600	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
755	77.500	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
756	77.400	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
757	77.300	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
758	77.200	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
759	77.100	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
760	77.000	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
761	76.900	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
762	76.800	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
763	76.700	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
764	76.600	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
765	76.500	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
766	76.400	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
767	76.300	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
768	76.200	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
769	76.100	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
770	76.000	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
771	75.900	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
772	75.800	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
773	75.700	7.91	1.17	0.04	0.06	0.00	3.01	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.06																		
20 DEG C RATE				0.03		0.00	1.89			0.00		0.00	0.00	0.00	0.00			0.00	
0.11																			

AVG 20 DEG C RATE 1.02 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
747	78.300	27.40	0.00	8.30	0.00	3.99	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
748	78.200	27.40	0.00	8.30	0.00	3.87	5.04	5.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
749	78.100	27.40	0.00	8.30	0.00	3.77	6.62	6.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17
750	78.000	27.40	0.00	8.30	0.00	3.70	7.82	7.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
751	77.900	27.40	0.00	8.30	0.00	3.66	8.73	8.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35
752	77.800	27.40	0.00	8.30	0.00	3.62	9.42	9.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38
753	77.700	27.40	0.00	8.30	0.00	3.60	9.95	9.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40
754	77.600	27.40	0.00	8.30	0.00	3.58	10.35	10.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41
755	77.500	27.40	0.00	8.30	0.00	3.57	10.65	10.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
756	77.400	27.40	0.00	8.30	0.00	3.56	10.88	10.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42
757	77.300	27.40	0.00	8.30	0.00	3.55	11.06	11.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
758	77.200	27.40	0.00	8.30	0.00	3.54	11.19	11.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
759	77.100	27.40	0.00	8.30	0.00	3.54	11.29	11.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
760	77.000	27.40	0.00	8.30	0.00	3.54	11.37	11.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
761	76.900	27.40	0.00	8.30	0.00	3.53	11.43	11.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
762	76.800	27.40	0.00	8.30	0.00	3.53	11.47	11.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
763	76.700	27.40	0.00	8.30	0.00	3.53	11.51	11.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
764	76.600	27.40	0.00	8.30	0.00	3.53	11.53	11.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
765	76.500	27.40	0.00	8.30	0.00	3.53	11.55	11.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
766	76.400	27.40	0.00	8.30	0.00	3.53	11.57	11.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43

767	76.300	27.40	0.00	8.30	0.00	3.53	11.58	11.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
768	76.200	27.40	0.00	8.30	0.00	3.53	11.59	11.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
769	76.100	27.40	0.00	8.30	0.00	3.53	11.59	11.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
770	76.000	27.40	0.00	8.30	0.00	3.53	11.60	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
771	75.900	27.40	0.00	8.30	0.00	3.53	11.60	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
772	75.800	27.40	0.00	8.30	0.00	3.53	11.61	11.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
773	75.700	27.40	0.00	8.30	0.00	3.53	11.60	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 27 LOST CREEK - MESSER CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
774	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.53	11.60	11.60	0.00	0.00	0.00	0.00	0.00	0.00	1.43

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
774	75.70	75.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
775	75.60	75.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
776	75.50	75.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
777	75.40	75.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000

778	75.30	75.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
779	75.20	75.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
780	75.10	75.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
781	75.00	74.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
782	74.90	74.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
783	74.80	74.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
784	74.70	74.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
785	74.60	74.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
786	74.50	74.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
787	74.40	74.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
788	74.30	74.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
789	74.20	74.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
790	74.10	74.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
791	74.00	73.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
792	73.90	73.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
793	73.80	73.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
794	73.70	73.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
795	73.60	73.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
796	73.50	73.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
797	73.40	73.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
798	73.30	73.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
799	73.20	73.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
800	73.10	73.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
801	73.00	72.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
802	72.90	72.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
803	72.80	72.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
804	72.70	72.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000

805	72.60	72.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
806	72.50	72.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
807	72.40	72.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
808	72.30	72.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
809	72.20	72.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
810	72.10	72.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
811	72.00	71.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
812	71.90	71.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
813	71.80	71.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
814	71.70	71.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
815	71.60	71.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
816	71.50	71.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
817	71.40	71.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
818	71.30	71.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
819	71.20	71.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
820	71.10	71.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
821	71.00	70.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
822	70.90	70.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
823	70.80	70.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
824	70.70	70.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
825	70.60	70.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
826	70.50	70.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
827	70.40	70.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
828	70.30	70.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
829	70.20	70.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
830	70.10	70.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
831	70.00	69.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000

832	69.90	69.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
833	69.80	69.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
834	69.70	69.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
835	69.60	69.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
836	69.50	69.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
837	69.40	69.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
838	69.30	69.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
839	69.20	69.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
840	69.10	69.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
841	69.00	68.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
842	68.90	68.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
843	68.80	68.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
844	68.70	68.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
845	68.60	68.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
846	68.50	68.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
847	68.40	68.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
848	68.30	68.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
849	68.20	68.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
850	68.10	68.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
851	68.00	67.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
852	67.90	67.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
853	67.80	67.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
854	67.70	67.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
855	67.60	67.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
856	67.50	67.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
857	67.40	67.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
858	67.30	67.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														

859	67.20	67.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
860	67.10	67.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
861	67.00	66.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
862	66.90	66.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
863	66.80	66.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
864	66.70	66.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
865	66.60	66.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
866	66.50	66.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
867	66.40	66.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
868	66.30	66.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
869	66.20	66.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
870	66.10	66.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
871	66.00	65.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
872	65.90	65.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
873	65.80	65.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
874	65.70	65.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
875	65.60	65.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
876	65.50	65.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
877	65.40	65.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
878	65.30	65.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
879	65.20	65.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
880	65.10	65.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
881	65.00	64.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
882	64.90	64.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
883	64.80	64.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
884	64.70	64.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
TOT						327.11			79133.53	119985.78				

AVG						0.00039			0.66	10.81					7.13				
CUM							2843.74												

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
774	75.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
775	75.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
776	75.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
777	75.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
778	75.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
779	75.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
780	75.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
781	74.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
782	74.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
783	74.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
784	74.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
785	74.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
786	74.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
787	74.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
788	74.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
789	74.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
790	74.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
791	73.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
792	73.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
793	73.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06

794	73.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
795	73.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
796	73.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
797	73.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
798	73.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
799	73.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
800	73.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
801	72.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
802	72.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
803	72.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
804	72.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
805	72.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
806	72.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
807	72.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
808	72.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
809	72.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
810	72.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
811	71.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
812	71.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
813	71.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
814	71.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
815	71.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
816	71.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
817	71.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
818	71.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
819	71.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
820	71.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

821	70.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
822	70.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
823	70.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
824	70.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
825	70.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
826	70.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
827	70.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
828	70.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
829	70.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
830	70.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
831	69.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
832	69.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
833	69.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
834	69.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
835	69.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
836	69.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
837	69.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
838	69.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
839	69.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
840	69.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
841	68.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
842	68.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
843	68.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
844	68.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
845	68.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
846	68.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06
847	68.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06

848	68.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
849	68.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
850	68.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
851	67.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
852	67.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
853	67.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
854	67.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
855	67.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
856	67.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
857	67.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
858	67.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
859	67.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
860	67.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
861	66.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
862	66.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
863	66.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
864	66.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
865	66.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
866	66.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
867	66.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
868	66.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
869	66.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
870	66.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
871	65.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
872	65.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
873	65.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
874	65.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

875	65.500	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
876	65.400	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
877	65.300	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
878	65.200	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
879	65.100	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
880	65.000	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
881	64.900	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
882	64.800	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
883	64.700	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
884	64.600	7.91	1.22	0.06	0.06	0.00	2.96	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16 0.06
20 DEG C RATE				0.04		0.00	1.86			0.00		0.00	0.00	0.00	0.00			0.00	0.10
AVG 20 DEG C RATE			1.06		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
774	75.600	27.40	0.00	8.30	0.00	3.66	8.79	8.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95
775	75.500	27.40	0.00	8.30	0.00	3.79	6.69	6.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
776	75.400	27.40	0.00	8.30	0.00	3.90	5.13	5.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
777	75.300	27.40	0.00	8.30	0.00	3.97	3.97	3.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
778	75.200	27.40	0.00	8.30	0.00	4.03	3.10	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
779	75.100	27.40	0.00	8.30	0.00	4.06	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
780	75.000	27.40	0.00	8.30	0.00	4.09	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
781	74.900	27.40	0.00	8.30	0.00	4.11	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
782	74.800	27.40	0.00	8.30	0.00	4.13	1.33	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

783	74.700	27.40	0.00	8.30	0.00	4.14	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
784	74.600	27.40	0.00	8.30	0.00	4.15	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
785	74.500	27.40	0.00	8.30	0.00	4.15	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
786	74.400	27.40	0.00	8.30	0.00	4.16	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
787	74.300	27.40	0.00	8.30	0.00	4.16	0.73	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
788	74.200	27.40	0.00	8.30	0.00	4.16	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
789	74.100	27.40	0.00	8.30	0.00	4.17	0.65	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
790	74.000	27.40	0.00	8.30	0.00	4.17	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
791	73.900	27.40	0.00	8.30	0.00	4.17	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
792	73.800	27.40	0.00	8.30	0.00	4.17	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
793	73.700	27.40	0.00	8.30	0.00	4.17	0.58	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
794	73.600	27.40	0.00	8.30	0.00	4.17	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
795	73.500	27.40	0.00	8.30	0.00	4.17	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
796	73.400	27.40	0.00	8.30	0.00	4.17	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
797	73.300	27.40	0.00	8.30	0.00	4.17	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
798	73.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
799	73.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
800	73.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
801	72.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
802	72.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
803	72.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
804	72.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
805	72.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
806	72.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
807	72.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
808	72.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
809	72.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.23																
810	72.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
811	71.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
812	71.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
813	71.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
814	71.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
815	71.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
816	71.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
817	71.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
818	71.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
819	71.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
820	71.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
821	70.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
822	70.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
823	70.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
824	70.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
825	70.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
826	70.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
827	70.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
828	70.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
829	70.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
830	70.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
831	69.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
832	69.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
833	69.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
834	69.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
835	69.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
836	69.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.23																
837	69.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
838	69.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
839	69.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
840	69.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
841	68.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
842	68.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
843	68.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
844	68.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
845	68.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
846	68.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
847	68.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
848	68.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
849	68.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
850	68.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
851	67.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
852	67.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
853	67.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
854	67.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
855	67.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
856	67.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
857	67.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
858	67.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
859	67.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
860	67.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
861	66.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
862	66.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
863	66.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.23																
864	66.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
865	66.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
866	66.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
867	66.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
868	66.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
869	66.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
870	66.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
871	65.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
872	65.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
873	65.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
874	65.600	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
875	65.500	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
876	65.400	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
877	65.300	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
878	65.200	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
879	65.100	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
880	65.000	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
881	64.900	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
882	64.800	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
883	64.700	27.40	0.00	8.30	0.00	4.17	0.55	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
884	64.600	27.40	0.00	8.30	0.00	4.17	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 28 MESSER CREEK - RICHLAND CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS

****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
885	UPR RCH	0.00280	27.40	0.00	8.30	0.00	4.17	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.23

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
885	64.60	64.50	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
886	64.50	64.40	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
887	64.40	64.30	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
888	64.30	64.20	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
889	64.20	64.10	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
890	64.10	64.00	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
891	64.00	63.90	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
892	63.90	63.80	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
TOT						22.86			5530.37	8647.62					
AVG					0.00041		0.64	10.81			6.91				
CUM						2866.60									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
885	64.500	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.15	0.06																		
886	64.400	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.06																		
887	64.300	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.06																		
888	64.200	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.06																		
889	64.100	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.06																		
890	64.000	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.06																		
891	63.900	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.06																		
892	63.800	7.91	1.26	0.06	0.06	0.00	2.79	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.06																		
20 DEG C RATE				0.04		0.00	1.75			0.00		0.00	0.00	0.00	0.00			0.00	
0.09																			
AVG 20 DEG C RATE			1.09		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
885	64.500	27.40	0.00	8.30	0.00	4.13	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
886	64.400	27.40	0.00	8.30	0.00	3.97	7.11	7.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67
887	64.300	27.40	0.00	8.30	0.00	3.83	9.22	9.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.02
888	64.200	27.40	0.00	8.30	0.00	3.73	10.81	10.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.24
889	64.100	27.40	0.00	8.30	0.00	3.65	12.01	12.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.38
890	64.000	27.40	0.00	8.30	0.00	3.59	12.90	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.46
891	63.900	27.40	0.00	8.30	0.00	3.55	13.58	13.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52
892	63.800	27.40	0.00	8.30	0.00	3.52	14.08	14.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.55

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 29 RICHLAND CREEK - PINEY CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
893	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.52	14.08	14.08	0.00	0.00	0.00	0.00	0.00	0.00	2.55

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
893	63.80	63.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
894	63.70	63.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
895	63.60	63.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
896	63.50	63.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
897	63.40	63.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
898	63.30	63.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
899	63.20	63.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
900	63.10	63.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
901	63.00	62.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
902	62.90	62.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
903	62.80	62.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
904	62.70	62.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
905	62.60	62.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
906	62.50	62.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

907	62.40	62.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
908	62.30	62.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
909	62.20	62.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
910	62.10	62.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
911	62.00	61.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
912	61.90	61.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
913	61.80	61.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
914	61.70	61.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
915	61.60	61.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
916	61.50	61.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
917	61.40	61.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
918	61.30	61.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
919	61.20	61.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
920	61.10	61.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
921	61.00	60.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
922	60.90	60.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
923	60.80	60.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
924	60.70	60.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
925	60.60	60.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
926	60.50	60.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
927	60.40	60.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
928	60.30	60.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
929	60.20	60.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
930	60.10	60.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
931	60.00	59.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
932	59.90	59.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
933	59.80	59.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

934	59.70	59.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
935	59.60	59.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
936	59.50	59.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
937	59.40	59.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
938	59.30	59.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
939	59.20	59.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
940	59.10	59.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
941	59.00	58.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
942	58.90	58.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
943	58.80	58.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
944	58.70	58.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
945	58.60	58.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
946	58.50	58.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
947	58.40	58.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
948	58.30	58.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
949	58.20	58.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
950	58.10	58.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
951	58.00	57.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
952	57.90	57.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
953	57.80	57.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
954	57.70	57.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
955	57.60	57.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
956	57.50	57.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
957	57.40	57.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
958	57.30	57.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
959	57.20	57.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
960	57.10	57.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000

961	57.00	56.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
962	56.90	56.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
963	56.80	56.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
964	56.70	56.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
965	56.60	56.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
966	56.50	56.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
967	56.40	56.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
968	56.30	56.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
969	56.20	56.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
970	56.10	56.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
971	56.00	55.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
972	55.90	55.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
973	55.80	55.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
974	55.70	55.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
975	55.60	55.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
976	55.50	55.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
977	55.40	55.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
978	55.30	55.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
979	55.20	55.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
980	55.10	55.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
981	55.00	54.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
982	54.90	54.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
983	54.80	54.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
984	54.70	54.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
985	54.60	54.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
986	54.50	54.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
987	54.40	54.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

988 54.30 54.20 0.00280 0.00 0.00042 2.77 0.62 10.81 669.68 1080.95 6.70 0.00 0.000 0.000
0.000

TOT							265.74				64288.95	103771.48											
AVG						0.00042		0.62	10.81					6.70									
CUM							3132.34																

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS
****

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
893	63.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
894	63.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
895	63.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
896	63.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
897	63.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
898	63.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
899	63.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
900	63.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
901	62.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
902	62.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
903	62.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
904	62.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
905	62.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
906	62.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
907	62.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
908	62.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
909	62.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
910	62.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06

911	61.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
912	61.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
913	61.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
914	61.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
915	61.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
916	61.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
917	61.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
918	61.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
919	61.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
920	61.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
921	60.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
922	60.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
923	60.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
924	60.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
925	60.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
926	60.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
927	60.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
928	60.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
929	60.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
930	60.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
931	59.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
932	59.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
933	59.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
934	59.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
935	59.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
936	59.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
937	59.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18

938	59.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
939	59.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
940	59.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
941	58.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
942	58.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
943	58.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
944	58.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
945	58.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
946	58.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
947	58.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
948	58.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
949	58.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
950	58.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
951	57.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
952	57.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
953	57.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
954	57.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
955	57.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
956	57.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
957	57.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
958	57.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
959	57.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
960	57.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
961	56.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
962	56.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
963	56.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
964	56.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18

965	56.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
966	56.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
967	56.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
968	56.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
969	56.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
970	56.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
971	55.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
972	55.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
973	55.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
974	55.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
975	55.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
976	55.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
977	55.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
978	55.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
979	55.100	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
980	55.000	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
981	54.900	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
982	54.800	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
983	54.700	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
984	54.600	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
985	54.500	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
986	54.400	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
987	54.300	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
988	54.200	7.91	1.30	0.06	0.06	0.00	2.74	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.06
20 DEG C RATE				0.04		0.00	1.72			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			1.13		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
893	63.700	27.40	0.00	8.30	0.00	3.73	11.12	11.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.66
894	63.600	27.40	0.00	8.30	0.00	3.91	8.88	8.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
895	63.500	27.40	0.00	8.30	0.00	4.04	7.18	7.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80
896	63.400	27.40	0.00	8.30	0.00	4.14	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
897	63.300	27.40	0.00	8.30	0.00	4.20	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
898	63.200	27.40	0.00	8.30	0.00	4.25	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
899	63.100	27.40	0.00	8.30	0.00	4.28	3.62	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
900	63.000	27.40	0.00	8.30	0.00	4.31	3.20	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
901	62.900	27.40	0.00	8.30	0.00	4.33	2.88	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
902	62.800	27.40	0.00	8.30	0.00	4.34	2.64	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
903	62.700	27.40	0.00	8.30	0.00	4.35	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
904	62.600	27.40	0.00	8.30	0.00	4.36	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
905	62.500	27.40	0.00	8.30	0.00	4.36	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
906	62.400	27.40	0.00	8.30	0.00	4.37	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
907	62.300	27.40	0.00	8.30	0.00	4.37	2.07	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
908	62.200	27.40	0.00	8.30	0.00	4.37	2.02	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
909	62.100	27.40	0.00	8.30	0.00	4.37	1.99	1.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
910	62.000	27.40	0.00	8.30	0.00	4.37	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
911	61.900	27.40	0.00	8.30	0.00	4.37	1.94	1.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
912	61.800	27.40	0.00	8.30	0.00	4.38	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
913	61.700	27.40	0.00	8.30	0.00	4.38	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
914	61.600	27.40	0.00	8.30	0.00	4.38	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.32																
915	61.500	27.40	0.00	8.30	0.00	4.38	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
916	61.400	27.40	0.00	8.30	0.00	4.38	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
917	61.300	27.40	0.00	8.30	0.00	4.38	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
918	61.200	27.40	0.00	8.30	0.00	4.38	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
919	61.100	27.40	0.00	8.30	0.00	4.38	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
920	61.000	27.40	0.00	8.30	0.00	4.38	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
921	60.900	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
922	60.800	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
923	60.700	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
924	60.600	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
925	60.500	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
926	60.400	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
927	60.300	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
928	60.200	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
929	60.100	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
930	60.000	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
931	59.900	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
932	59.800	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
933	59.700	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
934	59.600	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
935	59.500	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
936	59.400	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
937	59.300	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
938	59.200	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
939	59.100	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
940	59.000	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
941	58.900	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.32																
942	58.800	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
943	58.700	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
944	58.600	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
945	58.500	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
946	58.400	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
947	58.300	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
948	58.200	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
949	58.100	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
950	58.000	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
951	57.900	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
952	57.800	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
953	57.700	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
954	57.600	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
955	57.500	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
956	57.400	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
957	57.300	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
958	57.200	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
959	57.100	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
960	57.000	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
961	56.900	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
962	56.800	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
963	56.700	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
964	56.600	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
965	56.500	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
966	56.400	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
967	56.300	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
968	56.200	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.32																
969	56.100	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
970	56.000	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
971	55.900	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
972	55.800	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
973	55.700	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
974	55.600	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
975	55.500	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
976	55.400	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
977	55.300	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
978	55.200	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
979	55.100	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
980	55.000	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
981	54.900	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
982	54.800	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
983	54.700	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
984	54.600	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
985	54.500	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
986	54.400	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
987	54.300	27.40	0.00	8.30	0.00	4.38	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																
988	54.200	27.40	0.00	8.30	0.00	4.38	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m^3

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 30 PINEY CREEK - BEAUCOUP CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
989	UPR RCH	0.00280	27.40	0.00	8.30	0.00	4.38	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.32

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
989	54.20	54.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
990	54.10	54.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
991	54.00	53.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
992	53.90	53.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
993	53.80	53.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
994	53.70	53.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
995	53.60	53.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
996	53.50	53.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
997	53.40	53.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
998	53.30	53.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
999	53.20	53.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1000	53.10	53.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1001	53.00	52.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1002	52.90	52.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1003	52.80	52.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1004	52.70	52.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1005	52.60	52.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1006	52.50	52.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	

0.000															
1007	52.40	52.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1008	52.30	52.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1009	52.20	52.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1010	52.10	52.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1011	52.00	51.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1012	51.90	51.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1013	51.80	51.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1014	51.70	51.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1015	51.60	51.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1016	51.50	51.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1017	51.40	51.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1018	51.30	51.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
TOT						78.29			18940.60	32128.58					
AVG					0.00044		0.59	10.71			6.31				
CUM						3210.63									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
989	54.100	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
990	54.000	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
991	53.900	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
992	53.800	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
993	53.700	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
994	53.600	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.06
995	53.500	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

996	53.400	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
997	53.300	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
998	53.200	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
999	53.100	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1000	53.000	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1001	52.900	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1002	52.800	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1003	52.700	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1004	52.600	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1005	52.500	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1006	52.400	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1007	52.300	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1008	52.200	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1009	52.100	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1010	52.000	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1011	51.900	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1012	51.800	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1013	51.700	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1014	51.600	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1015	51.500	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1016	51.400	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1017	51.300	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
1018	51.200	7.91	1.36	0.04	0.06	0.00	3.16	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21 0.06
20 DEG C RATE				0.03		0.00	1.98			0.00		0.00	0.00	0.00	0.00			0.00	0.13
AVG 20 DEG C RATE			1.19		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
989	54.100	27.40	0.00	8.30	0.00	3.90	3.99	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
990	54.000	27.40	0.00	8.30	0.00	3.73	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87
991	53.900	27.40	0.00	8.30	0.00	3.64	6.98	6.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99
992	53.800	27.40	0.00	8.30	0.00	3.59	8.02	8.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
993	53.700	27.40	0.00	8.30	0.00	3.55	8.84	8.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
994	53.600	27.40	0.00	8.30	0.00	3.53	9.49	9.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
995	53.500	27.40	0.00	8.30	0.00	3.51	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
996	53.400	27.40	0.00	8.30	0.00	3.49	10.41	10.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
997	53.300	27.40	0.00	8.30	0.00	3.48	10.73	10.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
998	53.200	27.40	0.00	8.30	0.00	3.47	10.98	10.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
999	53.100	27.40	0.00	8.30	0.00	3.46	11.18	11.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
1000	53.000	27.40	0.00	8.30	0.00	3.46	11.34	11.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
1001	52.900	27.40	0.00	8.30	0.00	3.45	11.46	11.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1002	52.800	27.40	0.00	8.30	0.00	3.45	11.56	11.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1003	52.700	27.40	0.00	8.30	0.00	3.45	11.64	11.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1004	52.600	27.40	0.00	8.30	0.00	3.45	11.70	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1005	52.500	27.40	0.00	8.30	0.00	3.44	11.75	11.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1006	52.400	27.40	0.00	8.30	0.00	3.44	11.79	11.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1007	52.300	27.40	0.00	8.30	0.00	3.44	11.82	11.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1008	52.200	27.40	0.00	8.30	0.00	3.44	11.85	11.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1009	52.100	27.40	0.00	8.30	0.00	3.44	11.86	11.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1010	52.000	27.40	0.00	8.30	0.00	3.44	11.88	11.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16

1011	51.900	27.40	0.00	8.30	0.00	3.44	11.89	11.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1012	51.800	27.40	0.00	8.30	0.00	3.44	11.90	11.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1013	51.700	27.40	0.00	8.30	0.00	3.44	11.91	11.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1014	51.600	27.40	0.00	8.30	0.00	3.44	11.91	11.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1015	51.500	27.40	0.00	8.30	0.00	3.44	11.92	11.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1016	51.400	27.40	0.00	8.30	0.00	3.44	11.92	11.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1017	51.300	27.40	0.00	8.30	0.00	3.44	11.93	11.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
1018	51.200	27.40	0.00	8.30	0.00	3.44	11.92	11.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 31 BEAUCOUP CREEK - BANISTER CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1019	UPR RCH	0.00280	27.40	0.00	8.30	0.00	3.44	11.92	11.92	0.00	0.00	0.00	0.00	0.00	0.00	1.16

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1019	51.20	51.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1020	51.10	51.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1021	51.00	50.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000

1022	50.90	50.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1023	50.80	50.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1024	50.70	50.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1025	50.60	50.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1026	50.50	50.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1027	50.40	50.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1028	50.30	50.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1029	50.20	50.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1030	50.10	50.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1031	50.00	49.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1032	49.90	49.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1033	49.80	49.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1034	49.70	49.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1035	49.60	49.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1036	49.50	49.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1037	49.40	49.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1038	49.30	49.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1039	49.20	49.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1040	49.10	49.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1041	49.00	48.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1042	48.90	48.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1043	48.80	48.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1044	48.70	48.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1045	48.60	48.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1046	48.50	48.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1047	48.40	48.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1048	48.30	48.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														

1049	48.20	48.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1050	48.10	48.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1051	48.00	47.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1052	47.90	47.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1053	47.80	47.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1054	47.70	47.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1055	47.60	47.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1056	47.50	47.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1057	47.40	47.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1058	47.30	47.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1059	47.20	47.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1060	47.10	47.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
TOT						107.75			26067.04	44980.02				
AVG					0.00045		0.58	10.71			6.21			
CUM						3318.38								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1019	51.100	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1020	51.000	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1021	50.900	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1022	50.800	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1023	50.700	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1024	50.600	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1025	50.500	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06

1026	50.400	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1027	50.300	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1028	50.200	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1029	50.100	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1030	50.000	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1031	49.900	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1032	49.800	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1033	49.700	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1034	49.600	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1035	49.500	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1036	49.400	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1037	49.300	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1038	49.200	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1039	49.100	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1040	49.000	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1041	48.900	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1042	48.800	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1043	48.700	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1044	48.600	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1045	48.500	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1046	48.400	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1047	48.300	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1048	48.200	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1049	48.100	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1050	48.000	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1051	47.900	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1052	47.800	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06

1053	47.700	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1054	47.600	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1055	47.500	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1056	47.400	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1057	47.300	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1058	47.200	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1059	47.100	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1060	47.000	7.91	1.39	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
20 DEG C RATE				0.03		0.00	1.71			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.21		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1019	51.100	27.40	0.00	8.30	0.00	3.96	9.85	9.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
1020	51.000	27.40	0.00	8.30	0.00	4.14	8.20	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1021	50.900	27.40	0.00	8.30	0.00	4.24	6.89	6.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
1022	50.800	27.40	0.00	8.30	0.00	4.29	5.86	5.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1023	50.700	27.40	0.00	8.30	0.00	4.33	5.04	5.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1024	50.600	27.40	0.00	8.30	0.00	4.36	4.38	4.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
1025	50.500	27.40	0.00	8.30	0.00	4.38	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15
1026	50.400	27.40	0.00	8.30	0.00	4.39	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1027	50.300	27.40	0.00	8.30	0.00	4.40	3.13	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1028	50.200	27.40	0.00	8.30	0.00	4.41	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1029	50.100	27.40	0.00	8.30	0.00	4.42	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.13																	
1030	50.000	27.40	0.00	8.30	0.00	4.42	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1031	49.900	27.40	0.00	8.30	0.00	4.43	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1032	49.800	27.40	0.00	8.30	0.00	4.43	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1033	49.700	27.40	0.00	8.30	0.00	4.43	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1034	49.600	27.40	0.00	8.30	0.00	4.44	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1035	49.500	27.40	0.00	8.30	0.00	4.44	2.08	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1036	49.400	27.40	0.00	8.30	0.00	4.44	2.04	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1037	49.300	27.40	0.00	8.30	0.00	4.44	2.01	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1038	49.200	27.40	0.00	8.30	0.00	4.44	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1039	49.100	27.40	0.00	8.30	0.00	4.44	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1040	49.000	27.40	0.00	8.30	0.00	4.44	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1041	48.900	27.40	0.00	8.30	0.00	4.44	1.93	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1042	48.800	27.40	0.00	8.30	0.00	4.44	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1043	48.700	27.40	0.00	8.30	0.00	4.44	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1044	48.600	27.40	0.00	8.30	0.00E+00	4.44	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1045	48.500	27.40	0.00	8.30	0.00E+00	4.44	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1046	48.400	27.40	0.00	8.30	0.00	4.44	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1047	48.300	27.40	0.00	8.30	0.00	4.44	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1048	48.200	27.40	0.00	8.30	0.00	4.44	1.90	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1049	48.100	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1050	48.000	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1051	47.900	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1052	47.800	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1053	47.700	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1054	47.600	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1055	47.500	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.13																	
1056	47.400	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1057	47.300	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1058	47.200	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1059	47.100	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
1060	47.000	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 32 BANISTER CREEK - BRUSHY CREEK2 CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1061	UPR RCH	0.00280	27.40	0.00	8.30	0.00	4.44	1.89	1.89	0.00	0.00	0.00	0.00	0.00	0.00	0.13
EACH	INCR	0.0005	27.40	0.00	6.00	4.20	7.10	5.53	5.53	0.00	0.00	0.00	0.00		0.00	0.22

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1061	47.00	46.90	0.00327	0.00	0.00055	2.12	0.56	10.71	599.91	1071.01	6.00	0.00	0.000	0.000	0.001
1062	46.90	46.80	0.00374	0.00	0.00062	1.86	0.56	10.71	600.54	1071.07	6.01	0.00	0.000	0.000	0.001
1063	46.80	46.70	0.00421	0.00	0.00070	1.65	0.56	10.71	601.13	1071.12	6.01	0.00	0.000	0.000	0.001
1064	46.70	46.60	0.00468	0.00	0.00078	1.49	0.56	10.71	601.67	1071.17	6.02	0.00	0.000	0.000	0.001
1065	46.60	46.50	0.00515	0.00	0.00086	1.35	0.56	10.71	602.19	1071.22	6.02	0.00	0.000	0.000	0.001
1066	46.50	46.40	0.00562	0.00	0.00093	1.24	0.56	10.71	602.68	1071.26	6.03	0.00	0.000	0.000	

0.001														
1067	46.40	46.30	0.00609	0.00	0.00101	1.15	0.56	10.71	603.14	1071.30	6.03	0.00	0.000	0.000
0.001														
1068	46.30	46.20	0.00656	0.00	0.00109	1.06	0.56	10.71	603.58	1071.34	6.04	0.00	0.000	0.000
0.001														
1069	46.20	46.10	0.00703	0.00	0.00116	0.99	0.56	10.71	604.00	1071.38	6.04	0.00	0.000	0.000
0.001														
1070	46.10	46.00	0.00750	0.00	0.00124	0.93	0.56	10.71	604.41	1071.41	6.04	0.00	0.000	0.000
0.001														
1071	46.00	45.90	0.00797	0.00	0.00132	0.88	0.56	10.71	604.80	1071.45	6.05	0.00	0.000	0.000
0.001														
1072	45.90	45.80	0.00844	0.00	0.00139	0.83	0.56	10.71	605.18	1071.48	6.05	0.00	0.000	0.000
0.001														
1073	45.80	45.70	0.00891	0.00	0.00147	0.79	0.57	10.72	605.55	1071.51	6.06	0.00	0.000	0.000
0.001														
1074	45.70	45.60	0.00938	0.00	0.00155	0.75	0.57	10.72	605.90	1071.54	6.06	0.00	0.000	0.000
0.002														
1075	45.60	45.50	0.00985	0.00	0.00162	0.71	0.57	10.72	606.25	1071.58	6.06	0.00	0.000	0.001
0.002														
1076	45.50	45.40	0.01032	0.00	0.00170	0.68	0.57	10.72	606.58	1071.60	6.07	0.00	0.000	0.001
0.002														
1077	45.40	45.30	0.01079	0.00	0.00178	0.65	0.57	10.72	606.91	1071.63	6.07	0.00	0.000	0.001
0.002														
1078	45.30	45.20	0.01126	0.00	0.00185	0.62	0.57	10.72	607.22	1071.66	6.07	0.00	0.000	0.001
0.002														
1079	45.20	45.10	0.01173	0.00	0.00193	0.60	0.57	10.72	607.53	1071.69	6.08	0.00	0.000	0.001
0.002														
1080	45.10	45.00	0.01220	0.00	0.00201	0.58	0.57	10.72	607.84	1071.72	6.08	0.00	0.000	0.001
0.002														
1081	45.00	44.90	0.01267	0.00	0.00208	0.56	0.57	10.72	608.13	1071.74	6.08	0.00	0.000	0.001
0.002														
1082	44.90	44.80	0.01314	0.00	0.00216	0.54	0.57	10.72	608.42	1071.77	6.08	0.00	0.000	0.001
0.002														
1083	44.80	44.70	0.01361	0.00	0.00224	0.52	0.57	10.72	608.70	1071.79	6.09	0.00	0.000	0.001
0.002														
1084	44.70	44.60	0.01408	0.00	0.00231	0.50	0.57	10.72	608.98	1071.82	6.09	0.00	0.000	0.001
0.002														
1085	44.60	44.50	0.01455	0.00	0.00239	0.48	0.57	10.72	609.25	1071.84	6.09	0.00	0.000	0.001
0.002														
1086	44.50	44.40	0.01502	0.00	0.00246	0.47	0.57	10.72	609.52	1071.86	6.10	0.00	0.000	0.001
0.002														
1087	44.40	44.30	0.01549	0.00	0.00254	0.46	0.57	10.72	609.78	1071.89	6.10	0.00	0.000	0.001
0.003														
1088	44.30	44.20	0.01596	0.00	0.00262	0.44	0.57	10.72	610.03	1071.91	6.10	0.00	0.000	0.001
0.003														
1089	44.20	44.10	0.01643	0.00	0.00269	0.43	0.57	10.72	610.28	1071.93	6.10	0.00	0.000	0.001
0.003														
1090	44.10	44.00	0.01690	0.00	0.00277	0.42	0.57	10.72	610.53	1071.95	6.11	0.00	0.000	0.001
0.003														
1091	44.00	43.90	0.01737	0.00	0.00284	0.41	0.57	10.72	610.78	1071.98	6.11	0.00	0.000	0.001
0.003														
1092	43.90	43.80	0.01784	0.00	0.00292	0.40	0.57	10.72	611.02	1072.00	6.11	0.00	0.000	0.001
0.003														
1093	43.80	43.70	0.01831	0.00	0.00300	0.39	0.57	10.72	611.25	1072.02	6.11	0.00	0.000	0.001

0.003																
1094	43.70	43.60	0.01878	0.00	0.00307	0.38	0.57	10.72	611.48	1072.04	6.11	0.00	0.000	0.001		
0.003																
1095	43.60	43.50	0.01925	0.00	0.00315	0.37	0.57	10.72	611.71	1072.06	6.12	0.00	0.000	0.001		
0.003																
1096	43.50	43.40	0.01972	0.00	0.00322	0.36	0.57	10.72	611.94	1072.08	6.12	0.00	0.000	0.001		
0.003																
1097	43.40	43.30	0.02019	0.00	0.00330	0.35	0.57	10.72	612.16	1072.10	6.12	0.00	0.000	0.001		
0.003																
1098	43.30	43.20	0.02066	0.00	0.00337	0.34	0.57	10.72	612.38	1072.12	6.12	0.00	0.000	0.001		
0.003																
1099	43.20	43.10	0.02113	0.00	0.00345	0.34	0.57	10.72	612.60	1072.14	6.13	0.00	0.000	0.001		
0.003																
1100	43.10	43.00	0.02160	0.00	0.00352	0.33	0.57	10.72	612.81	1072.16	6.13	0.00	0.000	0.001		
0.004																
1101	43.00	42.90	0.02207	0.00	0.00360	0.32	0.57	10.72	613.02	1072.18	6.13	0.00	0.000	0.001		
0.004																
1102	42.90	42.80	0.02254	0.00	0.00368	0.31	0.57	10.72	613.23	1072.19	6.13	0.00	0.000	0.001		
0.004																
1103	42.80	42.70	0.02301	0.00	0.00375	0.31	0.57	10.72	613.43	1072.21	6.13	0.00	0.000	0.001		
0.004																
1104	42.70	42.60	0.02348	0.00	0.00383	0.30	0.57	10.72	613.64	1072.23	6.14	0.00	0.000	0.001		
0.004																
1105	42.60	42.50	0.02395	0.00	0.00390	0.30	0.57	10.72	613.84	1072.25	6.14	0.00	0.000	0.001		
0.004																
1106	42.50	42.40	0.02442	0.00	0.00398	0.29	0.57	10.72	614.03	1072.27	6.14	0.00	0.000	0.001		
0.004																
1107	42.40	42.30	0.02489	0.00	0.00405	0.29	0.57	10.72	614.23	1072.28	6.14	0.00	0.000	0.001		
0.004																
1108	42.30	42.20	0.02536	0.00	0.00413	0.28	0.57	10.72	614.42	1072.30	6.14	0.00	0.000	0.001		
0.004																
1109	42.20	42.10	0.02583	0.00	0.00420	0.28	0.57	10.72	614.62	1072.32	6.15	0.00	0.000	0.001		
0.004																
1110	42.10	42.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001		
0.004																
TOT						32.35			30438.03	53589.89						
AVG					0.00179		0.57	10.72			6.09					
CUM						3350.73										

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1061	46.900	7.91	1.44	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1062	46.800	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.23	0.06																		
1063	46.700	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1064	46.600	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1065	46.500	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1066	46.400	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1067	46.300	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1068	46.200	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1069	46.100	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1070	46.000	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1071	45.900	7.91	1.43	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1072	45.800	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1073	45.700	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1074	45.600	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1075	45.500	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1076	45.400	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1077	45.300	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1078	45.200	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1079	45.100	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1080	45.000	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1081	44.900	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1082	44.800	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1083	44.700	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1084	44.600	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1085	44.500	7.91	1.42	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1086	44.400	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1087	44.300	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1088	44.200	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.23	0.06																		
1089	44.100	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1090	44.000	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1091	43.900	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1092	43.800	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1093	43.700	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1094	43.600	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1095	43.500	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1096	43.400	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1097	43.300	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1098	43.200	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1099	43.100	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1100	43.000	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1101	42.900	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1102	42.800	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1103	42.700	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1104	42.600	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1105	42.500	7.91	1.41	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1106	42.400	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1107	42.300	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1108	42.200	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1109	42.100	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
1110	42.000	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.06
20 DEG C RATE				0.03		0.00	1.68			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.23		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1061	46.900	27.40	0.00	7.97	0.61	4.57	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
1062	46.800	27.40	0.00	7.72	1.06	4.58	2.80	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
1063	46.700	27.40	0.00	7.53	1.41	4.58	3.03	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
1064	46.600	27.40	0.00	7.38	1.69	4.58	3.20	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1065	46.500	27.40	0.00	7.25	1.92	4.57	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1066	46.400	27.40	0.00	7.15	2.11	4.57	3.40	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1067	46.300	27.40	0.00	7.06	2.27	4.57	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1068	46.200	27.40	0.00	6.98	2.41	4.56	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
1069	46.100	27.40	0.00	6.92	2.53	4.56	3.55	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1070	46.000	27.40	0.00	6.86	2.63	4.56	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1071	45.900	27.40	0.00	6.81	2.72	4.56	3.61	3.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1072	45.800	27.40	0.00	6.76	2.81	4.56	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1073	45.700	27.40	0.00	6.72	2.88	4.56	3.64	3.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1074	45.600	27.40	0.00	6.69	2.95	4.56	3.66	3.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1075	45.500	27.40	0.00	6.65	3.01	4.56	3.67	3.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1076	45.400	27.40	0.00	6.62	3.06	4.56	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1077	45.300	27.40	0.00	6.60	3.11	4.56	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1078	45.200	27.40	0.00	6.57	3.16	4.56	3.69	3.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1079	45.100	27.40	0.00	6.55	3.20	4.56	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1080	45.000	27.40	0.00	6.53	3.24	4.56	3.70	3.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1081	44.900	27.40	0.00	6.51	3.27	4.56	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1082	44.800	27.40	0.00	6.49	3.31	4.56	3.71	3.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1083	44.700	27.40	0.00	6.47	3.34	4.56	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1084	44.600	27.40	0.00	6.46	3.36	4.56	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23

1085	44.500	27.40	0.00	6.44	3.39	4.56	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
1086	44.400	27.40	0.00	6.43	3.42	4.56	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
1087	44.300	27.40	0.00	6.42	3.44	4.56	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
1088	44.200	27.40	0.00	6.40	3.46	4.56	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23																
1089	44.100	27.40	0.00	6.39	3.48	4.56	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1090	44.000	27.40	0.00	6.38	3.50	4.56	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1091	43.900	27.40	0.00	6.37	3.52	4.56	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1092	43.800	27.40	0.00	6.36	3.54	4.56	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1093	43.700	27.40	0.00	6.35	3.56	4.56	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1094	43.600	27.40	0.00	6.34	3.57	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1095	43.500	27.40	0.00	6.33	3.59	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1096	43.400	27.40	0.00	6.33	3.60	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1097	43.300	27.40	0.00	6.32	3.62	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1098	43.200	27.40	0.00	6.31	3.63	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1099	43.100	27.40	0.00	6.30	3.64	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1100	43.000	27.40	0.00	6.30	3.66	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1101	42.900	27.40	0.00	6.29	3.67	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1102	42.800	27.40	0.00	6.29	3.68	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1103	42.700	27.40	0.00	6.28	3.69	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1104	42.600	27.40	0.00	6.27	3.70	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1105	42.500	27.40	0.00	6.27	3.71	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1106	42.400	27.40	0.00	6.26	3.72	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1107	42.300	27.40	0.00	6.26	3.73	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1108	42.200	27.40	0.00	6.25	3.74	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1109	42.100	27.40	0.00	6.25	3.74	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																
1110	42.000	27.40	0.00	6.24	3.75	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22																

* CM-I = CHLORIDES CM-II = SULFATES NCM = NBOD

MG/L MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 33 BRUSHY CREEK2 - MCCLELLEN BR CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1111	UPR RCH	0.02630	27.40	0.00	6.24	3.75	4.55	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.22

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1111	42.00	41.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1112	41.90	41.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1113	41.80	41.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1114	41.70	41.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1115	41.60	41.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1116	41.50	41.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1117	41.40	41.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1118	41.30	41.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1119	41.20	41.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1120	41.10	41.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1121	41.00	40.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1122	40.90	40.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1123	40.80	40.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1124	40.70	40.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1125	40.60	40.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1126	40.50	40.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1127	40.40	40.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1128	40.30	40.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1129	40.20	40.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1130	40.10	40.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1131	40.00	39.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1132	39.90	39.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1133	39.80	39.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1134	39.70	39.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1135	39.60	39.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1136	39.50	39.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1137	39.40	39.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1138	39.30	39.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1139	39.20	39.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1140	39.10	39.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1141	39.00	38.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1142	38.90	38.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1143	38.80	38.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1144	38.70	38.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1145	38.60	38.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1146	38.50	38.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1147	38.40	38.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1148	38.30	38.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1149	38.20	38.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1150	38.10	38.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1151	38.00	37.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1152	37.90	37.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1153	37.80	37.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1154	37.70	37.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1155	37.60	37.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1156	37.50	37.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1157	37.40	37.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1158	37.30	37.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1159	37.20	37.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1160	37.10	37.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1161	37.00	36.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1162	36.90	36.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1163	36.80	36.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1164	36.70	36.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1165	36.60	36.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1166	36.50	36.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1167	36.40	36.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1168	36.30	36.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1169	36.20	36.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1170	36.10	36.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1171	36.00	35.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1172	35.90	35.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1173	35.80	35.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1174	35.70	35.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1175	35.60	35.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1176	35.50	35.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1177	35.40	35.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1178	35.30	35.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1179	35.20	35.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1180	35.10	35.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1181	35.00	34.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1182	34.90	34.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1183	34.80	34.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1184	34.70	34.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1185	34.60	34.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1186	34.50	34.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1187	34.40	34.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1188	34.30	34.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1189	34.20	34.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1190	34.10	34.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1191	34.00	33.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1192	33.90	33.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1193	33.80	33.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1194	33.70	33.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1195	33.60	33.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
TOT						23.00			52258.40	91148.36					
AVG					0.00428		0.57	10.72			6.15				
CUM						3373.72									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

1111	41.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1112	41.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1113	41.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1114	41.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1115	41.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1116	41.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1117	41.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1118	41.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1119	41.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1120	41.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1121	40.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1122	40.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1123	40.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1124	40.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1125	40.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1126	40.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1127	40.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1128	40.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1129	40.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1130	40.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1131	39.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1132	39.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1133	39.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1134	39.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1135	39.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1136	39.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1137	39.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06

1138	39.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1139	39.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1140	39.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1141	38.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1142	38.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1143	38.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1144	38.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1145	38.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1146	38.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1147	38.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1148	38.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1149	38.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1150	38.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1151	37.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1152	37.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1153	37.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1154	37.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1155	37.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1156	37.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1157	37.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1158	37.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1159	37.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1160	37.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1161	36.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1162	36.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1163	36.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1164	36.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06

1165	36.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1166	36.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1167	36.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1168	36.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1169	36.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1170	36.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1171	35.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1172	35.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1173	35.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1174	35.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1175	35.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1176	35.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1177	35.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1178	35.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1179	35.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1180	35.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1181	34.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1182	34.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1183	34.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1184	34.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1185	34.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1186	34.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1187	34.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1188	34.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1189	34.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1190	34.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			
1191	33.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
0.06																			

1192	33.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1193	33.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1194	33.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1195	33.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
20 DEG C RATE				0.03		0.00	2.00			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1111	41.900	27.40	0.00	6.24	3.75	4.35	3.76	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
1112	41.800	27.40	0.00	6.24	3.75	4.21	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
1113	41.700	27.40	0.00	6.24	3.75	4.10	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
1114	41.600	27.40	0.00	6.24	3.75	4.02	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
1115	41.500	27.40	0.00	6.24	3.75	3.96	3.88	3.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
1116	41.400	27.40	0.00	6.24	3.75	3.92	3.91	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
1117	41.300	27.40	0.00	6.24	3.75	3.89	3.93	3.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
1118	41.200	27.40	0.00	6.24	3.75	3.87	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
1119	41.100	27.40	0.00	6.24	3.75	3.85	3.98	3.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
1120	41.000	27.40	0.00	6.24	3.75	3.84	4.01	4.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
1121	40.900	27.40	0.00	6.24	3.75	3.83	4.03	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
1122	40.800	27.40	0.00	6.24	3.75	3.82	4.05	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
1123	40.700	27.40	0.00	6.24	3.75	3.82	4.08	4.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
1124	40.600	27.40	0.00	6.24	3.75	3.81	4.10	4.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
1125	40.500	27.40	0.00	6.24	3.75	3.81	4.12	4.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.34																
1126	40.400	27.40	0.00	6.24	3.75	3.81	4.14	4.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.35																
1127	40.300	27.40	0.00	6.24	3.75	3.81	4.16	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.36																
1128	40.200	27.40	0.00	6.24	3.75	3.80	4.18	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.36																
1129	40.100	27.40	0.00	6.24	3.75	3.80	4.20	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.37																
1130	40.000	27.40	0.00	6.24	3.75	3.80	4.22	4.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.37																
1131	39.900	27.40	0.00	6.24	3.75	3.80	4.24	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38																
1132	39.800	27.40	0.00	6.24	3.75	3.80	4.25	4.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38																
1133	39.700	27.40	0.00	6.24	3.75	3.80	4.27	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38																
1134	39.600	27.40	0.00	6.24	3.75	3.80	4.29	4.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.39																
1135	39.500	27.40	0.00	6.24	3.75	3.79	4.30	4.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.39																
1136	39.400	27.40	0.00	6.24	3.75	3.79	4.32	4.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
1137	39.300	27.40	0.00	6.24	3.75	3.79	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
1138	39.200	27.40	0.00	6.24	3.75	3.79	4.35	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40																
1139	39.100	27.40	0.00	6.24	3.75	3.79	4.36	4.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
1140	39.000	27.40	0.00	6.24	3.75	3.79	4.38	4.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
1141	38.900	27.40	0.00	6.24	3.75	3.79	4.39	4.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
1142	38.800	27.40	0.00	6.24	3.75	3.79	4.40	4.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
1143	38.700	27.40	0.00	6.24	3.75	3.79	4.42	4.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
1144	38.600	27.40	0.00	6.24	3.75	3.79	4.43	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
1145	38.500	27.40	0.00	6.24	3.75	3.79	4.44	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
1146	38.400	27.40	0.00	6.24	3.75	3.79	4.45	4.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43																
1147	38.300	27.40	0.00	6.24	3.75	3.79	4.47	4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43																
1148	38.200	27.40	0.00	6.24	3.75	3.79	4.48	4.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43																
1149	38.100	27.40	0.00	6.24	3.75	3.79	4.49	4.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43																
1150	38.000	27.40	0.00	6.24	3.75	3.78	4.50	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43																
1151	37.900	27.40	0.00	6.24	3.75	3.78	4.51	4.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.44																
1152	37.800	27.40	0.00	6.24	3.75	3.78	4.52	4.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.44																
1153	37.700	27.40	0.00	6.24	3.75	3.78	4.53	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.44																
1154	37.600	27.40	0.00	6.24	3.75	3.78	4.54	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.44																
1155	37.500	27.40	0.00	6.24	3.75	3.78	4.55	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.44																
1156	37.400	27.40	0.00	6.24	3.75	3.78	4.56	4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1157	37.300	27.40	0.00	6.24	3.75	3.78	4.57	4.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1158	37.200	27.40	0.00	6.24	3.75	3.78	4.58	4.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1159	37.100	27.40	0.00	6.24	3.75	3.78	4.58	4.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1160	37.000	27.40	0.00	6.24	3.75	3.78	4.59	4.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1161	36.900	27.40	0.00	6.24	3.75	3.78	4.60	4.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1162	36.800	27.40	0.00	6.24	3.75	3.78	4.61	4.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1163	36.700	27.40	0.00	6.24	3.75	3.78	4.62	4.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45																
1164	36.600	27.40	0.00	6.24	3.75	3.78	4.62	4.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1165	36.500	27.40	0.00	6.24	3.75	3.78	4.63	4.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1166	36.400	27.40	0.00	6.24	3.75	3.78	4.64	4.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1167	36.300	27.40	0.00	6.24	3.75	3.78	4.64	4.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1168	36.200	27.40	0.00	6.24	3.75	3.78	4.65	4.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1169	36.100	27.40	0.00	6.24	3.75	3.78	4.66	4.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1170	36.000	27.40	0.00	6.24	3.75	3.78	4.66	4.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1171	35.900	27.40	0.00	6.24	3.75	3.78	4.67	4.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1172	35.800	27.40	0.00	6.24	3.75	3.78	4.68	4.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1173	35.700	27.40	0.00	6.24	3.75	3.78	4.68	4.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
1174	35.600	27.40	0.00	6.24	3.75	3.78	4.69	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1175	35.500	27.40	0.00	6.24	3.75	3.78	4.69	4.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1176	35.400	27.40	0.00	6.24	3.75	3.78	4.70	4.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1177	35.300	27.40	0.00	6.24	3.75	3.78	4.70	4.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1178	35.200	27.40	0.00	6.24	3.75	3.78	4.71	4.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1179	35.100	27.40	0.00	6.24	3.75	3.78	4.71	4.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.47																
1180	35.000	27.40	0.00	6.24	3.75	3.78	4.72	4.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1181	34.900	27.40	0.00	6.24	3.75	3.77	4.72	4.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1182	34.800	27.40	0.00	6.24	3.75	3.77	4.73	4.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1183	34.700	27.40	0.00	6.24	3.75	3.77	4.73	4.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1184	34.600	27.40	0.00	6.24	3.75	3.77	4.74	4.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1185	34.500	27.40	0.00	6.24	3.75	3.77	4.74	4.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1186	34.400	27.40	0.00	6.24	3.75	3.77	4.74	4.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1187	34.300	27.40	0.00	6.24	3.75	3.77	4.75	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1188	34.200	27.40	0.00	6.24	3.75	3.77	4.75	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1189	34.100	27.40	0.00	6.24	3.75	3.77	4.75	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1190	34.000	27.40	0.00	6.24	3.75	3.77	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1191	33.900	27.40	0.00	6.24	3.75	3.77	4.76	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1192	33.800	27.40	0.00	6.24	3.75	3.77	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1193	33.700	27.40	0.00	6.24	3.75	3.77	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
1194	33.600	27.40	0.00	6.24	3.75	3.77	4.77	4.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																
1195	33.500	27.40	0.00	6.24	3.75	3.77	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 34 MCCLELLEN BR - FLAT CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO. *	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
1196	UPR RCH	0.02630	27.40	0.00	6.24	3.75	3.77	4.78	4.78	0.00	0.00	0.00	0.00	0.00	0.00	0.48

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1196	33.50	33.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1197	33.40	33.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1198	33.30	33.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1199	33.20	33.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1200	33.10	33.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1201	33.00	32.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1202	32.90	32.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1203	32.80	32.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1204	32.70	32.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1205	32.60	32.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1206	32.50	32.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1207	32.40	32.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1208	32.30	32.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1209	32.20	32.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1210	32.10	32.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
TOT						4.06			9222.07	16085.00					
AVG					0.00428		0.57	10.72			6.15				
CUM						3377.78									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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 SETT	NCM DECAY

		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da
1196	33.400	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1197	33.300	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1198	33.200	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1199	33.100	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1200	33.000	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1201	32.900	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1202	32.800	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1203	32.700	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1204	32.600	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1205	32.500	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1206	32.400	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1207	32.300	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1208	32.200	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1209	32.100	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
1210	32.000	7.91	1.40	0.04	0.06	0.00	2.73	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.06
20 DEG C RATE				0.03		0.00	1.71			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1196	33.400	27.40	0.00	6.24	3.75	3.93	4.85	4.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1197	33.300	27.40	0.00	6.24	3.75	4.04	4.92	4.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49

1198	33.200	27.40	0.00	6.24	3.75	4.12	4.99	4.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50																
1199	33.100	27.40	0.00	6.24	3.75	4.18	5.05	5.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.51																
1200	33.000	27.40	0.00	6.24	3.75	4.22	5.12	5.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.51																
1201	32.900	27.40	0.00	6.24	3.75	4.25	5.18	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.52																
1202	32.800	27.40	0.00	6.24	3.75	4.27	5.24	5.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.53																
1203	32.700	27.40	0.00	6.24	3.75	4.29	5.30	5.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.53																
1204	32.600	27.40	0.00	6.24	3.75	4.30	5.36	5.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1205	32.500	27.40	0.00	6.24	3.75	4.31	5.41	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.55																
1206	32.400	27.40	0.00	6.24	3.75	4.31	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.55																
1207	32.300	27.40	0.00	6.24	3.75	4.31	5.52	5.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.56																
1208	32.200	27.40	0.00	6.24	3.75	4.31	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.56																
1209	32.100	27.40	0.00	6.24	3.75	4.31	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
1210	32.000	27.40	0.00	6.24	3.75	4.31	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 35 FLAT CREEK - SANDY CREEK CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1211	UPR RCH	0.02630	27.40	0.00	6.24	3.75	4.31	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.57
1211	WSTLD	0.00280	27.40	0.00	0.00	0.00	7.10	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.22

********** HYDRAULIC PARAMETER VALUES **********

ELEM	BEGIN	ENDING	FLOW	PCT	ADVCTV	TRAVEL	DEPTH	WIDTH	VOLUME	SURFACE	X-SECT	TIDAL	TIDAL	DISPRSN

NO.	DIST	DIST		EFF	VELO	TIME				AREA	AREA	PRISM	VELO	MEAN VELO
	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s m/s
1211	32.00	31.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1212	31.90	31.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1213	31.80	31.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1214	31.70	31.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1215	31.60	31.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1216	31.50	31.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1217	31.40	31.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1218	31.30	31.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1219	31.20	31.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1220	31.10	31.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1221	31.00	30.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1222	30.90	30.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1223	30.80	30.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1224	30.70	30.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1225	30.60	30.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1226	30.50	30.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1227	30.40	30.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1228	30.30	30.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1229	30.20	30.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1230	30.10	30.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1231	30.00	29.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1232	29.90	29.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1233	29.80	29.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
TOT						5.63			14165.55	24665.88				

AVG 0.00472 0.57 10.72 6.16
CUM 3383.41

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1211	31.900	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1212	31.800	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1213	31.700	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1214	31.600	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1215	31.500	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1216	31.400	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1217	31.300	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1218	31.200	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1219	31.100	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1220	31.000	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1221	30.900	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1222	30.800	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1223	30.700	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1224	30.600	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1225	30.500	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1226	30.400	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1227	30.300	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1228	30.200	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1229	30.100	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1230	30.000	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06

1231	29.900	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1232	29.800	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
1233	29.700	7.91	1.40	0.04	0.06	0.00	2.68	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.06
20 DEG C RATE				0.03		0.00	1.68			0.00		0.00	0.00	0.00	0.00			0.00	0.07	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1211	31.900	27.40	0.00	5.64	3.39	4.53	5.50	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
1212	31.800	27.40	0.00	5.64	3.39	4.49	5.53	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
1213	31.700	27.40	0.00	5.64	3.39	4.46	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
1214	31.600	27.40	0.00	5.64	3.39	4.44	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
1215	31.500	27.40	0.00	5.64	3.39	4.42	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
1216	31.400	27.40	0.00	5.64	3.39	4.41	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
1217	31.300	27.40	0.00	5.64	3.39	4.40	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
1218	31.200	27.40	0.00	5.64	3.39	4.39	5.73	5.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
1219	31.100	27.40	0.00	5.64	3.39	4.39	5.75	5.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
1220	31.000	27.40	0.00	5.64	3.39	4.38	5.78	5.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
1221	30.900	27.40	0.00	5.64	3.39	4.38	5.81	5.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
1222	30.800	27.40	0.00	5.64	3.39	4.38	5.84	5.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
1223	30.700	27.40	0.00	5.64	3.39	4.37	5.87	5.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1224	30.600	27.40	0.00	5.64	3.39	4.37	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1225	30.500	27.40	0.00	5.64	3.39	4.37	5.92	5.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
1226	30.400	27.40	0.00	5.64	3.39	4.37	5.94	5.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1227	30.300	27.40	0.00	5.64	3.39	4.37	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1228	30.200	27.40	0.00	5.64	3.39	4.37	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
1229	30.100	27.40	0.00	5.64	3.39	4.37	6.01	6.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1230	30.000	27.40	0.00	5.64	3.39	4.37	6.04	6.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1231	29.900	27.40	0.00	5.64	3.39	4.37	6.06	6.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1232	29.800	27.40	0.00	5.64	3.39	4.36	6.08	6.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
1233	29.700	27.40	0.00	5.64	3.39	4.36	6.10	6.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 36 SANDY CREEK - HWY 124 CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1234	UPR RCH	0.02910	27.40	0.00	5.64	3.39	4.36	6.10	6.10	0.00	0.00	0.00	0.00	0.00	0.00	0.45

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1234	29.70	29.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1235	29.60	29.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1236	29.50	29.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1237	29.40	29.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	

0.005															
1238	29.30	29.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	
0.005															
1239	29.20	29.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	
0.005															
1240	29.10	29.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	
0.005															
1241	29.00	28.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	
0.005															
1242	28.90	28.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	
0.005															
1243	28.80	28.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	
0.005															
1244	28.70	28.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	
0.005															
TOT						2.69			6774.83	11796.73					
AVG					0.00472		0.57	10.72			6.16				
CUM						3386.11									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1234	29.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1235	29.500	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1236	29.400	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1237	29.300	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1238	29.200	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1239	29.100	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1240	29.000	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1241	28.900	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1242	28.800	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1243	28.700	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
1244	28.600	7.91	1.40	0.04	0.06	0.00	3.19	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06

```
 20 DEG C RATE                0.03         0.00  2.00               0.00         0.00  0.00   0.00  0.00               0.00
0.09
 AVG 20 DEG C RATE     1.22         0.05                                  0.00
0.05

 * g/m²/d              ** mg/L/day


 ************************************************ WATER QUALITY CONSTITUENT VALUES
************************************************

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

1234   29.600  27.40  0.00     5.64     3.39   4.20   6.06   6.06   0.00   0.00   0.00   0.00   0.01   0.00    0.00      0.00
0.43
1235   29.500  27.40  0.00     5.64     3.39   4.08   6.02   6.02   0.00   0.00   0.01   0.01   0.02   0.00    0.00      0.00
0.41
1236   29.400  27.40  0.00     5.64     3.39   3.99   5.98   5.98   0.00   0.00   0.01   0.01   0.02   0.00    0.00      0.00
0.39
1237   29.300  27.40  0.00     5.64     3.39   3.92   5.94   5.94   0.00   0.00   0.01   0.01   0.03   0.00    0.00      0.00
0.37
1238   29.200  27.40  0.00     5.64     3.39   3.87   5.90   5.90   0.00   0.00   0.01   0.01   0.04   0.00    0.00      0.00
0.35
1239   29.100  27.40  0.00     5.64     3.39   3.84   5.86   5.86   0.00   0.00   0.02   0.02   0.05   0.00    0.00      0.00
0.34
1240   29.000  27.40  0.00     5.64     3.39   3.81   5.82   5.82   0.00   0.00   0.02   0.02   0.06   0.00    0.00      0.00
0.32
1241   28.900  27.40  0.00     5.64     3.39   3.80   5.79   5.79   0.00   0.00   0.02   0.02   0.07   0.00    0.00      0.00
0.31
1242   28.800  27.40  0.00     5.64     3.39   3.78   5.75   5.75   0.00   0.00   0.02   0.02   0.07   0.00    0.00      0.00
0.29
1243   28.700  27.40  0.00     5.64     3.39   3.77   5.72   5.72   0.00   0.00   0.03   0.03   0.08   0.00    0.00      0.00
0.28
1244   28.600  27.40  0.00     5.64     3.39   3.77   5.69   5.69   0.00   0.00   0.03   0.03   0.09   0.00    0.00      0.00
0.26

 * CM-I = CHLORIDES                        CM-II = SULFATES                        NCM = NBOD
         MG/L                                    MG/L                                    MG/L
 ** g/m³


STREAM SUMMARY                                                  CASTOR CREEK WATERSHED MODEL
HEADWATER                                                       CASTOR CREEK PROPOSED SUMMER RUN 90% REDUCTION MAN-MADE

 TRAVEL TIME      =        3386.11 DAYS

 MAXIMUM EFFLUENT =           9.62 PERCENT

 FLOW             =   0.00280 TO    0.02910 m³/s
 DISPERSION       =   0.0001  TO    0.0015  m²/s
 VELOCITY         =   0.00029 TO    0.00472 m/s
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DEPTH            =   0.54    TO    0.87    m
WIDTH            =  10.71    TO   11.91    m

BOD DECAY        =    0.04   TO    0.10    per day
NH3 DECAY        =    0.00   TO    0.00    per day
SDMNT OXYGEN DMND=    2.68   TO    3.43    g/m²/d
NH3 SOURCE       =    0.00   TO    0.00    g/m²/d
REAERATION       =    0.93   TO    1.49    per day
BOD SETTLING     =    0.06   TO    0.06    per day
ORGN DECAY       =    0.00   TO    0.00    per day
ORGN SETTLING    =    0.00   TO    0.00    per day

TEMPERATURE      =   27.40   TO   27.40    deg C
DISSOLVED OXYGEN =    2.99   TO    4.58    mg/L


    .....EXECUTION COMPLETED
```

APPENDIX B8 - Proposed 3.0 summer projection justifications

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
2	McDowell Branch - Horse Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
3	Horse Creek - Guice Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
4	Guice Branch - Curr Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
5	Curr Creek - Poplar Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
6	Poplar Branch - White Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
7	White Branch - Colston Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
8	White Branch - Colston Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
9	Fourmile Creek - Pool Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
10	Pool Branch - Ginney Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
11	Ginney Branch - Edwards Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
12	Edwards Branch - Little Flat	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
13	Little Flat - Glade Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
14	Glade Creek - Cub Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
15	Cub Creek - Cow Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
16	Cow Creek - Bear Creek Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
17	Bear Creek Branch - Biles Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
18	Biles Branch - Hurricane Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
19	Hurricane Creek - Indian Branch	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
20	Indian Branch - Moody Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
21	Moody Creek - Bull Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
22	Bull Creek - Sweetwater Creek	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
23	Sweetwater Creek - Brushy Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
24	Brushy Creek - White Oak Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
25	White Oak Creek - Bills Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
26	Bills Creek - Lost Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
27	Lost Creek - Messer Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
28	Messer Creek - Richland Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
29	Richland Creek - Piney Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
30	Piney Creek - Beaucoup Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
31	Beaucoup Creek - Banister Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
32	Banister Creek - Brushy Creek2	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
33	Brushy Creek 2 - McClellen Branch	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
34	McClellen Branch - Flat Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
35	Flat Creek - Sandy Creek	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard
36	Sandy Creek - Hwy 124	Temperature	°Celcius	27.4	Summer Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Summer Season Standard

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 3, Program Constants			
Description of Constant	**Value**	**Result**	**Source/Justification**
Maximum iteration limit	1000.0		Standard
KL Minimum	0.7	Minimum KL to be used.	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
Inhibition control value	3.0	Inhibits all decay rate except SOD for low DO.	Standard LA modeling procedure.
Ocean exchange ratio	0.0	Set 0% tidal exchange at lower boundary.	This was done to allow dispersion in the model but not to force the bottom element through the boundary conditions.
Hydraulic calculation method	2.0	Sets the Hydraulic calc. to width and depth coef.	The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions, making the Leopold relationships inaccurate. This method allows the model to predict a more accurate depth and width during low flow conditions.
Settled rate units.	2.0	Sets the settled rate to a velocity (m/day).	By making the settling rate a velocity the rate becomes dependent upon the depth.
K2 Max	25.0	Max K2 at 20 C allowed for any computational element	EPA Policy in the absence of a measured value.
NCM Oxygen Uptake	1.0	Oxygen Uptake Rate per Unit of NBOD decay.	Standard LA modeling procedure

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 27, Lower Boundary Conditions

Reach #	NAME	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	Temperature	^{o}Celcius	27.4	Summer Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	10.4	Site 1
		Conservative Matl. II		5	Site 1
		Dissolved O_2	mg/l	7.1	Summer Season 90 percent DO Sat
		BOD	mg/l	9.58	Site 1
		Org.- N	mg/l	0	
		NH_3-N	mg/l	0	
		NO_{2+3}-N	mg/l	0.03	
		Chlorophyll a	ug/l	0	
		Nonconservative	mg/l	0.62	Site 1

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 26, Wastewater Data for NCM					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		NCM	mg/l	0.22	Reference Stream Data

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 25, Wastewater Data for DO, BOD, and Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Dissolved O_2	mg/l	7.1	90 percent of DO Sat at Summer 90th Percentile Temperature
		CBOD	mg/l	3.46	Reference Stream Data

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 24, Wastewater Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Wasteload inflow	cms	0.0028	LTP Summer Projection Value
		Temperature	^{o}Celcius	27.4	90th percentile Temperature for Summer Season
		Salinity	ppt		
		Conservative Matl. I	mg/l		
		Conservative Matl. II	mg/l		

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 22, Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		NCM	mg/l	0.22	Background per reference stream data

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 21, Headwater Data for DO, BOD, and Nitrogen					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		Dissolved O_2	mg/l	7.1	Summer Season 90 percent DO Sat
		BOD	mg/l	5.53	Background per reference stream data

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 20, Headwater Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Element # of input		1	
		Headwater name		Castor Creek	
		Headwater flow	cms	0.0028	Per LTP
		Temperature	°Celcius	27.40	Summer Season 90th Percentile Temperature
		Conservative Matl. I	mg/l	8.30	Site 5
		Conservative Matl. II	mg/l	0.00	Site 5

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	BOD	kg/day	11	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
2	McDowell Branch - Horse Creek	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
3	Horse Creek - Guice Branch	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
4	Guice Branch - Curr Creek	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
5	Curr Creek - Poplar Branch	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
6	Poplar Branch - White Branch	BOD	kg/day	0	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
7	White Branch - Colston Creek	BOD	kg/day	6	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
8	White Branch - Colston Creek	BOD	kg/day	1	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
9	Fourmile Creek - Pool Branch	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
10	Pool Branch - Ginney Branch	BOD	kg/day	0	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
11	Ginney Branch - Edwards Branch	BOD	kg/day	13	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
12	Edwards Branch - Little Flat	BOD	kg/day	13	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
13	Little Flat - Glade Creek	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
14	Glade Creek - Cub Creek	BOD	kg/day	4	90% reduction man-made loading
		Nonconservative matl.		8	90% reduction man-made loading
15	Cub Creek - Cow Creek	BOD	kg/day	1	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
16	Cow Creek - Bear Creek Branch	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
17	Bear Creek Branch - Biles Branch	BOD	kg/day	0	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
18	Biles Branch - Hurricane Creek	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		3	90% reduction man-made loading

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
19	Hurricane Creek - Indian Branch	BOD	kg/day	6	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
20	Indian Branch - Moody Creek	BOD	kg/day	9	90% reduction man-made loading
		Nonconservative matl.		4	90% reduction man-made loading
21	Moody Creek - Bull Creek	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
22	Bull Creek - Sweetwater Creek	BOD	kg/day	29	90% reduction man-made loading
		Nonconservative matl.		8	90% reduction man-made loading
23	Sweetwater Creek - Brushy Creek	BOD	kg/day	8	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
24	Brushy Creek - White Oak Creek	BOD	kg/day	31	90% reduction man-made loading
		Nonconservative matl.		8	90% reduction man-made loading
25	White Oak Creek - Bills Creek	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
26	Bills Creek - Lost Creek	BOD	kg/day	24	90% reduction man-made loading
		Nonconservative matl.		7	90% reduction man-made loading
27	Lost Creek - Messer Creek	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		4	90% reduction man-made loading
28	Messer Creek - Richland Creek	BOD	kg/day	10	90% reduction man-made loading
		Nonconservative matl.		3	90% reduction man-made loading
29	Richland Creek - Piney Creek	BOD	kg/day	14	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
30	Piney Creek - Beaucoup Creek	BOD	kg/day	23	90% reduction man-made loading
		Nonconservative matl.		6	90% reduction man-made loading
31	Beaucoup Creek - Banister Creek	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
32	Banister Creek - Brushy Creek2	BOD	kg/day	8	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
33	Brushy Creek 2 - McClellen Branch	BOD	kg/day	26	90% reduction man-made loading
		Nonconservative matl.		4	90% reduction man-made loading
34	McClellen Branch - Flat Creek	BOD	kg/day	7	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
35	Flat Creek - Sandy Creek	BOD	kg/day	10	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 18, Incremetal Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
32		NCM	mg/l	0.22	Background from reference streams

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 17, Incremetal Data for DO, BOD, Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
32		Dissolved O_2	mg/l	7.1	Summer Season 90 percent DO Sat
		BOD	mg/l	5.53	Background from reference streams
		Org.-N	mg/l		
		NH_3-N	mg/l		
		NO_{2+3} - N	mg/l		

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 16, Incremental Data for Flow, Temperature, Salinity, and Conservatives					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
32		Incremental Outflow	m^3/s		
		Incremental Inflow	m^3/s	0.0235	
		Temperature	$^oCelcius$	27.4	Summer Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	6	Site 3
		Conservative Matl. II	mg/l	4.2	Site 3

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
8	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
15	Cub Creek - Cow Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		NCM Settling Rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
22	Bull Creek - Sweetwater Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	NCM Decay	1/day	0.1	Interpolation of Bottle Rates from sites 4-5
		NCM Settling Rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	NCM Decay	1/day	0.09	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
29	Richland Creek - Piney Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	NCM Decay	1/day	0.07	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
36	Sandy Creek - Hwy 124	NCM Decay	1/day	0.09	Bottle Rate Site 1
		NCM Settling Rate	m/day	0.05	Calibration

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.07	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.12	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.15	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.13	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
15	Cub Creek - Cow Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.02	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.92	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.91	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
22	Bull Creek - Sweetwater Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.98	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.02	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.03	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.91	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.89	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.86	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 4 and 5
		BOD Settling rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.75	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
29	Richland Creek - Piney Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.72	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.98	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.71	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.68	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.00	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.71	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.68	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.00	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate for Site 1
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
2	McDowell Branch - Horse Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
3	Horse Creek - Guice Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
4	Guice Branch - Curr Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
5	Curr Creek - Poplar Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
6	Poplar Branch - White Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
			Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
7	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
9	Fourmile Creek - Pool Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
10	Pool Branch - Ginney Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
11	Ginney Branch - Edwards Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
12	Edwards Branch - Little Flat	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.20	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.86	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
13	Little Flat - Glade Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.84	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
14	Glade Creek - Cub Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.82	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
15	Cub Creek - Cow Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.81	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
16	Cow Creek - Bear Creek Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.8	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
17	Bear Creek Branch - Biles Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
18	Biles Branch - Hurricane Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
19	Hurricane Creek - Indian Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.78	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
20	Indian Branch - Moody Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.77	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
21	Moody Creek - Bull Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.76	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
22	Bull Creek - Sweetwater Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.75	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
23	Sweetwater Creek - Brushy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.74	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
24	Brushy Creek - White Oak Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.73	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
25	White Oak Creek - Bills Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.71	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
26	Bills Creek - Lost Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.68	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
27	Lost Creek - Messer Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.65	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
28	Messer Creek - Richland Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.63	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
29	Richland Creek - Piney Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.61	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
30	Piney Creek - Beaucoup Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.58	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
31	Beaucoup Creek - Banister Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.57	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
32	Banister Creek - Brushy Creek2	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
33	Brushy Creek 2 - McClellen Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
34	McClellen Branch - Flat Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
35	Flat Creek - Sandy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Summer Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

APPENDIX B9 - Proposed 3.0 summer loading calculations

Summer Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:	Castor Creek - Proposed Standards Loading

Shaded cells are input values for calculations.
Values to be used in the projection models.

Reach Number and Description	Calibration Model Values: Non-Point UCBOD gm O$_2$ / [(m^2)(day)] A, (note 1)	Non-Point UNBOD gm O$_2$ / [(m^2)(day)] B, (note 1)	SOD @ 20°C gm O$_2$ / [(m^2)(day)] C, (note 1)	Total Calb. Benthic Load (TCBL) gm O$_2$ / [(m^2)(day)] D, (note 1)	Reach Length Kilo-meters E, (note 1)	Back-ground Benthic Load gm O$_2$ / [(m^2)(day)] F	Proj. Model Avg. Reach Width Meters G	Proj. Temp. (degrees Celcius) I	Percentage Reduction of man-made sources % H	TCBL adjusted for % reduction (Reduced TCBL) gm O$_2$ / [(m^2)(day)] J, (note 2)	Projection Model Equivalents: Reduced TCBL adjusted for MOS gm O$_2$ / [(m^2)(day)] K, (note 3)	Non-Point UCBOD gm O$_2$ / [(m^2)(day)] L = (K)(A / D)	Non-Point UNBOD gm O$_2$ / [(m^2)(day)] M = (K)(B / D)	SOD @ 20°C gm O$_2$ / [(m^2)(day)] N = (K)(C / D)	Projected Model Loads: Non-Point UCBOD INPUTS (kg/day) O = (E)(G)(L)	Non-Point UNBOD INPUTS (kg/day) P = (E)(G)(M)	SOD load @ Proj. temp. (kg/day) Q, (note 4)	Total Projection Benthic Load (LA+MOS) (kg/day) O + P + Q
1	0.271	0.031	3.65	3.952	5.90	0.00	11.90	27.40	60.0%	1.58	1.98	0.135	0.016	1.83	10	1	204	214.80
2	0.263	0.032	3.65	3.944	1.60	0.00	11.90	27.40	60.0%	1.58	1.97	0.131	0.016	1.83	3	0	55	58.18
3	0.261	0.031	3.65	3.942	0.90	0.00	11.90	27.40	60.0%	1.58	1.97	0.131	0.015	1.83	1	0	31	32.71
4	0.259	0.030	3.65	3.938	1.30	0.00	11.90	27.40	60.0%	1.58	1.97	0.129	0.015	1.83	2	0	45	47.22
5	0.261	0.030	3.65	3.941	2.80	0.00	11.90	27.40	60.0%	1.58	1.97	0.131	0.015	1.83	4	1	97	101.76
6	0.261	0.029	3.65	3.940	0.10	0.00	11.90	27.40	60.0%	1.58	1.97	0.130	0.015	1.83	0	0	3	3.63
7	0.250	0.031	3.65	3.931	3.80	0.00	11.90	27.40	60.0%	1.57	1.97	0.125	0.015	1.83	6	1	132	137.87
8	0.252	0.030	3.65	3.932	0.50	0.00	11.90	27.40	60.0%	1.57	1.97	0.126	0.015	1.83	1	0	17	18.14
9	0.252	0.030	3.65	3.932	3.10	0.00	11.90	27.40	60.0%	1.57	1.97	0.126	0.015	1.83	5	1	107	112.49
10	0.252	0.032	3.65	3.934	0.20	0.00	11.90	27.40	60.0%	1.57	1.97	0.126	0.016	1.83	0	0	7	7.26
11	0.251	0.031	3.65	3.932	7.70	0.00	11.90	27.40	60.0%	1.57	1.97	0.126	0.015	1.83	12	1	266	279.39
12	0.326	0.117	4.30	4.743	7.40	0.00	11.20	27.40	60.0%	1.90	2.37	0.163	0.059	2.15	14	5	284	302.32
13	0.146	0.219	4.30	4.665	3.70	0.00	11.10	27.40	60.0%	1.87	2.33	0.073	0.110	2.15	3	5	141	148.22
14	0.131	0.246	4.20	4.577	5.50	0.00	11.10	27.40	60.0%	1.83	2.29	0.066	0.123	2.10	4	8	204	215.81
15	0.150	0.255	4.10	4.505	1.20	0.00	11.10	27.40	60.0%	1.80	2.25	0.075	0.128	2.05	1	2	44	46.22
16	0.141	0.253	4.10	4.494	3.20	0.00	11.10	27.40	60.0%	1.80	2.25	0.070	0.127	2.05	3	5	116	123.04
17	0.136	0.250	4.10	4.486	0.40	0.00	11.00	27.40	60.0%	1.79	2.24	0.068	0.125	2.05	0	1	14	15.22
18	0.144	0.254	4.10	4.497	1.90	0.00	11.00	27.40	60.0%	1.80	2.25	0.072	0.127	2.05	2	3	68	72.43
19	0.455	0.198	4.10	4.752	2.30	0.00	11.00	27.40	60.0%	1.90	2.38	0.227	0.099	2.05	6	3	83	90.90
20	0.515	0.242	3.70	4.458	3.00	0.00	11.00	27.40	60.0%	1.78	2.23	0.258	0.121	1.85	9	4	97	109.79
21	0.519	0.241	3.700	4.459	1.70	0.00	11.00	27.40	60.0%	1.78	2.23	0.259	0.120	1.85	5	2	55	62.23
22	0.506	0.146	3.700	4.258	9.70	0.00	11.00	27.40	60.0%	1.70	2.13	0.253	0.073	1.85	27	8	315	349.39
23	0.473	0.136	3.750	4.236	2.70	0.00	11.00	27.40	60.0%	1.69	2.12	0.236	0.068	1.88	7	2	89	97.79
24	0.470	0.125	3.750	4.206	11.10	0.00	11.00	27.40	60.0%	1.68	2.10	0.235	0.063	1.88	29	8	365	401.20
25	0.435	0.123	3.100	3.563	0.80	0.00	10.90	27.40	60.0%	1.43	1.78	0.218	0.061	1.55	2	1	22	23.97
26	0.374	0.112	3.100	3.611	9.60	0.00	10.90	27.40	60.0%	1.44	1.81	0.187	0.056	1.55	20	6	258	283.90
27	0.264	0.192	3.100	3.692	3.00	0.00	10.80	27.40	60.0%	1.48	1.85	0.132	0.096	1.55	4	3	80	87.42
28	0.347	0.116	2.700	3.334	4.20	0.00	10.80	27.40	60.0%	1.33	1.67	0.174	0.058	1.35	8	3	98	108.09
29	0.386	0.125	2.550	3.180	5.00	0.00	10.80	27.40	60.0%	1.27	1.59	0.193	0.063	1.28	10	3	110	123.52
30	0.467	0.125	3.650	4.183	8.50	0.00	10.70	27.40	60.0%	1.67	2.09	0.234	0.062	1.83	21	6	265	291.43
31	0.512	0.122	2.600	3.285	1.50	0.00	10.70	27.40	60.0%	1.31	1.64	0.256	0.061	1.30	4	1	33	38.34
32	0.505	0.125	2.500	3.191	2.30	0.00	10.70	27.40	60.0%	1.28	1.60	0.252	0.063	1.25	6	2	49	56.77
33	0.462	0.071	2.400	2.465	6.20	0.00	10.70	27.40	60.0%	0.99	1.23	0.231	0.036	1.20	15	2	127	144.55
34	0.623	0.062	2.600	3.285	1.50	0.00	10.70	27.40	60.0%	1.31	1.64	0.312	0.031	1.30	5	1	33	38.75
35	0.610	0.081	2.500	3.191	2.30	0.00	10.70	27.40	60.0%	1.28	1.60	0.305	0.041	1.25	8	1	49	57.52
36	0.060	0.005	2.400	2.465	6.20	0.00	10.70	27.40	60.0%	0.99	1.23	0.030	0.002	1.20	2	0	127	129.02
Sub-Total										56.44					256	85	4090	**4431**

Reach Number and Description	Margin of Safety Loads: MOS Total Benthic Load @ 20°C (kg/day) R = (K-J)(E)(G)	MOS SOD @ 20°C (kg/day) S = (R)(C/D)	Non-Point UCBOD MOS Loads (kg/day) T = (R)(A/D)	Non-Point UNBOD MOS Loads (kg/day) U = (R)(B/D)	Adjusted SOD MOS @ Proj. temp (kg/day) V, (note 5)	Adjusted Total MOS @ Proj. temp (kg/day) T + U + V	Man-made Model equivalents: Manmade portion of TCBL gm O$_2$ / [(m^2)(day)] W = K - F	Non-Point UCBOD gm O$_2$ / [(m^2)(day)] X = (W)(A / D)	Non-Point UNBOD gm O$_2$ / [(m^2)(day)] Y = (W)(B / D)	SOD @ 20°C gm O$_2$ / [(m^2)(day)] Z = (W)(C / D)	Man-made Model loads: Non-Point UCBOD INPUTS (kg/day) AA = (E)(G)(X)	Non-Point UNBOD INPUTS (kg/day) AB = (E)(G)(Y)	SOD load @ Proj. temp. (kg/day) AC, (note 6)	Man-made Total Projection Benthic Load (kg/day) AA + AB + AC	Background Model loads: Non-Point UCBOD INPUTS (kg/day) AD = O - AA	Non-Point UNBOD INPUTS (kg/day) AE = P - AB	SOD load @ Proj. temp. (kg/day) AF = Q - AC	Man-made Total Projection Benthic Load (kg/day) AD + AE + AF
1	28	26	2	0	41	43	1.98	0.135	0.016	1.83	10	1	204	214.80	0	0	0	0.00
2	8	7	1	0	11	12	1.97	0.131	0.016	1.83	3	0	55	58.18	0	0	0	0.00
3	4	4	0	0	6	7	1.97	0.131	0.015	1.83	1	0	31	32.71	0	0	0	0.00
4	6	6	0	0	9	9	1.97	0.129	0.015	1.83	2	0	45	47.22	0	0	0	0.00
5	13	12	1	0	19	20	1.97	0.131	0.015	1.83	4	1	97	101.76	0	0	0	0.00
6	0	0	0	0	1	1	1.97	0.130	0.015	1.83	0	0	3	3.63	0	0	0	0.00
7	18	17	1	0	26	28	1.97	0.125	0.015	1.83	6	1	132	137.87	0	0	0	0.00
8	2	2	0	0	3	4	1.97	0.126	0.015	1.83	1	0	17	18.14	0	0	0	0.00
9	15	13	1	0	21	22	1.97	0.126	0.015	1.83	5	1	107	112.49	0	0	0	0.00
10	1	1	0	0	1	1	1.97	0.126	0.016	1.83	0	0	7	7.26	0	0	0	0.00
11	36	33	2	0	53	56	1.97	0.126	0.015	1.83	12	1	266	279.39	0	0	0	0.00
12	39	36	3	1	57	60	2.37	0.163	0.059	2.15	14	5	284	302.32	0	0	0	0.00
13	19	18	1	1	28	30	2.33	0.073	0.110	2.15	3	5	141	148.22	0	0	0	0.00
14	28	26	1	2	41	43	2.29	0.066	0.123	2.10	4	8	204	215.81	0	0	0	0.00
15	6	5	0	0	9	9	2.25	0.075	0.128	2.05	1	2	44	46.22	0	0	0	0.00
16	16	15	1	1	23	25	2.25	0.070	0.127	2.05	3	5	116	123.04	0	0	0	0.00
17	2	2	0	0	3	3	2.24	0.068	0.125	2.05	0	1	14	15.22	0	0	0	0.00
18	9	9	0	1	14	14	2.25	0.072	0.127	2.05	2	3	68	72.43	0	0	0	0.00
19	12	10	1	1	17	18	2.38	0.227	0.099	2.05	6	3	83	90.90	0	0	0	0.00
20	15	12	2	1	19	22	2.23	0.258	0.121	1.85	9	4	97	109.79	0	0	0	0.00
21	8	7	1	0	11	12	2.23	0.259	0.120	1.85	5	2	55	62.23	0	0	0	0.00
22	45	39	5	2	63	70	2.13	0.253	0.073	1.85	27	8	315	349.39	0	0	0	0.00
23	13	11	1	0	18	20	2.12	0.236	0.068	1.88	7	2	89	97.79	0	0	0	0.00
24	51	46	6	2	73	80	2.10	0.235	0.063	1.88	29	8	365	401.20	0	0	0	0.00
25	3	3	0	0	4	5	1.78	0.218	0.061	1.55	2	1	22	23.97	0	0	0	0.00
26	38	32	4	1	52	57	1.81	0.187	0.056	1.55	20	6	258	283.90	0	0	0	0.00
27	12	10	1	1	16	17	1.85	0.132	0.096	1.55	4	3	80	87.42	0	0	0	0.00
28	15	12	2	1	20	22	1.67	0.174	0.058	1.35	8	3	98	108.09	0	0	0	0.00
29	17	14	2	1	22	25	1.59	0.193	0.063	1.28	10	3	110	123.52	0	0	0	0.00
30	38	33	4	1	53	58	2.09	0.234	0.062	1.83	21	6	265	291.43	0	0	0	0.00
31	5	4	1	0	7	8	1.64	0.256	0.061	1.30	4	1	33	38.34	0	0	0	0.00
32	8	6	1	0	10	11	1.60	0.252	0.063	1.25	6	2	49	56.77	0	0	0	0.00
33	16	16	3	0	25	29	1.23	0.231	0.036	1.20	15	2	127	144.55	0	0	0	0.00
34	5	4	1	0	7	8	1.64	0.312	0.031	1.30	5	1	33	38.75	0	0	0	0.00
35	8	6	2	0	10	12	1.60	0.305	0.041	1.25	8	1	49	57.52	0	0	0	0.00
36	16	16	0	0	25	26	1.23	0.030	0.002	1.20	2	0	127	129.02	0	0	0	0.00
Sub-Total	577		51	17	818	**886**					256	85	4090	**4431**	0	0	0	**0**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.
Note 2, **J** = [(1 - **H**) x (**D** - **F**) + **F**]
Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]
Note 4, **Q** = **E** x **G** x **N** x 1.065 $^{(\mathbf{I}-20)}$
Note 5, **V** = **S** x 1.065 $^{(\mathbf{I}-20)}$
Note 6, **AC** = **E** x **G** x **Z** x 1.065 $^{(\mathbf{I}-20)}$

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) = [MOG + MOU] =	**20%**

Summer TMDL calculations and Projection model calculations for Headwater / Tributary loads:

Castor Creek - Proposed Standards Loading

Shaded cells are input values for calculations.
Values to be used in the projection models.

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Background UCBOD conc. (mg/l)	Background UNBOD conc. (mg/l)	Background UCBOD Load (kg/day)	Background UNBOD Load (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**F**	**G**	**H = (86.4)(A)(F)**	**I = (86.4)(A)(G)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Headwater Castor Creek	0.0028	14.74	0.58	3.57	0.14	5.53	0.22	1.34	0.05	60%	2.23	0.09	2.45	0.10	10.14	0.40	**0.23**	**2.32**
Flat Creek	0.0028	3.46	0.50	0.84	0.12	3.46	0.22	0.84	0.05	60%	0.84	0.08	0.84	0.09	3.46	0.36	**0.01**	**0.92**
SUB-TOTAL TMDL LOADING				**4**	**0**			**2**	**0**		**3**	**0**	**3**	**0**			**0**	**3**

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) =	**20%**

Summer TMDL calculations and Projection model calculations for Incremental loads:

Castor Creek - Proposed Standards Loading

Shaded cells are input values for calculations.
Values to be used in the projection models.

Incremental Load Determinations:

Reach Description and #	Calibration Load determinations:									Percentage Reduction calculations:			Projection Model Input determinations:				Projection Model Input determinations:			
	Projection Flow (cms)	Calb. UCBOD conc. (mg/l)	Unadjusted UCBOD (kg/day)	Calb. UNBOD conc. (mg/l)	Unadjusted UNBOD (kg/day)	Background Conc. UCBOD (mg/l)	Background Conc. UNBOD (mg/l)	Background Load UCBOD (kg/day)	Background Load UNBOD (kg/day)	Actual % Reduction of Man Made Loads	Increm. UCBOD Load Adjusted For % Reduction **(LA load)**	Increm. UNBOD Load Adjusted For % Reduction **(LA load)**	Increm. UCBOD Adjusted for MOS (kg/day) (1)	Increm. UNBOD Adjusted for MOS (kg/day) (1)	Projection UCBOD conc. (mg/l)	Projection UNBOD conc. (mg/l)	Proj. UCBOD MOS load (kg/day)	Proj. UNBOD MOS load (kg/day)	**Sub-total MOS load (kg/day)**	**Sub-total LA load (kg/day)**
	A	**B**	**C = (86.4)(A)(B)**	**D**	**E = (86.4)(A)(D)**	**F**	**G**	**H = (86.4)(A)(F)**	**I = (86.4)(A)(G)**	**J,** Note 1	**K = (C-H)(1-J) + H**	**L = (E-I)(1-J) + I**	**M = (K-H) / (1-MOS) + H**	**N = (L-I) / (1-MOS) + I**	**M / [(A)(86.4)]**	**N / [(A)(86.4)]**	**O = M - K**	**P = N - L**	**O + P**	**K + L**
1										60%										
2										60%										
3										60%										
4										60%										
5										60%										
6										60%										
7										60%										
8										60%										
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28										60%										
29										60%										
30										60%										
31										60%										
32	0.02	9.19	18.66	0.84	1.71	5.53	0.22	11.23	0.45	60%	14.2006176	0.9502272	15	1	7.36	0.53	1	0	1	15
33										60%										
34										60%										
35										60%										
36										60%										
Sub-Total benthic loading								**11**	**0**		**14**	**1**	**15**	**1**			**1**	**0**	**1**	**15**

Note 1: The percentage reduction values are taken from the "Non-Point Benthic Load Input and TMDL Calculations" worksheet.

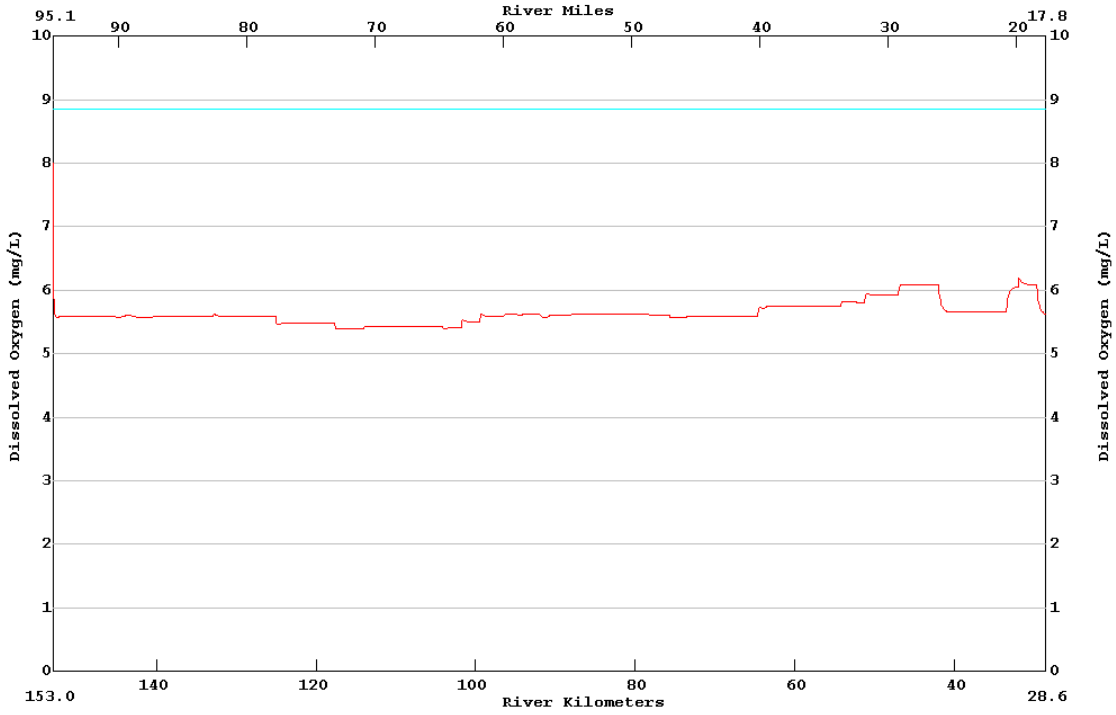
EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) =	**20%**

2/21/2002

APPENDIX B10 - Proposed 3.0 winter projection model input/output

LA-QUAL Version 5.02 Run at 11:37 on 02/22/2002 File D:\Castor\Input Files\castorwin390.txt
CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE min= 5.39 max= 8.00
CASTOR CREEK WATERSHED MODEL



```
LA-QUAL Version 5.02
Louisiana Department of Environmental Quality

Input file is D:\Castor\Input Files\castorwin390.txt
Output produced at 11:37 on 02/22/2002

$$$ DATA TYPE 1 (TITLES AND CONTROL CARDS) $$$

CARD TYPE       CONTROL TITLES

TITLE01         CASTOR CREEK WATERSHED MODEL
TITLE02         CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE
CNTROL04  YES   METRIC UNITS
CNTROL05  YES   OXYGEN DEPENDENT RATES
ENDATA01

$$$ DATA TYPE 2 (MODEL OPTIONS) $$$

CARD TYPE       MODEL OPTION

MODOPT01   NO   TEMPERATURE
MODOPT02   NO   SALINITY
MODOPT03  YES   CONSERVATIVE MATERIAL  I = CHLORIDES                  IN MG/L
MODOPT04  YES   CONSERVATIVE MATERIAL II = SULFATES                  IN MG/L
MODOPT05  YES   DISSOLVED OXYGEN
MODOPT06  YES   BIOCHEMICAL OXYGEN DEMAND
MODOPT07   NO   NITROGEN
MODOPT08   NO   PHOSPHORUS
MODOPT09   NO   CHLOROPHYLL A
MODOPT10   NO   MACROPHYTES
MODOPT11   NO   COLIFORM
MODOPT12  YES   NONCONSERVATIVE MATERIAL = NBOD                      IN MG/L
ENDATA02

$$$ DATA TYPE 3 (PROGRAM CONSTANTS) $$$

CARD TYPE       DESCRIPTION OF CONSTANT                        VALUE

PROGRAM         MAXIMUM ITERATION LIMIT            =      1000.00000
PROGRAM         PLOT TYPE                          =         4.00000
PROGRAM         FINAL REPORT TYPE                  =         1.00000
PROGRAM         SPECIAL REPORT TYPE                =         3.00000
PROGRAM         KL MINIMUM                         =         0.70000 meters/day
PROGRAM         NCM OXYGEN UPTAKE RATE             =         1.00000 mg O/mg NCM
PROGRAM         INHIBITION CONTROL VALUE           =         3.00000
PROGRAM         NH3 OXYGEN UPTAKE RATE             =         4.30000 mg O/mg N
PROGRAM         K2 MAXIMUM                         =        25.00000 per day
PROGRAM         HYDRAULIC CALCULATION METHOD       =         2.00000 (widths and depths)
PROGRAM         SETTLING RATE UNITS                =         2.00000 (per day)
PROGRAM         OCEAN EXCHANGE RATIO               =         0.00000
ENDATA03

$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
```

CARD TYPE RATE CODE THETA VALUE

ENDATA04

$$$ CONSTANTS TYPE 5 (TEMPERATURE DATA) $$$

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA05

$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA06

$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$

CARD TYPE DESCRIPTION OF CONSTANT VALUE

ENDATA07

$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$

CARD TYPE	REACH	ID	NAME	BEGIN REACH km		END REACH km	ELEM LENGTH km	REACH LENGTH km	ELEMS PER RCH	BEGIN ELEM NUM	END ELEM NUM
REACH ID	1	CC	HEADWATER CC - MCDOWELL BRANCH	153.00	TO	147.10	0.1000	5.90	59	1	59
REACH ID	2	CC	MCDOWELL BRANCH - HORSE CREEK	147.10	TO	145.50	0.1000	1.60	16	60	75
REACH ID	3	CC	HORSE CREEK - GUICE BRANCH	145.50	TO	144.60	0.1000	0.90	9	76	84
REACH ID	4	CC	GUICE BRANCH - CURR CREEK	144.60	TO	143.30	0.1000	1.30	13	85	97
REACH ID	5	CC	CURR CREEK - POPLAR BRANCH	143.30	TO	140.50	0.1000	2.80	28	98	125
REACH ID	6	CC	POPLAR BRANCH - WHITE BRANCH	140.50	TO	140.40	0.1000	0.10	1	126	126
REACH ID	7	CC	WHITE BRANCH - COLSTON CREEK	140.40	TO	136.60	0.1000	3.80	38	127	164
REACH ID	8	CC	COLSTON CREEK - FOURMILE CREEK	136.60	TO	136.10	0.1000	0.50	5	165	169
REACH ID	9	CC	FOURMILE CREEK - POOL BRANCH	136.10	TO	133.00	0.1000	3.10	31	170	200
REACH ID	10	CC	POOL BRANCH - GINNEY BRANCH	133.00	TO	132.80	0.1000	0.20	2	201	202
REACH ID	11	CC	GINNEY BRANCH - EDWARDS BRANCH	132.80	TO	125.10	0.1000	7.70	77	203	279
REACH ID	12	CC	EDWARDS BRANCH - LITTLE FLAT	125.10	TO	117.70	0.1000	7.40	74	280	353
REACH ID	13	CC	LITTLE FLAT - GLADE CREEK	117.70	TO	114.00	0.1000	3.70	37	354	390
REACH ID	14	CC	GLADE CREEK - CUB CREEK	114.00	TO	108.50	0.1000	5.50	55	391	445
REACH ID	15	CC	CUB CREEK - COW CREEK	108.50	TO	107.30	0.1000	1.20	12	446	457
REACH ID	16	CC	COW CREEK - BEAR CREEK BRANCH	107.30	TO	104.10	0.1000	3.20	32	458	489
REACH ID	17	CC	BEAR CREEK BRANCH - BILES BR	104.10	TO	103.70	0.1000	0.40	4	490	493
REACH ID	18	CC	BILES BRANCH - HURRICANE CR	103.70	TO	101.80	0.1000	1.90	19	494	512
REACH ID	19	CC	HURRICANE CR - INDIAN BRANCH	101.80	TO	99.50	0.1000	2.30	23	513	535
REACH ID	20	CC	INDIAN BRANCH - MOODY CREEK	99.50	TO	96.50	0.1000	3.00	30	536	565
REACH ID	21	CC	MOODY CREEK - BULL CREEK	96.50	TO	94.80	0.1000	1.70	17	566	582
REACH ID	22	CC	BULL CREEK - SWEETWATER CREEK	94.80	TO	92.00	0.1000	2.80	28	583	610
REACH ID	23	CC	SWEETWATER CREEK - BRUSHY CREEK	92.00	TO	91.00	0.1000	1.00	10	611	620
REACH ID	24	CC	BRUSHY CREEK - WHITE OAK CREEK	91.00	TO	88.10	0.1000	2.90	29	621	649
REACH ID	25	CC	WHITE OAK CREEK - BILLS CREEK	88.10	TO	78.40	0.1000	9.70	97	650	746
REACH ID	26	CC	BILLS CREEK - LOST CREEK	78.40	TO	75.70	0.1000	2.70	27	747	773
REACH ID	27	CC	LOST CREEK - MESSER CREEK	75.70	TO	64.60	0.1000	11.10	111	774	884

REACH ID	28	CC	MESSER CREEK - RICHLAND CREEK	64.60	TO	63.80	0.1000	0.80	8	885	892
REACH ID	29	CC	RICHLAND CREEK - PINEY CREEK	63.80	TO	54.20	0.1000	9.60	96	893	988
REACH ID	30	CC	PINEY CREEK - BEAUCOUP CREEK	54.20	TO	51.20	0.1000	3.00	30	989	1018
REACH ID	31	CC	BEAUCOUP CREEK - BANISTER CREEK	51.20	TO	47.00	0.1000	4.20	42	1019	1060
REACH ID	32	CC	BANISTER CREEK - BRUSHY CREEK2	47.00	TO	42.00	0.1000	5.00	50	1061	1110
REACH ID	33	CC	BRUSHY CREEK2 - MCCLELLEN BR	42.00	TO	33.50	0.1000	8.50	85	1111	1195
REACH ID	34	CC	MCCLELLEN BR - FLAT CREEK	33.50	TO	32.00	0.1000	1.50	15	1196	1210
REACH ID	35	CC	FLAT CREEK - SANDY CREEK	32.00	TO	29.70	0.1000	2.30	23	1211	1233
REACH ID	36	CC	SANDY CREEK - HWY 124	29.70	TO	28.60	0.1000	1.10	11	1234	1244

ENDATA08

$$$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) $$$

CARD TYPE	REACH	ID	WIDTH "A"	WIDTH "B"	WIDTH "C"	DEPTH "D"	DEPTH "E"	DEPTH "F"	SLOPE	MANNINGS "N"
HYDR-1	1	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	2	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	3	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	4	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	5	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	6	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	7	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	8	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	9	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	10	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	11	CC	0.100	0.400	11.900	0.100	0.400	0.530	0.00000	0.027
HYDR-1	12	CC	0.100	0.400	11.200	0.100	0.400	0.860	0.00000	0.027
HYDR-1	13	CC	0.100	0.400	11.100	0.100	0.400	0.840	0.00000	0.027
HYDR-1	14	CC	0.100	0.400	11.100	0.100	0.400	0.820	0.00000	0.027
HYDR-1	15	CC	0.100	0.400	11.100	0.100	0.400	0.810	0.00000	0.027
HYDR-1	16	CC	0.100	0.400	11.100	0.100	0.400	0.800	0.00000	0.027
HYDR-1	17	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	18	CC	0.100	0.400	11.000	0.100	0.400	0.790	0.00000	0.027
HYDR-1	19	CC	0.100	0.400	11.000	0.100	0.400	0.780	0.00000	0.027
HYDR-1	20	CC	0.100	0.400	11.000	0.100	0.400	0.770	0.00000	0.027
HYDR-1	21	CC	0.100	0.400	11.000	0.100	0.400	0.760	0.00000	0.027
HYDR-1	22	CC	0.100	0.400	11.000	0.100	0.400	0.750	0.00000	0.027
HYDR-1	23	CC	0.100	0.400	11.000	0.100	0.400	0.740	0.00000	0.027
HYDR-1	24	CC	0.100	0.400	11.000	0.100	0.400	0.730	0.00000	0.027
HYDR-1	25	CC	0.100	0.400	10.900	0.100	0.400	0.710	0.00000	0.027
HYDR-1	26	CC	0.100	0.400	10.900	0.100	0.400	0.680	0.00000	0.027
HYDR-1	27	CC	0.100	0.400	10.800	0.100	0.400	0.650	0.00000	0.027
HYDR-1	28	CC	0.100	0.400	10.800	0.100	0.400	0.630	0.00000	0.027
HYDR-1	29	CC	0.100	0.400	10.800	0.100	0.400	0.610	0.00000	0.027
HYDR-1	30	CC	0.100	0.400	10.700	0.100	0.400	0.580	0.00000	0.027
HYDR-1	31	CC	0.100	0.400	10.700	0.100	0.400	0.570	0.00000	0.027
HYDR-1	32	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	33	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	34	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	35	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027
HYDR-1	36	CC	0.100	0.400	10.700	0.100	0.400	0.550	0.00000	0.027

ENDATA09

$$$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) $$$

CARD TYPE	REACH	ID	TIDAL RANGE	DISPERSION "A"	DISPERSION "B"	DISPERSION "C"	DISPERSION "D"

ENDATA10

$$$ DATA TYPE 11 (INITIAL CONDITIONS) $$$

CARD TYPE	REACH	ID	TEMP	SALIN	DO	NH3	NO3+2	PHOS	CHL A	MACRO
INITIAL	1	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	2	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	3	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	4	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	5	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	6	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	7	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	8	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	9	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	10	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	11	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	12	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	13	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	14	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	15	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	16	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	17	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	18	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	19	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	20	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	21	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	22	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	23	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	24	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	25	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	26	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	27	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	28	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	29	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	30	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	31	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	32	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	33	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	34	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	35	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00
INITIAL	36	CC	21.40	0.00	5.00	0.00	0.00	0.00	0.00	0.00

ENDATA11

$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$

CARD TYPE	REACH	ID	K2 OPT	K2 "A"	K2 "B"	K2 "C"	BKGRND SOD g/m²/d	AEROB BOD DECAY per day	BOD SETT m/d	BOD CONV TO SOD	ANAER BOD DECAY

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COEF-1       1   CC  20 K2=a/D           0.700     0.000     0.000     2.070     0.040     0.050     0.000     0.000
COEF-1       2   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       3   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       4   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       5   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       6   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       7   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       8   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1       9   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1      10   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1      11   CC  20 K2=a/D           0.700     0.000     0.000     2.080     0.040     0.050     0.000     0.000
COEF-1      12   CC  20 K2=a/D           0.700     0.000     0.000     2.120     0.030     0.050     0.000     0.000
COEF-1      13   CC  20 K2=a/D           0.700     0.000     0.000     2.150     0.040     0.050     0.000     0.000
COEF-1      14   CC  20 K2=a/D           0.700     0.000     0.000     2.130     0.050     0.050     0.000     0.000
COEF-1      15   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.060     0.050     0.000     0.000
COEF-1      16   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.060     0.050     0.000     0.000
COEF-1      17   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.070     0.050     0.000     0.000
COEF-1      18   CC  20 K2=a/D           0.700     0.000     0.000     2.110     0.070     0.050     0.000     0.000
COEF-1      19   CC  20 K2=a/D           0.700     0.000     0.000     2.020     0.070     0.050     0.000     0.000
COEF-1      20   CC  20 K2=a/D           0.700     0.000     0.000     1.920     0.060     0.050     0.000     0.000
COEF-1      21   CC  20 K2=a/D           0.700     0.000     0.000     1.910     0.060     0.050     0.000     0.000
COEF-1      22   CC  20 K2=a/D           0.700     0.000     0.000     1.950     0.060     0.050     0.000     0.000
COEF-1      23   CC  20 K2=a/D           0.700     0.000     0.000     1.970     0.050     0.050     0.000     0.000
COEF-1      24   CC  20 K2=a/D           0.700     0.000     0.000     1.970     0.050     0.050     0.000     0.000
COEF-1      25   CC  20 K2=a/D           0.700     0.000     0.000     1.980     0.040     0.050     0.000     0.000
COEF-1      26   CC  20 K2=a/D           0.700     0.000     0.000     2.020     0.030     0.050     0.000     0.000
COEF-1      27   CC  20 K2=a/D           0.700     0.000     0.000     2.030     0.040     0.050     0.000     0.000
COEF-1      28   CC  20 K2=a/D           0.700     0.000     0.000     1.910     0.040     0.050     0.000     0.000
COEF-1      29   CC  20 K2=a/D           0.700     0.000     0.000     1.890     0.040     0.050     0.000     0.000
COEF-1      30   CC  20 K2=a/D           0.700     0.000     0.000     1.860     0.030     0.050     0.000     0.000
COEF-1      31   CC  20 K2=a/D           0.700     0.000     0.000     1.750     0.030     0.050     0.000     0.000
COEF-1      32   CC  20 K2=a/D           0.700     0.000     0.000     1.720     0.030     0.050     0.000     0.000
COEF-1      33   CC  20 K2=a/D           0.700     0.000     0.000     1.980     0.030     0.050     0.000     0.000
COEF-1      34   CC  20 K2=a/D           0.700     0.000     0.000     1.710     0.030     0.050     0.000     0.000
COEF-1      35   CC  20 K2=a/D           0.700     0.000     0.000     1.680     0.030     0.050     0.000     0.000
COEF-1      36   CC  20 K2=a/D           0.700     0.000     0.000     2.000     0.030     0.050     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

ENDATA13

$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$

CARD TYPE      REACH  ID       SECCHI    ALGAE:     ALGAE    ALG CONV     ALGAE     ALGAE     MACRO     MACRO
                                DEPTH     CHL A      SETT     TO SOD      GROW      RESP      GROW      RESP

ENDATA14

$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
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CARD TYPE	REACH	ID	COLIFORM DIE-OFF	NCM DECAY	NCM SETT	NCM CONV TO SOD
COEF-4	1	CC	0.00	0.04	0.05	0.00
COEF-4	2	CC	0.00	0.04	0.05	0.00
COEF-4	3	CC	0.00	0.04	0.05	0.00
COEF-4	4	CC	0.00	0.04	0.05	0.00
COEF-4	5	CC	0.00	0.04	0.05	0.00
COEF-4	6	CC	0.00	0.04	0.05	0.00
COEF-4	7	CC	0.00	0.04	0.05	0.00
COEF-4	8	CC	0.00	0.04	0.05	0.00
COEF-4	9	CC	0.00	0.04	0.05	0.00
COEF-4	10	CC	0.00	0.04	0.05	0.00
COEF-4	11	CC	0.00	0.04	0.05	0.00
COEF-4	12	CC	0.00	0.18	0.05	0.00
COEF-4	13	CC	0.00	0.18	0.05	0.00
COEF-4	14	CC	0.00	0.17	0.05	0.00
COEF-4	15	CC	0.00	0.17	0.05	0.00
COEF-4	16	CC	0.00	0.17	0.05	0.00
COEF-4	17	CC	0.00	0.17	0.05	0.00
COEF-4	18	CC	0.00	0.17	0.05	0.00
COEF-4	19	CC	0.00	0.17	0.05	0.00
COEF-4	20	CC	0.00	0.16	0.05	0.00
COEF-4	21	CC	0.00	0.16	0.05	0.00
COEF-4	22	CC	0.00	0.15	0.05	0.00
COEF-4	23	CC	0.00	0.15	0.05	0.00
COEF-4	24	CC	0.00	0.14	0.05	0.00
COEF-4	25	CC	0.00	0.13	0.05	0.00
COEF-4	26	CC	0.00	0.11	0.05	0.00
COEF-4	27	CC	0.00	0.10	0.05	0.00
COEF-4	28	CC	0.00	0.09	0.05	0.00
COEF-4	29	CC	0.00	0.11	0.05	0.00
COEF-4	30	CC	0.00	0.13	0.05	0.00
COEF-4	31	CC	0.00	0.14	0.05	0.00
COEF-4	32	CC	0.00	0.14	0.05	0.00
COEF-4	33	CC	0.00	0.06	0.05	0.00
COEF-4	34	CC	0.00	0.06	0.05	0.00
COEF-4	35	CC	0.00	0.07	0.05	0.00
COEF-4	36	CC	0.00	0.09	0.05	0.00

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	32	CC	0.00000	0.02350	21.40	0.00	6.00	4.20	0.00470	0.00000

ENDATA16

$$$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) $$$

CARD TYPE	REACH	ID	DO	BOD	ORG-N	NH3	NO3+2
INCR-2	32	CC	8.00	5.53	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	32	CC	0.00	0.00	0.00	0.22

ENDATA18

$$$ DATA TYPE 19 (NONPOINT SOURCE DATA) $$$

CARD TYPE	REACH	ID	BOD	ORG-N	COLI	NCM	DO
NONPOINT	1	CC	11.00	0.00	0.00	1.00	0.00
NONPOINT	2	CC	3.00	0.00	0.00	0.00	0.00
NONPOINT	3	CC	2.00	0.00	0.00	0.00	0.00
NONPOINT	4	CC	2.00	0.00	0.00	0.00	0.00
NONPOINT	5	CC	5.00	0.00	0.00	1.00	0.00
NONPOINT	6	CC	0.00	0.00	0.00	0.00	0.00
NONPOINT	7	CC	6.00	0.00	0.00	1.00	0.00
NONPOINT	8	CC	1.00	0.00	0.00	0.00	0.00
NONPOINT	9	CC	5.00	0.00	0.00	1.00	0.00
NONPOINT	10	CC	0.00	0.00	0.00	0.00	0.00
NONPOINT	11	CC	13.00	0.00	0.00	2.00	0.00
NONPOINT	12	CC	13.00	0.00	0.00	5.00	0.00
NONPOINT	13	CC	3.00	0.00	0.00	5.00	0.00
NONPOINT	14	CC	4.00	0.00	0.00	8.00	0.00
NONPOINT	15	CC	1.00	0.00	0.00	2.00	0.00
NONPOINT	16	CC	3.00	0.00	0.00	5.00	0.00
NONPOINT	17	CC	0.00	0.00	0.00	1.00	0.00
NONPOINT	18	CC	2.00	0.00	0.00	3.00	0.00
NONPOINT	19	CC	6.00	0.00	0.00	2.00	0.00
NONPOINT	20	CC	9.00	0.00	0.00	4.00	0.00
NONPOINT	21	CC	5.00	0.00	0.00	2.00	0.00
NONPOINT	22	CC	8.00	0.00	0.00	2.00	0.00
NONPOINT	23	CC	3.00	0.00	0.00	1.00	0.00
NONPOINT	24	CC	8.00	0.00	0.00	2.00	0.00
NONPOINT	25	CC	25.00	0.00	0.00	7.00	0.00
NONPOINT	26	CC	6.00	0.00	0.00	2.00	0.00
NONPOINT	27	CC	17.00	0.00	0.00	12.00	0.00
NONPOINT	28	CC	2.00	0.00	0.00	1.00	0.00
NONPOINT	29	CC	24.00	0.00	0.00	8.00	0.00
NONPOINT	30	CC	9.00	0.00	0.00	2.00	0.00
NONPOINT	31	CC	15.00	0.00	0.00	4.00	0.00
NONPOINT	32	CC	18.00	0.00	0.00	5.00	0.00
NONPOINT	33	CC	23.00	0.00	0.00	4.00	0.00
NONPOINT	34	CC	7.00	0.00	0.00	1.00	0.00
NONPOINT	35	CC	10.00	0.00	0.00	1.00	0.00
NONPOINT	36	CC	3.00	0.00	0.00	0.00	0.00

ENDATA19

$$$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) $$$

CARD TYPE	ELEMENT	NAME	UNIT	FLOW	FLOW	TEMP	SALIN	CM-I	CM-II

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                                                   m³/s      cfs   deg C      ppt  MG/L      MG/L

HDWTR-1           1     HEADWATER              0   0.00280    0.099   21.40     0.00     8.300     0.000
ENDATA20

$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$

CARD TYPE     ELEMENT   NAME                          DO       BOD     ORG-N       NH3     NO3+2

HDWTR-2           1     HEADWATER                   8.00      5.53      0.00      0.00      0.00
ENDATA21

$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$

CARD TYPE     ELEMENT   NAME                         PHOS     CHL A      COLI       NCM

HDWTR-3           1     HEADWATER                    0.00      0.00      0.00      0.22
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     1211      32.00  FLAT CREEK             0.00280    0.09887    0.064   21.40     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    NITRIF     NO3+2

WSTLD-2        1211     FLAT CREEK                   8.00      3.46      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

WSTLD-3        1211     FLAT CREEK                   0.00      0.00      0.00      0.22
ENDATA26

$$$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) $$$

CARD TYPE    CONSTITUENT                    CONCENTRATION

LOWER BC     TEMPERATURE                        =     21.400 deg C
LOWER BC     SALINITY                           =      0.000 ppt
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LOWER BC     CONSERVATIVE MATERIAL I            =     10.400 MG/L
LOWER BC     CONSERVATIVE MATERIAL II           =      5.000 MG/L
LOWER BC     DISSOLVED OXYGEN                   =      8.000 mg/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND          =      9.580 mg/L
LOWER BC     ORGANIC NITROGEN                   =      0.000 mg/L
LOWER BC     AMMONIA NITROGEN                   =      0.000 mg/L
LOWER BC     NITRATE + NITRITE                  =      0.030 mg/L
LOWER BC     PHOSPHORUS                         =      0.090 mg/L
LOWER BC     CHLOROPHYLL A                      =      0.000 µg/L
LOWER BC     COLIFORM                           =      0.000 #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL           =      0.620 MG/L
ENDATA27

$$$ DATA TYPE 28 (DAM DATA) $$$

CARD TYPE     ELEMENT   NAME                  EQN      "A"       "B"       "H"

ENDATA28

$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$

CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8

ENDATA29

$$$ DATA TYPE 30 (PLOT CONTROL CARDS) $$$


NUMBER OF PLOTS =  6
NUMBER OF REACHES IN PLOT 1 =  36
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
         25 26 27 28 29 30 31 32 33 34 35 36
NUMBER OF REACHES IN PLOT 2 =  12
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12
NUMBER OF REACHES IN PLOT 3 =   9
PLOT RCH 12 13 14 15 16 17 18 19 20
NUMBER OF REACHES IN PLOT 4 =  10
PLOT RCH 19 20 21 22 23 24 25 26 27 28
NUMBER OF REACHES IN PLOT 5 =   8
PLOT RCH 26 27 28 29 30 31 32 33
NUMBER OF REACHES IN PLOT 6 =   6
PLOT RCH 31 32 33 34 35 36
ENDATA30

$$$ DATA TYPE 31 (OVERLAY PLOT DATA) $$$


ENDATA31



     .....NO ERRORS DETECTED IN INPUT DATA
     .....HYDRAULIC CALCULATIONS COMPLETED
     .....TRIDIAGONAL MATRIX TERMS INITIALIZED
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     .....OXYGEN DEPENDENT RATES CONVERGENT IN   1 ITERATIONS
     .....CONSTITUENT CALCULATIONS COMPLETED
     .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
     .....GRAPHICS DATA FOR PLOT 2 WRITTEN TO UNIT 12
     .....GRAPHICS DATA FOR PLOT 3 WRITTEN TO UNIT 13
     .....GRAPHICS DATA FOR PLOT 4 WRITTEN TO UNIT 14
     .....GRAPHICS DATA FOR PLOT 5 WRITTEN TO UNIT 15
     .....GRAPHICS DATA FOR PLOT 6 WRITTEN TO UNIT 16
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FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 1 HEADWATER CC - MCDOWELL BRANCH CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1	HDWTR	0.00280	21.40	0.00	8.30	0.00	8.00	5.53	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.22

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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	153.00	152.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
2	152.90	152.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
3	152.80	152.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
4	152.70	152.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
5	152.60	152.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
6	152.50	152.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
7	152.40	152.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
8	152.30	152.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
9	152.20	152.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

10	152.10	152.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
11	152.00	151.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
12	151.90	151.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
13	151.80	151.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
14	151.70	151.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
15	151.60	151.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
16	151.50	151.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
17	151.40	151.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
18	151.30	151.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
19	151.20	151.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
20	151.10	151.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
21	151.00	150.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
22	150.90	150.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
23	150.80	150.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
24	150.70	150.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
25	150.60	150.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
26	150.50	150.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
27	150.40	150.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
28	150.30	150.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
29	150.20	150.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
30	150.10	150.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
31	150.00	149.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
32	149.90	149.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
33	149.80	149.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
34	149.70	149.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
35	149.60	149.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
36	149.50	149.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

37	149.40	149.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
38	149.30	149.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
39	149.20	149.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
40	149.10	149.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
41	149.00	148.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
42	148.90	148.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
43	148.80	148.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
44	148.70	148.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
45	148.60	148.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
46	148.50	148.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
47	148.40	148.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
48	148.30	148.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
49	148.20	148.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
50	148.10	148.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
51	148.00	147.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
52	147.90	147.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
53	147.80	147.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
54	147.70	147.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
55	147.60	147.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
56	147.50	147.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
57	147.40	147.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
58	147.30	147.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
59	147.20	147.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
TOT						156.71			37910.36	70266.22				
AVG					0.00044		0.54	11.91			6.43			
CUM						156.71								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS
****

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
1	152.900	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	152.800	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	152.700	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	152.600	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	152.500	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	152.400	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	152.300	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	152.200	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	152.100	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	152.000	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	151.900	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	151.800	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	151.700	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	151.600	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	151.500	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	151.400	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	151.300	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	151.200	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	151.100	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	151.000	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	150.900	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	150.800	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	150.700	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

24	150.600	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
25	150.500	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
26	150.400	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
27	150.300	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
28	150.200	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
29	150.100	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
30	150.000	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
31	149.900	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
32	149.800	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
33	149.700	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
34	149.600	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
35	149.500	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
36	149.400	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
37	149.300	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
38	149.200	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
39	149.100	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
40	149.000	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
41	148.900	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
42	148.800	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
43	148.700	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
44	148.600	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
45	148.500	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
46	148.400	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
47	148.300	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
48	148.200	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
49	148.100	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
50	148.000	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04

51	147.900	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
52	147.800	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
53	147.700	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
54	147.600	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
55	147.500	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
56	147.400	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
57	147.300	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
58	147.200	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
59	147.100	8.85	1.33	0.04	0.05	0.00	2.26	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
20 DEG C RATE				0.04		0.00	2.07			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1	152.900	21.40	0.00	8.30	0.00	6.08	5.04	5.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
2	152.800	21.40	0.00	8.30	0.00	5.66	4.64	4.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24
3	152.700	21.40	0.00	8.30	0.00	5.58	4.33	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
4	152.600	21.40	0.00	8.30	0.00	5.57	4.08	4.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
5	152.500	21.40	0.00	8.30	0.00	5.57	3.88	3.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
6	152.400	21.40	0.00	8.30	0.00	5.57	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
7	152.300	21.40	0.00	8.30	0.00	5.58	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
8	152.200	21.40	0.00	8.30	0.00	5.58	3.49	3.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
9	152.100	21.40	0.00	8.30	0.00	5.58	3.40	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
10	152.000	21.40	0.00	8.30	0.00	5.59	3.34	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.27																
11	151.900	21.40	0.00	8.30	0.00	5.59	3.29	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
12	151.800	21.40	0.00	8.30	0.00	5.59	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
13	151.700	21.40	0.00	8.30	0.00	5.59	3.21	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
14	151.600	21.40	0.00	8.30	0.00	5.59	3.18	3.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
15	151.500	21.40	0.00	8.30	0.00	5.59	3.16	3.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
16	151.400	21.40	0.00	8.30	0.00	5.59	3.14	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
17	151.300	21.40	0.00	8.30	0.00	5.59	3.13	3.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
18	151.200	21.40	0.00	8.30	0.00	5.59	3.12	3.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
19	151.100	21.40	0.00	8.30	0.00	5.59	3.11	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27																
20	151.000	21.40	0.00	8.30	0.00	5.59	3.10	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
21	150.900	21.40	0.00	8.30	0.00	5.60	3.10	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
22	150.800	21.40	0.00	8.30	0.00	5.60	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
23	150.700	21.40	0.00	8.30	0.00	5.60	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
24	150.600	21.40	0.00	8.30	0.00	5.60	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
25	150.500	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
26	150.400	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
27	150.300	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
28	150.200	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
29	150.100	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
30	150.000	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
31	149.900	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
32	149.800	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
33	149.700	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
34	149.600	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
35	149.500	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
36	149.400	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
37	149.300	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.28																
38	149.200	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
39	149.100	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
40	149.000	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
41	148.900	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
42	148.800	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
43	148.700	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
44	148.600	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
45	148.500	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
46	148.400	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
47	148.300	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
48	148.200	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
49	148.100	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
50	148.000	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
51	147.900	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
52	147.800	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
53	147.700	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
54	147.600	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
55	147.500	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
56	147.400	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
57	147.300	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
58	147.200	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
59	147.100	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
60	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.60	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.28

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
60	147.10	147.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
61	147.00	146.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
62	146.90	146.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
63	146.80	146.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
64	146.70	146.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
65	146.60	146.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
66	146.50	146.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
67	146.40	146.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
68	146.30	146.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
69	146.20	146.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
70	146.10	146.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
71	146.00	145.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
72	145.90	145.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
73	145.80	145.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
74	145.70	145.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
75	145.60	145.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	

0.000

TOT								42.50				10280.78	19055.24						
AVG						0.00044			0.54	11.91					6.43				
CUM								199.20											

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
60	147.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
61	146.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
62	146.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
63	146.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
64	146.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
65	146.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
66	146.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
67	146.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
68	146.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
69	146.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
70	146.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
71	145.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
72	145.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
73	145.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
74	145.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
75	145.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
60	147.000	21.40	0.00	8.30	0.00	5.59	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
61	146.900	21.40	0.00	8.30	0.00	5.58	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
62	146.800	21.40	0.00	8.30	0.00	5.58	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
63	146.700	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
64	146.600	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
65	146.500	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
66	146.400	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
67	146.300	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
68	146.200	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
69	146.100	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
70	146.000	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
71	145.900	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
72	145.800	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
73	145.700	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
74	145.600	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
75	145.500	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 3 HORSE CREEK - GUICE BRANCH CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL
76	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.59	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
76	145.50	145.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
77	145.40	145.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
78	145.30	145.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
79	145.20	145.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
80	145.10	145.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
81	145.00	144.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
82	144.90	144.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
83	144.80	144.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
84	144.70	144.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
TOT						23.90			5782.94	10718.57				
AVG					0.00044		0.54	11.91			6.43			
CUM						223.11								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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	NCM SETT

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1/da  1/da

  76  145.400  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  77  145.300  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  78  145.200  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  79  145.100  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  80  145.000  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  81  144.900  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  82  144.800  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  83  144.700  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  84  144.600  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05

 20 DEG C RATE                 0.04         0.00  2.08               0.00         0.00  0.00   0.00  0.00               0.00
0.04
 AVG 20 DEG C RATE     1.30         0.05                                  0.00
0.05

 * g/m²/d              ** mg/L/day


 ************************************************** WATER QUALITY CONSTITUENT VALUES
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 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

  76  145.400  21.40  0.00     8.30     0.00   5.59   3.21   3.21   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.01
  77  145.300  21.40  0.00     8.30     0.00   5.58   3.30   3.30   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.00
  78  145.200  21.40  0.00     8.30     0.00   5.58   3.37   3.37   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.00
  79  145.100  21.40  0.00     8.30     0.00   5.58   3.43   3.43   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.00
  80  145.000  21.40  0.00     8.30     0.00   5.58   3.48   3.48   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.00
  81  144.900  21.40  0.00     8.30     0.00   5.58   3.52   3.52   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.00
  82  144.800  21.40  0.00     8.30     0.00   5.57   3.55   3.55   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.00
  83  144.700  21.40  0.00     8.30     0.00   5.57   3.57   3.57   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.00
  84  144.600  21.40  0.00     8.30     0.00   5.57   3.59   3.59   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
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0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 4 GUICE BRANCH - CURR CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
85	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.57	3.59	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
85	144.60	144.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
86	144.50	144.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
87	144.40	144.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
88	144.30	144.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
89	144.20	144.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
90	144.10	144.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
91	144.00	143.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
92	143.90	143.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
93	143.80	143.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
94	143.70	143.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
95	143.60	143.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	

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0.000
   96  143.50  143.40    0.00280   0.00  0.00044     2.66   0.54  11.91    642.55    1190.95    6.43      0.00  0.000     0.000
0.000
   97  143.40  143.30    0.00280   0.00  0.00044     2.66   0.54  11.91    642.55    1190.95    6.43      0.00  0.000     0.000
0.000

  TOT                                                 34.53                 8353.13   15482.38
  AVG                                       0.00044            0.54  11.91                          6.43
  CUM                                                257.64


 ********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS
**********************************************

 ELEM  ENDING  SAT    REAER   CBOD  CBOD  ANBOD  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI
NCM   NCM
 NO.     DIST  D.O.    RATE  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

  85  144.500  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  86  144.400  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  87  144.300  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  88  144.200  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  89  144.100  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  90  144.000  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  91  143.900  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  92  143.800  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  93  143.700  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  94  143.600  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  95  143.500  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  96  143.400  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05
  97  143.300  8.85    1.33   0.04  0.05   0.00  2.27  2.27  2.27   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.04  0.05

 20 DEG C RATE                 0.04         0.00  2.08               0.00         0.00  0.00   0.00  0.00                0.00
0.04
 AVG 20 DEG C RATE     1.30         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day
```

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
85	144.500	21.40	0.00	8.30	0.00	5.58	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	144.400	21.40	0.00	8.30	0.00	5.58	3.21	3.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	144.300	21.40	0.00	8.30	0.00	5.59	3.08	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	144.200	21.40	0.00	8.30	0.00	5.59	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	144.100	21.40	0.00	8.30	0.00	5.60	2.88	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	144.000	21.40	0.00	8.30	0.00	5.60	2.81	2.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	143.900	21.40	0.00	8.30	0.00	5.60	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	143.800	21.40	0.00	8.30	0.00	5.60	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	143.700	21.40	0.00	8.30	0.00	5.60	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	143.600	21.40	0.00	8.30	0.00	5.60	2.65	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	143.500	21.40	0.00	8.30	0.00	5.60	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	143.400	21.40	0.00	8.30	0.00	5.60	2.61	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	143.300	21.40	0.00	8.30	0.00	5.60	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 5 CURR CREEK - POPLAR BRANCH CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS
****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

98	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.60	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
98	143.30	143.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
99	143.20	143.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
100	143.10	143.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
101	143.00	142.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
102	142.90	142.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
103	142.80	142.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
104	142.70	142.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
105	142.60	142.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
106	142.50	142.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
107	142.40	142.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
108	142.30	142.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
109	142.20	142.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
110	142.10	142.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
111	142.00	141.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
112	141.90	141.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
113	141.80	141.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
114	141.70	141.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
115	141.60	141.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
116	141.50	141.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
117	141.40	141.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

118	141.30	141.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
119	141.20	141.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
120	141.10	141.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
121	141.00	140.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
122	140.90	140.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
123	140.80	140.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
124	140.70	140.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
125	140.60	140.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
TOT						74.37			17991.37	33346.68				
AVG					0.00044		0.54	11.91			6.43			
CUM						332.00								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																	
98	143.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
99	143.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
100	143.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
101	142.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
102	142.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
103	142.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
104	142.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
105	142.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
106	142.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
107	142.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
108	142.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	

109	142.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
110	142.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
111	141.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
112	141.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
113	141.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
114	141.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
115	141.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
116	141.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
117	141.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
118	141.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
119	141.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
120	141.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
121	140.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
122	140.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
123	140.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
124	140.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
125	140.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
98	143.200	21.40	0.00	8.30	0.00	5.60	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
99	143.100	21.40	0.00	8.30	0.00	5.60	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

100	143.000	21.40	0.00	8.30	0.00	5.59	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
101	142.900	21.40	0.00	8.30	0.00	5.59	2.80	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
102	142.800	21.40	0.00	8.30	0.00	5.59	2.83	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
103	142.700	21.40	0.00	8.30	0.00	5.58	2.85	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
104	142.600	21.40	0.00	8.30	0.00	5.58	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
105	142.500	21.40	0.00	8.30	0.00	5.58	2.89	2.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
106	142.400	21.40	0.00	8.30	0.00	5.58	2.90	2.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
107	142.300	21.40	0.00	8.30	0.00	5.58	2.91	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
108	142.200	21.40	0.00	8.30	0.00	5.58	2.92	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
109	142.100	21.40	0.00	8.30	0.00	5.58	2.92	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
110	142.000	21.40	0.00	8.30	0.00	5.58	2.93	2.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
111	141.900	21.40	0.00	8.30	0.00	5.58	2.93	2.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
112	141.800	21.40	0.00	8.30	0.00	5.58	2.93	2.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
113	141.700	21.40	0.00	8.30	0.00	5.58	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
114	141.600	21.40	0.00	8.30	0.00	5.58	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
115	141.500	21.40	0.00	8.30	0.00	5.58	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
116	141.400	21.40	0.00	8.30	0.00	5.58	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
117	141.300	21.40	0.00	8.30	0.00	5.58	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
118	141.200	21.40	0.00	8.30	0.00	5.58	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
119	141.100	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
120	141.000	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
121	140.900	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
122	140.800	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
123	140.700	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
124	140.600	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
125	140.500	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 6 POPLAR BRANCH - WHITE BRANCH CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
126	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.57	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.58

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
126	140.50	140.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						2.66			642.55	1190.95					
AVG					0.00044		0.54	11.91			6.43				
CUM						334.66									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST km	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD 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
126	140.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	

AVG 20 DEG C RATE 1.30 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
126	140.400	21.40	0.00	8.30	0.00	5.59	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 7 WHITE BRANCH - COLSTON CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS
****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
127	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.59	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.46

********** HYDRAULIC PARAMETER VALUES
****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
127	140.40	140.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
128	140.30	140.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
129	140.20	140.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

130	140.10	140.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
131	140.00	139.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
132	139.90	139.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
133	139.80	139.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
134	139.70	139.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
135	139.60	139.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
136	139.50	139.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
137	139.40	139.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
138	139.30	139.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
139	139.20	139.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
140	139.10	139.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
141	139.00	138.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
142	138.90	138.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
143	138.80	138.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
144	138.70	138.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
145	138.60	138.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
146	138.50	138.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
147	138.40	138.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
148	138.30	138.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
149	138.20	138.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
150	138.10	138.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
151	138.00	137.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
152	137.90	137.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
153	137.80	137.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
154	137.70	137.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
155	137.60	137.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
156	137.50	137.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

157	137.40	137.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
158	137.30	137.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
159	137.20	137.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
160	137.10	137.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
161	137.00	136.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
162	136.90	136.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
163	136.80	136.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
164	136.70	136.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
TOT						100.93			24416.85	45256.21				
AVG					0.00044		0.54	11.91			6.43			
CUM						435.59								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																	
127	140.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
128	140.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
129	140.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
130	140.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
131	139.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
132	139.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
133	139.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
134	139.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
135	139.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
136	139.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	
137	139.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.04	0.05																	

138	139.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
139	139.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
140	139.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
141	138.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
142	138.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
143	138.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
144	138.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
145	138.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
146	138.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
147	138.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
148	138.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
149	138.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
150	138.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
151	137.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
152	137.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
153	137.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
154	137.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
155	137.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
156	137.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
157	137.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
158	137.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
159	137.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
160	137.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
161	136.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
162	136.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
163	136.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
164	136.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			

20 DEG C RATE 0.04 0.00 2.08 0.00 0.00 0.00 0.00 0.00 0.00
0.04
AVG 20 DEG C RATE 1.30 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
127	140.300	21.40	0.00	8.30	0.00	5.60	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
128	140.200	21.40	0.00	8.30	0.00	5.60	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
129	140.100	21.40	0.00	8.30	0.00	5.59	2.48	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
130	140.000	21.40	0.00	8.30	0.00	5.59	2.50	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
131	139.900	21.40	0.00	8.30	0.00	5.59	2.52	2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
132	139.800	21.40	0.00	8.30	0.00	5.59	2.54	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
133	139.700	21.40	0.00	8.30	0.00	5.59	2.55	2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
134	139.600	21.40	0.00	8.30	0.00	5.59	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
135	139.500	21.40	0.00	8.30	0.00	5.59	2.57	2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
136	139.400	21.40	0.00	8.30	0.00	5.59	2.58	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
137	139.300	21.40	0.00	8.30	0.00	5.59	2.58	2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
138	139.200	21.40	0.00	8.30	0.00	5.59	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
139	139.100	21.40	0.00	8.30	0.00	5.59	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
140	139.000	21.40	0.00	8.30	0.00	5.59	2.59	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
141	138.900	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
142	138.800	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
143	138.700	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
144	138.600	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
145	138.500	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

146	138.400	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
147	138.300	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
148	138.200	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
149	138.100	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
150	138.000	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
151	137.900	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
152	137.800	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
153	137.700	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
154	137.600	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
155	137.500	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
156	137.400	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
157	137.300	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
158	137.200	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
159	137.100	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
160	137.000	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
161	136.900	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
162	136.800	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
163	136.700	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
164	136.600	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 8 COLSTON CREEK - FOURMILE CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM	TYPE	FLOW	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	ORGN	NH3	NO3+2	PHOS	CHL A	COLI	NCM

NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
165	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.43

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST	ENDING DIST	FLOW	PCT EFF	ADVCTV VELO	TRAVEL TIME	DEPTH	WIDTH	VOLUME	SURFACE AREA	X-SECT AREA	TIDAL PRISM	TIDAL VELO	DISPRSN	MEAN VELO
	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
165	136.60	136.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
166	136.50	136.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
167	136.40	136.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
168	136.30	136.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
169	136.20	136.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
TOT						13.28			3212.74	5954.76					
AVG					0.00044		0.54	11.91			6.43				
CUM						448.87									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
165	136.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
166	136.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
167	136.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
168	136.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
169	136.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05

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 20 DEG C RATE                0.04         0.00  2.08               0.00         0.00  0.00   0.00  0.00               0.00
0.04
 AVG 20 DEG C RATE     1.30         0.05                                  0.00
0.05

 * g/m²/d              ** mg/L/day


 ************************************************ WATER QUALITY CONSTITUENT VALUES
************************************************

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*

 165  136.500  21.40  0.00     8.30     0.00   5.59   2.74   2.74   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.34
 166  136.400  21.40  0.00     8.30     0.00   5.59   2.86   2.86   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.27
 167  136.300  21.40  0.00     8.30     0.00   5.59   2.94   2.94   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.22
 168  136.200  21.40  0.00     8.30     0.00   5.59   3.02   3.02   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.17
 169  136.100  21.40  0.00     8.30     0.00   5.59   3.07   3.07   0.00   0.00   0.00   0.00   0.00   0.00    0.00      0.00
0.14

 * CM-I = CHLORIDES                        CM-II = SULFATES                          NCM = NBOD
         MG/L                                     MG/L                                    MG/L
 ** g/m³


FINAL REPORT    HEADWATER                                        CASTOR CREEK WATERSHED MODEL
REACH NO.  9    FOURMILE CREEK - POOL BRANCH                     CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE


 ********************************************************** REACH INPUTS
**********************************************************

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II    DO     BOD   EBOD   ORGN    NH3  NO3+2   PHOS  CHL A     COLI
NCM
 NO.               m³/     DEG C      PPT       *        *    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    #/100mL
*

  170   UPR RCH   0.00280   21.40     0.00     8.30     0.00   5.59   3.07   3.07   0.00   0.00   0.00   0.00   0.00     0.00
0.14


 ***************************************************** 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/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s	m/s
170	136.10	136.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
171	136.00	135.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
172	135.90	135.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
173	135.80	135.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
174	135.70	135.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
175	135.60	135.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
176	135.50	135.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
177	135.40	135.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
178	135.30	135.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
179	135.20	135.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
180	135.10	135.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
181	135.00	134.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
182	134.90	134.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
183	134.80	134.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
184	134.70	134.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
185	134.60	134.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
186	134.50	134.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
187	134.40	134.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
188	134.30	134.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
189	134.20	134.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
190	134.10	134.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
191	134.00	133.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
192	133.90	133.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
193	133.80	133.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
194	133.70	133.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

195	133.60	133.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
196	133.50	133.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
197	133.40	133.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
198	133.30	133.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
199	133.20	133.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
200	133.10	133.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
0.000														
TOT						82.34			19919.01	36919.54				
AVG					0.00044		0.54	11.91			6.43			
CUM						531.21								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
170	136.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
171	135.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
172	135.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
173	135.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
174	135.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
175	135.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
176	135.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
177	135.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
178	135.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
179	135.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
180	135.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
181	134.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
182	134.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05

183	134.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
184	134.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
185	134.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
186	134.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
187	134.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
188	134.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
189	134.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
190	134.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
191	133.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
192	133.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
193	133.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
194	133.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
195	133.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
196	133.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
197	133.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
198	133.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
199	133.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
200	133.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI NCM #/100mL *
170	136.000	21.40	0.00	8.30	0.00	5.59	2.99	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

171	135.900	21.40	0.00	8.30	0.00	5.59	2.92	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
172	135.800	21.40	0.00	8.30	0.00	5.59	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
173	135.700	21.40	0.00	8.30	0.00	5.59	2.83	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
174	135.600	21.40	0.00	8.30	0.00	5.59	2.80	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
175	135.500	21.40	0.00	8.30	0.00	5.59	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
176	135.400	21.40	0.00	8.30	0.00	5.59	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
177	135.300	21.40	0.00	8.30	0.00	5.59	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
178	135.200	21.40	0.00	8.30	0.00	5.59	2.72	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
179	135.100	21.40	0.00	8.30	0.00	5.59	2.70	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
180	135.000	21.40	0.00	8.30	0.00	5.59	2.70	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
181	134.900	21.40	0.00	8.30	0.00	5.59	2.69	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49
182	134.800	21.40	0.00	8.30	0.00	5.59	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
183	134.700	21.40	0.00	8.30	0.00	5.59	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
184	134.600	21.40	0.00	8.30	0.00	5.59	2.68	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
185	134.500	21.40	0.00	8.30	0.00	5.59	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
186	134.400	21.40	0.00	8.30	0.00	5.59	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
187	134.300	21.40	0.00	8.30	0.00	5.59	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
188	134.200	21.40	0.00	8.30	0.00	5.59	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
189	134.100	21.40	0.00	8.30	0.00	5.59	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
190	134.000	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
191	133.900	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
192	133.800	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
193	133.700	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
194	133.600	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
195	133.500	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
196	133.400	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
197	133.300	21.40	0.00	8.30	0.00	5.59	2.66	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

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0.52
 198  133.200  21.40  0.00     8.30     0.00   5.59   2.66   2.66   0.00   0.00   0.00   0.00   0.00   0.00    0.00     0.00
0.52
 199  133.100  21.40  0.00     8.30     0.00   5.59   2.66   2.66   0.00   0.00   0.00   0.00   0.00   0.00    0.00     0.00
0.52
 200  133.000  21.40  0.00     8.30     0.00   5.59   2.66   2.66   0.00   0.00   0.00   0.00   0.00   0.00    0.00     0.00
0.52

 * CM-I = CHLORIDES                        CM-II = SULFATES                          NCM = NBOD
         MG/L                                     MG/L                                    MG/L
 ** g/m³


FINAL REPORT    HEADWATER                                        CASTOR CREEK WATERSHED MODEL
REACH NO. 10    POOL BRANCH - GINNEY BRANCH                      CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE


 ************************************************************ REACH INPUTS
************************************************************

 ELEM  TYPE        FLOW     TEMP     SALN     CM-I    CM-II    DO     BOD   EBOD   ORGN    NH3  NO3+2   PHOS  CHL A     COLI
NCM
 NO.               m³/     DEG C      PPT       *        *    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L    #/100mL
*

  201   UPR RCH   0.00280   21.40     0.00     8.30     0.00   5.59   2.66   2.66   0.00   0.00   0.00   0.00   0.00     0.00
0.52


 ***************************************************** 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/           m/s      days      m      m      m³         m²      m²        m³      m/s    m²/s
m/s

  201  133.00  132.90    0.00280   0.00  0.00044     2.66   0.54  11.91    642.55    1190.95    6.43      0.00  0.000     0.000
0.000
  202  132.90  132.80    0.00280   0.00  0.00044     2.66   0.54  11.91    642.55    1190.95    6.43      0.00  0.000     0.000
0.000

  TOT                                                 5.31                1285.10    2381.91
  AVG                                     0.00044            0.54  11.91                          6.43
  CUM                                               536.52


 ********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS
**********************************************

 ELEM  ENDING  SAT    REAER   CBOD  CBOD  ANBOD  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI
NCM   NCM
```

NO.	DIST	D.O.	RATE	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
201	132.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
202	132.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04	
AVG 20 DEG C RATE			1.30		0.05						0.00									0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
201	132.900	21.40	0.00	8.30	0.00	5.60	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
202	132.800	21.40	0.00	8.30	0.00	5.62	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 11 GINNEY BRANCH - EDWARDS BRANCH CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
203	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.62	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.33

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
203	132.80	132.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
204	132.70	132.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
205	132.60	132.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
206	132.50	132.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
207	132.40	132.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
208	132.30	132.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
209	132.20	132.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
210	132.10	132.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
211	132.00	131.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
212	131.90	131.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
213	131.80	131.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
214	131.70	131.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
215	131.60	131.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
216	131.50	131.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
217	131.40	131.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
218	131.30	131.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
219	131.20	131.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
220	131.10	131.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
221	131.00	130.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
222	130.90	130.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
223	130.80	130.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
224	130.70	130.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
225	130.60	130.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

226	130.50	130.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
227	130.40	130.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
228	130.30	130.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
229	130.20	130.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
230	130.10	130.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
231	130.00	129.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
232	129.90	129.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
233	129.80	129.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
234	129.70	129.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
235	129.60	129.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
236	129.50	129.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
237	129.40	129.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
238	129.30	129.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
239	129.20	129.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
240	129.10	129.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
241	129.00	128.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
242	128.90	128.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
243	128.80	128.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
244	128.70	128.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
245	128.60	128.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
246	128.50	128.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
247	128.40	128.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
248	128.30	128.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
249	128.20	128.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
250	128.10	128.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
251	128.00	127.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000
252	127.90	127.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000

253	127.80	127.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
254	127.70	127.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
255	127.60	127.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
256	127.50	127.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
257	127.40	127.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
258	127.30	127.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
259	127.20	127.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
260	127.10	127.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
261	127.00	126.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
262	126.90	126.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
263	126.80	126.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
264	126.70	126.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
265	126.60	126.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
266	126.50	126.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
267	126.40	126.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
268	126.30	126.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
269	126.20	126.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
270	126.10	126.00	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
271	126.00	125.90	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
272	125.90	125.80	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
273	125.80	125.70	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
274	125.70	125.60	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
275	125.60	125.50	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
276	125.50	125.40	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
277	125.40	125.30	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
278	125.30	125.20	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000
279	125.20	125.10	0.00280	0.00	0.00044	2.66	0.54	11.91	642.55	1190.95	6.43	0.00	0.000	0.000	0.000

TOT							204.51				49476.21	91703.38						
AVG						0.00044		0.54	11.91					6.43				
CUM							741.04											

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
203	132.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
204	132.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
205	132.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
206	132.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
207	132.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
208	132.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
209	132.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
210	132.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
211	131.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
212	131.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
213	131.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
214	131.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
215	131.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
216	131.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
217	131.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
218	131.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
219	131.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
220	131.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05
221	130.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.05

222	130.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
223	130.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
224	130.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
225	130.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
226	130.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
227	130.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
228	130.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
229	130.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
230	130.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
231	129.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
232	129.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
233	129.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
234	129.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
235	129.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
236	129.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
237	129.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
238	129.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
239	129.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
240	129.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
241	128.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
242	128.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
243	128.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
244	128.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
245	128.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
246	128.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
247	128.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
248	128.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			

249	128.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
250	128.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
251	127.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
252	127.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
253	127.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
254	127.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
255	127.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
256	127.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
257	127.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
258	127.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
259	127.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
260	127.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
261	126.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
262	126.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
263	126.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
264	126.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
265	126.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
266	126.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
267	126.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
268	126.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
269	126.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
270	126.000	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
271	125.900	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
272	125.800	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
273	125.700	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
274	125.600	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			
275	125.500	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
0.05																			

276	125.400	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
277	125.300	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
278	125.200	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
279	125.100	8.85	1.33	0.04	0.05	0.00	2.27	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
20 DEG C RATE				0.04		0.00	2.08			0.00		0.00	0.00	0.00	0.00			0.00	0.04
AVG 20 DEG C RATE			1.30		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
203	132.700	21.40	0.00	8.30	0.00	5.62	1.92	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35
204	132.600	21.40	0.00	8.30	0.00	5.61	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37
205	132.500	21.40	0.00	8.30	0.00	5.61	2.23	2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
206	132.400	21.40	0.00	8.30	0.00	5.60	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
207	132.300	21.40	0.00	8.30	0.00	5.60	2.43	2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
208	132.200	21.40	0.00	8.30	0.00	5.60	2.50	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
209	132.100	21.40	0.00	8.30	0.00	5.59	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
210	132.000	21.40	0.00	8.30	0.00	5.59	2.60	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
211	131.900	21.40	0.00	8.30	0.00	5.59	2.64	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
212	131.800	21.40	0.00	8.30	0.00	5.59	2.67	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
213	131.700	21.40	0.00	8.30	0.00	5.59	2.69	2.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
214	131.600	21.40	0.00	8.30	0.00	5.59	2.71	2.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
215	131.500	21.40	0.00	8.30	0.00	5.59	2.73	2.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
216	131.400	21.40	0.00	8.30	0.00	5.59	2.74	2.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
217	131.300	21.40	0.00	8.30	0.00	5.59	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.42																
218	131.200	21.40	0.00	8.30	0.00	5.59	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
219	131.100	21.40	0.00	8.30	0.00	5.59	2.76	2.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
220	131.000	21.40	0.00	8.30	0.00	5.59	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
221	130.900	21.40	0.00	8.30	0.00	5.59	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
222	130.800	21.40	0.00	8.30	0.00	5.59	2.77	2.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
223	130.700	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
224	130.600	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
225	130.500	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
226	130.400	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
227	130.300	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
228	130.200	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
229	130.100	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
230	130.000	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
231	129.900	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
232	129.800	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
233	129.700	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
234	129.600	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
235	129.500	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
236	129.400	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
237	129.300	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
238	129.200	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
239	129.100	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
240	129.000	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
241	128.900	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
242	128.800	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
243	128.700	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
244	128.600	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.42																
245	128.500	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
246	128.400	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
247	128.300	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
248	128.200	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
249	128.100	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
250	128.000	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
251	127.900	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
252	127.800	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
253	127.700	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
254	127.600	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
255	127.500	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
256	127.400	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
257	127.300	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
258	127.200	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
259	127.100	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
260	127.000	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
261	126.900	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
262	126.800	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
263	126.700	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
264	126.600	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
265	126.500	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
266	126.400	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
267	126.300	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
268	126.200	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
269	126.100	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
270	126.000	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
271	125.900	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

272	125.800	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
273	125.700	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
274	125.600	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
275	125.500	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
276	125.400	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
277	125.300	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
278	125.200	21.40	0.00	8.30	0.00	5.59	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
279	125.100	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 12 EDWARDS BRANCH - LITTLE FLAT CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
280	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.59	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.42

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
280	125.10	125.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
281	125.00	124.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
282	124.90	124.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	

283	124.80	124.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
284	124.70	124.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
285	124.60	124.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
286	124.50	124.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
287	124.40	124.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
288	124.30	124.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
289	124.20	124.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
290	124.10	124.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
291	124.00	123.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
292	123.90	123.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
293	123.80	123.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
294	123.70	123.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
295	123.60	123.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
296	123.50	123.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
297	123.40	123.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
298	123.30	123.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
299	123.20	123.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
300	123.10	123.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
301	123.00	122.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
302	122.90	122.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
303	122.80	122.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
304	122.70	122.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
305	122.60	122.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
306	122.50	122.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
307	122.40	122.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
308	122.30	122.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
309	122.20	122.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000

310	122.10	122.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
311	122.00	121.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
312	121.90	121.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
313	121.80	121.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
314	121.70	121.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
315	121.60	121.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
316	121.50	121.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
317	121.40	121.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
318	121.30	121.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
319	121.20	121.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
320	121.10	121.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
321	121.00	120.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
322	120.90	120.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
323	120.80	120.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
324	120.70	120.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
325	120.60	120.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
326	120.50	120.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
327	120.40	120.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
328	120.30	120.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
329	120.20	120.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
330	120.10	120.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
331	120.00	119.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
332	119.90	119.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
333	119.80	119.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
334	119.70	119.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
335	119.60	119.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000
336	119.50	119.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	0.000

0.000															
337	119.40	119.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
338	119.30	119.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
339	119.20	119.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
340	119.10	119.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
341	119.00	118.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
342	118.90	118.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
343	118.80	118.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
344	118.70	118.60	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
345	118.60	118.50	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
346	118.50	118.40	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
347	118.40	118.30	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
348	118.30	118.20	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
349	118.20	118.10	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
350	118.10	118.00	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
351	118.00	117.90	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
352	117.90	117.80	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
353	117.80	117.70	0.00280	0.00	0.00029	4.03	0.87	11.21	974.70	1120.95	9.75	0.00	0.000	0.000	
0.000															
TOT						298.15			72127.47	82950.52					
AVG					0.00029		0.87	11.21			9.75				
CUM						1039.18									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
280	125.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.05
281	124.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.20	0.05																		
282	124.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
283	124.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
284	124.600	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
285	124.500	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
286	124.400	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
287	124.300	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
288	124.200	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
289	124.100	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
290	124.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
291	123.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
292	123.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
293	123.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
294	123.600	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
295	123.500	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
296	123.400	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
297	123.300	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
298	123.200	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
299	123.100	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
300	123.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
301	122.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
302	122.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
303	122.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
304	122.600	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
305	122.500	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
306	122.400	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
307	122.300	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
308	122.200	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.20	0.05																		
309	122.100	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
310	122.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
311	121.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
312	121.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
313	121.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
314	121.600	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
315	121.500	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
316	121.400	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
317	121.300	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
318	121.200	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
319	121.100	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
320	121.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
321	120.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
322	120.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
323	120.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
324	120.600	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
325	120.500	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
326	120.400	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
327	120.300	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
328	120.200	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
329	120.100	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
330	120.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
331	119.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
332	119.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
333	119.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
334	119.600	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
335	119.500	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.20	0.05																		
336	119.400	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
337	119.300	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
338	119.200	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
339	119.100	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
340	119.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
341	118.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
342	118.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
343	118.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
344	118.600	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
345	118.500	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
346	118.400	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
347	118.300	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
348	118.200	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
349	118.100	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
350	118.000	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
351	117.900	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
352	117.800	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
353	117.700	8.85	0.83	0.03	0.05	0.00	2.32	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.20	0.05																		
20 DEG C RATE				0.03		0.00	2.12			0.00		0.00	0.00	0.00	0.00			0.00	
0.18																			
AVG 20 DEG C RATE			0.81		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *

280	125.000	21.40	0.00	8.30	0.00	5.48	2.63	2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.35																
281	124.900	21.40	0.00	8.30	0.00	5.46	2.51	2.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.31																
282	124.800	21.40	0.00	8.30	0.00	5.46	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30																
283	124.700	21.40	0.00	8.30	0.00	5.47	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.29																
284	124.600	21.40	0.00	8.30	0.00	5.47	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
285	124.500	21.40	0.00	8.30	0.00	5.47	2.26	2.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
286	124.400	21.40	0.00	8.30	0.00	5.47	2.24	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
287	124.300	21.40	0.00	8.30	0.00	5.47	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
288	124.200	21.40	0.00	8.30	0.00	5.48	2.20	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
289	124.100	21.40	0.00	8.30	0.00	5.48	2.19	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
290	124.000	21.40	0.00	8.30	0.00	5.48	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
291	123.900	21.40	0.00	8.30	0.00	5.48	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
292	123.800	21.40	0.00	8.30	0.00	5.48	2.17	2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
293	123.700	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
294	123.600	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
295	123.500	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
296	123.400	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
297	123.300	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
298	123.200	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
299	123.100	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
300	123.000	21.40	0.00	8.30	0.00	5.48	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
301	122.900	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
302	122.800	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
303	122.700	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
304	122.600	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
305	122.500	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
306	122.400	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																

307	122.300	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
308	122.200	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
309	122.100	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
310	122.000	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
311	121.900	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
312	121.800	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
313	121.700	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
314	121.600	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
315	121.500	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
316	121.400	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
317	121.300	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
318	121.200	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
319	121.100	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
320	121.000	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
321	120.900	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
322	120.800	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
323	120.700	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
324	120.600	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
325	120.500	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
326	120.400	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
327	120.300	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
328	120.200	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
329	120.100	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
330	120.000	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
331	119.900	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
332	119.800	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
333	119.700	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																

334	119.600	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
335	119.500	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
336	119.400	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
337	119.300	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
338	119.200	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
339	119.100	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
340	119.000	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
341	118.900	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
342	118.800	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
343	118.700	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
344	118.600	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
345	118.500	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
346	118.400	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
347	118.300	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
348	118.200	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
349	118.100	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
350	118.000	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
351	117.900	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
352	117.800	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																
353	117.700	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m^3

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 13 LITTLE FLAT - GLADE CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM	TYPE	FLOW	TEMP	SALN	CM-I	CM-II	DO	BOD	EBOD	ORGN	NH3	NO3+2	PHOS	CHL A	COLI

NCM NO.		m³/	DEG C	PPT	*	*	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	#/100mL	*
354	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.48	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.28

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
354	117.70	117.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
355	117.60	117.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
356	117.50	117.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
357	117.40	117.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
358	117.30	117.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
359	117.20	117.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
360	117.10	117.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
361	117.00	116.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
362	116.90	116.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
363	116.80	116.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
364	116.70	116.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
365	116.60	116.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
366	116.50	116.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
367	116.40	116.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
368	116.30	116.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
369	116.20	116.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
370	116.10	116.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
371	116.00	115.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000

372	115.90	115.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
373	115.80	115.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
374	115.70	115.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
375	115.60	115.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
376	115.50	115.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
377	115.40	115.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
378	115.30	115.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
379	115.20	115.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
380	115.10	115.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
381	115.00	114.90	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
382	114.90	114.80	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
383	114.80	114.70	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
384	114.70	114.60	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
385	114.60	114.50	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
386	114.50	114.40	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
387	114.40	114.30	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
388	114.30	114.20	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
389	114.20	114.10	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
390	114.10	114.00	0.00280	0.00	0.00030	3.90	0.85	11.11	943.78	1110.95	9.44	0.00	0.000	0.000	0.000
TOT						144.34			34919.92	41105.25					
AVG					0.00030		0.85	11.11			9.44				
CUM						1183.53									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

354	117.600	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
355	117.500	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
356	117.400	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
357	117.300	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
358	117.200	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
359	117.100	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
360	117.000	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
361	116.900	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
362	116.800	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
363	116.700	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
364	116.600	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
365	116.500	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
366	116.400	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
367	116.300	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
368	116.200	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
369	116.100	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
370	116.000	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
371	115.900	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
372	115.800	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
373	115.700	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
374	115.600	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
375	115.500	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
376	115.400	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
377	115.300	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
378	115.200	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
379	115.100	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			
380	115.000	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
0.05																			

381	114.900	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
382	114.800	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
383	114.700	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
384	114.600	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
385	114.500	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
386	114.400	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
387	114.300	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
388	114.200	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
389	114.100	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
390	114.000	8.85	0.85	0.04	0.05	0.00	2.35	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20 0.05
20 DEG C RATE				0.04		0.00	2.15			0.00		0.00	0.00	0.00	0.00			0.00	0.18
AVG 20 DEG C RATE			0.82		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
354	117.600	21.40	0.00	8.30	0.00	5.41	1.82	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
355	117.500	21.40	0.00	8.30	0.00	5.39	1.57	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
356	117.400	21.40	0.00	8.30	0.00	5.39	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
357	117.300	21.40	0.00	8.30	0.00	5.39	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
358	117.200	21.40	0.00	8.30	0.00	5.39	1.17	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
359	117.100	21.40	0.00	8.30	0.00	5.39	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
360	117.000	21.40	0.00	8.30	0.00	5.39	1.05	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
361	116.900	21.40	0.00	8.30	0.00	5.40	1.01	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
362	116.800	21.40	0.00	8.30	0.00	5.40	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.57																
363	116.700	21.40	0.00	8.30	0.00	5.40	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
364	116.600	21.40	0.00	8.30	0.00	5.40	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
365	116.500	21.40	0.00	8.30	0.00	5.40	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
366	116.400	21.40	0.00	8.30	0.00	5.40	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
367	116.300	21.40	0.00	8.30	0.00	5.40	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
368	116.200	21.40	0.00	8.30	0.00	5.40	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
369	116.100	21.40	0.00	8.30	0.00	5.40	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
370	116.000	21.40	0.00	8.30	0.00	5.40	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
371	115.900	21.40	0.00	8.30	0.00	5.40	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
372	115.800	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
373	115.700	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
374	115.600	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
375	115.500	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
376	115.400	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
377	115.300	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
378	115.200	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
379	115.100	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
380	115.000	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
381	114.900	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
382	114.800	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
383	114.700	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
384	114.600	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
385	114.500	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
386	114.400	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
387	114.300	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
388	114.200	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57																
389	114.100	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

390	114.000	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 14 GLADE CREEK - CUB CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
391	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.40	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.57

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
391	114.00	113.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
392	113.90	113.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
393	113.80	113.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
394	113.70	113.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
395	113.60	113.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
396	113.50	113.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
397	113.40	113.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
398	113.30	113.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
399	113.20	113.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
400	113.10	113.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	

401	113.00	112.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
402	112.90	112.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
403	112.80	112.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
404	112.70	112.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
405	112.60	112.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
406	112.50	112.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
407	112.40	112.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
408	112.30	112.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
409	112.20	112.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
410	112.10	112.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
411	112.00	111.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
412	111.90	111.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
413	111.80	111.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
414	111.70	111.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
415	111.60	111.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
416	111.50	111.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
417	111.40	111.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
418	111.30	111.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
419	111.20	111.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
420	111.10	111.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
421	111.00	110.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
422	110.90	110.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
423	110.80	110.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
424	110.70	110.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
425	110.60	110.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
426	110.50	110.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000
427	110.40	110.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	0.000

0.000															
428	110.30	110.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
429	110.20	110.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
430	110.10	110.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
431	110.00	109.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
432	109.90	109.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
433	109.80	109.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
434	109.70	109.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
435	109.60	109.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
436	109.50	109.40	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
437	109.40	109.30	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
438	109.30	109.20	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
439	109.20	109.10	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
440	109.10	109.00	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
441	109.00	108.90	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
442	108.90	108.80	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
443	108.80	108.70	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
444	108.70	108.60	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
445	108.60	108.50	0.00280	0.00	0.00030	3.81	0.83	11.11	921.56	1110.95	9.22	0.00	0.000	0.000	
0.000															
TOT						209.52			50685.94	61102.41					
AVG					0.00030		0.83	11.11			9.22				
CUM						1393.04									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
391	113.900	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

392	113.800	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
393	113.700	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
394	113.600	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
395	113.500	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
396	113.400	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
397	113.300	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
398	113.200	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
399	113.100	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
400	113.000	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
401	112.900	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
402	112.800	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
403	112.700	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
404	112.600	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
405	112.500	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
406	112.400	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
407	112.300	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
408	112.200	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
409	112.100	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
410	112.000	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
411	111.900	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
412	111.800	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
413	111.700	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
414	111.600	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
415	111.500	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
416	111.400	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
417	111.300	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
418	111.200	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.19	0.05																		
419	111.100	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
420	111.000	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
421	110.900	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
422	110.800	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
423	110.700	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
424	110.600	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
425	110.500	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
426	110.400	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
427	110.300	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
428	110.200	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
429	110.100	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
430	110.000	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
431	109.900	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
432	109.800	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
433	109.700	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
434	109.600	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
435	109.500	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
436	109.400	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
437	109.300	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
438	109.200	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
439	109.100	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
440	109.000	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
441	108.900	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
442	108.800	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
443	108.700	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
444	108.600	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
445	108.500	8.85	0.87	0.05	0.05	0.00	2.33	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.19 0.05

20 DEG C RATE 0.05 0.00 2.13 0.00 0.00 0.00 0.00 0.00 0.00
0.17
AVG 20 DEG C RATE 0.84 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
391	113.900	21.40	0.00	8.30	0.00	5.42	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
392	113.800	21.40	0.00	8.30	0.00	5.42	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
393	113.700	21.40	0.00	8.30	0.00	5.42	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
394	113.600	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
395	113.500	21.40	0.00	8.30	0.00	5.42	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
396	113.400	21.40	0.00	8.30	0.00	5.42	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
397	113.300	21.40	0.00	8.30	0.00	5.42	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
398	113.200	21.40	0.00	8.30	0.00	5.42	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
399	113.100	21.40	0.00	8.30	0.00	5.42	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
400	113.000	21.40	0.00	8.30	0.00	5.42	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
401	112.900	21.40	0.00	8.30	0.00	5.42	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
402	112.800	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
403	112.700	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
404	112.600	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
405	112.500	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
406	112.400	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
407	112.300	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
408	112.200	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66

409	112.100	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
410	112.000	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
411	111.900	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
412	111.800	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
413	111.700	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
414	111.600	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
415	111.500	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
416	111.400	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
417	111.300	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
418	111.200	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
419	111.100	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
420	111.000	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
421	110.900	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
422	110.800	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
423	110.700	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
424	110.600	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
425	110.500	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
426	110.400	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
427	110.300	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
428	110.200	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
429	110.100	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
430	110.000	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
431	109.900	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
432	109.800	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
433	109.700	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
434	109.600	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
435	109.500	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																

436	109.400	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
437	109.300	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
438	109.200	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
439	109.100	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
440	109.000	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
441	108.900	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
442	108.800	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
443	108.700	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
444	108.600	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
445	108.500	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 15 CUB CREEK - COW CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
446	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.42	0.75	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.66

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
446	108.50	108.40	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000

447	108.40	108.30	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
448	108.30	108.20	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
449	108.20	108.10	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
450	108.10	108.00	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
451	108.00	107.90	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
452	107.90	107.80	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
453	107.80	107.70	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
454	107.70	107.60	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
455	107.60	107.50	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
456	107.50	107.40	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
457	107.40	107.30	0.00280	0.00	0.00031	3.76	0.82	11.11	910.45	1110.95	9.10	0.00	0.000	0.000	0.000
TOT						45.16			10925.44	13331.43					
AVG					0.00031		0.82	11.11			9.10				
CUM						1438.20									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
446	108.400	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
447	108.300	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
448	108.200	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
449	108.100	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
450	108.000	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
451	107.900	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
452	107.800	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
453	107.700	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05

454	107.600	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
455	107.500	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
456	107.400	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
457	107.300	8.85	0.88	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
20 DEG C RATE				0.06		0.00	2.11			0.00		0.00	0.00	0.00	0.00			0.00	0.17
AVG 20 DEG C RATE			0.85		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
446	108.400	21.40	0.00	8.30	0.00	5.43	0.76	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
447	108.300	21.40	0.00	8.30	0.00	5.43	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
448	108.200	21.40	0.00	8.30	0.00	5.43	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
449	108.100	21.40	0.00	8.30	0.00	5.42	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76
450	108.000	21.40	0.00	8.30	0.00	5.42	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76
451	107.900	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
452	107.800	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
453	107.700	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
454	107.600	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
455	107.500	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
456	107.400	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
457	107.300	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 16 COW CREEK - BEAR CREEK BRANCH CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
458	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.42	0.79	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.77

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
458	107.30	107.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
459	107.20	107.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
460	107.10	107.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
461	107.00	106.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
462	106.90	106.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
463	106.80	106.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
464	106.70	106.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
465	106.60	106.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
466	106.50	106.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
467	106.40	106.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
468	106.30	106.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
469	106.20	106.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
470	106.10	106.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
471	106.00	105.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	

472	105.90	105.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
473	105.80	105.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
474	105.70	105.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
475	105.60	105.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
476	105.50	105.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
477	105.40	105.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
478	105.30	105.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
479	105.20	105.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
480	105.10	105.00	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
481	105.00	104.90	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
482	104.90	104.80	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
483	104.80	104.70	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
484	104.70	104.60	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
485	104.60	104.50	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
486	104.50	104.40	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
487	104.40	104.30	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
488	104.30	104.20	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
489	104.20	104.10	0.00280	0.00	0.00031	3.72	0.81	11.11	899.34	1110.95	8.99	0.00	0.000	0.000	0.000
TOT						118.96			28779.00	35550.49					
AVG					0.00031		0.81	11.11			8.99				
CUM						1557.16									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da
458	107.200	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.19	0.05																		
459	107.100	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
460	107.000	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
461	106.900	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
462	106.800	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
463	106.700	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
464	106.600	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
465	106.500	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
466	106.400	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
467	106.300	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
468	106.200	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
469	106.100	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
470	106.000	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
471	105.900	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
472	105.800	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
473	105.700	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
474	105.600	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
475	105.500	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
476	105.400	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
477	105.300	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
478	105.200	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
479	105.100	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
480	105.000	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
481	104.900	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
482	104.800	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
483	104.700	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
484	104.600	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
485	104.500	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.19	0.05																		
486	104.400	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
487	104.300	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
488	104.200	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
489	104.100	8.85	0.89	0.06	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
20 DEG C RATE				0.06		0.00	2.11			0.00		0.00	0.00	0.00	0.00			0.00	
0.17																			
AVG 20 DEG C RATE			0.86		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
458	107.200	21.40	0.00	8.30	0.00	5.42	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
459	107.100	21.40	0.00	8.30	0.00	5.43	0.85	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
460	107.000	21.40	0.00	8.30	0.00	5.43	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
461	106.900	21.40	0.00	8.30	0.00	5.43	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
462	106.800	21.40	0.00	8.30	0.00	5.43	0.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
463	106.700	21.40	0.00	8.30	0.00	5.43	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
464	106.600	21.40	0.00	8.30	0.00	5.43	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
465	106.500	21.40	0.00	8.30	0.00	5.43	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
466	106.400	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
467	106.300	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
468	106.200	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
469	106.100	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
470	106.000	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
471	105.900	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73

472	105.800	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
473	105.700	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
474	105.600	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
475	105.500	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
476	105.400	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
477	105.300	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
478	105.200	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
479	105.100	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
480	105.000	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
481	104.900	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
482	104.800	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
483	104.700	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
484	104.600	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
485	104.500	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
486	104.400	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
487	104.300	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
488	104.200	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
489	104.100	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 17 BEAR CREEK BRANCH - BILES BR CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *

490	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.42	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.73

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
490	104.10	104.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
491	104.00	103.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
492	103.90	103.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
493	103.80	103.70	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
TOT						14.55			3520.96	4403.81					
AVG					0.00032		0.80	11.01			8.80				
CUM						1571.72									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
490	104.000	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
491	103.900	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
492	103.800	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
493	103.700	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
20 DEG C RATE				0.07		0.00	2.11			0.00		0.00	0.00	0.00	0.00			0.00	0.17	
AVG 20 DEG C RATE			0.88		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
490	104.000	21.40	0.00	8.30	0.00	5.40	0.62	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
491	103.900	21.40	0.00	8.30	0.00	5.39	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
492	103.800	21.40	0.00	8.30	0.00	5.39	0.29	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
493	103.700	21.40	0.00	8.30	0.00	5.39	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 18 BILES BRANCH - HURRICANE CR CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS
****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
494	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.39	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00	1.15

********** HYDRAULIC PARAMETER VALUES
****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
494	103.70	103.60	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
495	103.60	103.50	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
496	103.50	103.40	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	

497	103.40	103.30	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
498	103.30	103.20	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
499	103.20	103.10	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
500	103.10	103.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
501	103.00	102.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
502	102.90	102.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
503	102.80	102.70	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
504	102.70	102.60	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
505	102.60	102.50	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
506	102.50	102.40	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
507	102.40	102.30	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
508	102.30	102.20	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
509	102.20	102.10	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
510	102.10	102.00	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
511	102.00	101.90	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
512	101.90	101.80	0.00280	0.00	0.00032	3.64	0.80	11.01	880.24	1100.95	8.80	0.00	0.000	0.000	0.000
TOT						69.13			16724.54	20918.10					
AVG					0.00032		0.80	11.01			8.80				
CUM						1640.85									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
494	103.600	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
495	103.500	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
496	103.400	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.19	0.05																		
497	103.300	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
498	103.200	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
499	103.100	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
500	103.000	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
501	102.900	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
502	102.800	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
503	102.700	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
504	102.600	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
505	102.500	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
506	102.400	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
507	102.300	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
508	102.200	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
509	102.100	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
510	102.000	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
511	101.900	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
512	101.800	8.85	0.90	0.07	0.05	0.00	2.30	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.19	0.05																		
20 DEG C RATE				0.07		0.00	2.11			0.00		0.00	0.00	0.00	0.00			0.00	
0.17																			
AVG 20 DEG C RATE			0.88		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI NCM #/100mL *
494	103.600	21.40	0.00	8.30	0.00	5.40	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.97																
495	103.500	21.40	0.00	8.30	0.00	5.41	0.60	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87																

496	103.400	21.40	0.00	8.30	0.00	5.41	0.71	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
497	103.300	21.40	0.00	8.30	0.00	5.41	0.78	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.78
498	103.200	21.40	0.00	8.30	0.00	5.41	0.83	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
499	103.100	21.40	0.00	8.30	0.00	5.41	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76
500	103.000	21.40	0.00	8.30	0.00	5.41	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76
501	102.900	21.40	0.00	8.30	0.00	5.41	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
502	102.800	21.40	0.00	8.30	0.00	5.41	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
503	102.700	21.40	0.00	8.30	0.00	5.41	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
504	102.600	21.40	0.00	8.30	0.00	5.41	0.93	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
505	102.500	21.40	0.00	8.30	0.00	5.41	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
506	102.400	21.40	0.00	8.30	0.00	5.41	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
507	102.300	21.40	0.00	8.30	0.00	5.41	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
508	102.200	21.40	0.00	8.30	0.00	5.41	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
509	102.100	21.40	0.00	8.30	0.00	5.41	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
510	102.000	21.40	0.00	8.30	0.00	5.41	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
511	101.900	21.40	0.00	8.30	0.00	5.41	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
512	101.800	21.40	0.00	8.30	0.00	5.41	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 19 HURRICANE CR - INDIAN BRANCH CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
513	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.41	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.75

********** HYDRAULIC PARAMETER VALUES
****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
513	101.80	101.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
514	101.70	101.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
515	101.60	101.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
516	101.50	101.40	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
517	101.40	101.30	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
518	101.30	101.20	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
519	101.20	101.10	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
520	101.10	101.00	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
521	101.00	100.90	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
522	100.90	100.80	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
523	100.80	100.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
524	100.70	100.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
525	100.60	100.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
526	100.50	100.40	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
527	100.40	100.30	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
528	100.30	100.20	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
529	100.20	100.10	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
530	100.10	100.00	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
531	100.00	99.90	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
532	99.90	99.80	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
533	99.80	99.70	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000

534	99.70	99.60	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
535	99.60	99.50	0.00280	0.00	0.00032	3.59	0.79	11.01	869.23	1100.95	8.69	0.00	0.000	0.000	0.000
TOT						82.64			19992.27	25321.91					
AVG					0.00032		0.79	11.01			8.69				
CUM						1723.49									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
513	101.700	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
514	101.600	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
515	101.500	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
516	101.400	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
517	101.300	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
518	101.200	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
519	101.100	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
520	101.000	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
521	100.900	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
522	100.800	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
523	100.700	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
524	100.600	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
525	100.500	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
526	100.400	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
527	100.300	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
528	100.200	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05
529	100.100	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05

530	100.000	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
531	99.900	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
532	99.800	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
533	99.700	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
534	99.600	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
535	99.500	8.85	0.91	0.07	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
20 DEG C RATE				0.07		0.00	2.02			0.00		0.00	0.00	0.00	0.00			0.00	0.17
AVG 20 DEG C RATE			0.89		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
513	101.700	21.40	0.00	8.30	0.00	5.51	1.39	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
514	101.600	21.40	0.00	8.30	0.00	5.53	1.70	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
515	101.500	21.40	0.00	8.30	0.00	5.53	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
516	101.400	21.40	0.00	8.30	0.00	5.52	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
517	101.300	21.40	0.00	8.30	0.00	5.52	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
518	101.200	21.40	0.00	8.30	0.00	5.51	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
519	101.100	21.40	0.00	8.30	0.00	5.51	2.27	2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
520	101.000	21.40	0.00	8.30	0.00	5.50	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
521	100.900	21.40	0.00	8.30	0.00	5.50	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
522	100.800	21.40	0.00	8.30	0.00	5.50	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
523	100.700	21.40	0.00	8.30	0.00	5.50	2.35	2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
524	100.600	21.40	0.00	8.30	0.00	5.50	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
525	100.500	21.40	0.00	8.30	0.00	5.50	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

526	100.400	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
527	100.300	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
528	100.200	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
529	100.100	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
530	100.000	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
531	99.900	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
532	99.800	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
533	99.700	21.40	0.00	8.30	0.00	5.50	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
534	99.600	21.40	0.00	8.30	0.00	5.50	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
535	99.500	21.40	0.00	8.30	0.00	5.50	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 20 INDIAN BRANCH - MOODY CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
536	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.50	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.42

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
536	99.50	99.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	

537	99.40	99.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
538	99.30	99.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
539	99.20	99.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
540	99.10	99.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
541	99.00	98.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
542	98.90	98.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
543	98.80	98.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
544	98.70	98.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
545	98.60	98.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
546	98.50	98.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
547	98.40	98.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
548	98.30	98.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
549	98.20	98.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
550	98.10	98.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
551	98.00	97.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
552	97.90	97.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
553	97.80	97.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
554	97.70	97.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
555	97.60	97.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
556	97.50	97.40	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
557	97.40	97.30	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
558	97.30	97.20	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
559	97.20	97.10	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
560	97.10	97.00	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
561	97.00	96.90	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
562	96.90	96.80	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
563	96.80	96.70	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000

564	96.70	96.60	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
565	96.60	96.50	0.00280	0.00	0.00033	3.55	0.78	11.01	858.22	1100.95	8.58	0.00	0.000	0.000	0.000
TOT						106.43			25746.60	33028.58					
AVG					0.00033		0.78	11.01			8.58				
CUM						1829.91									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
536	99.400	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
537	99.300	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
538	99.200	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
539	99.100	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
540	99.000	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
541	98.900	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
542	98.800	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
543	98.700	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
544	98.600	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
545	98.500	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
546	98.400	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
547	98.300	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
548	98.200	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
549	98.100	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
550	98.000	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
551	97.900	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.05
552	97.800	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.18	0.05																		
553	97.700	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
554	97.600	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
555	97.500	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
556	97.400	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
557	97.300	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
558	97.200	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
559	97.100	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
560	97.000	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
561	96.900	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
562	96.800	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
563	96.700	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
564	96.600	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
565	96.500	8.85	0.92	0.06	0.05	0.00	2.10	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.18	0.05																		
20 DEG C RATE				0.06		0.00	1.92			0.00		0.00	0.00	0.00	0.00			0.00	
0.16																			
AVG 20 DEG C RATE			0.90		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
536	99.400	21.40	0.00	8.30	0.00	5.62	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
537	99.300	21.40	0.00	8.30	0.00	5.63	2.70	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60
538	99.200	21.40	0.00	8.30	0.00	5.62	2.79	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
539	99.100	21.40	0.00	8.30	0.00	5.61	2.86	2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
540	99.000	21.40	0.00	8.30	0.00	5.60	2.91	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67

541	98.900	21.40	0.00	8.30	0.00	5.60	2.94	2.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
542	98.800	21.40	0.00	8.30	0.00	5.60	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
543	98.700	21.40	0.00	8.30	0.00	5.60	2.98	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
544	98.600	21.40	0.00	8.30	0.00	5.59	2.99	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
545	98.500	21.40	0.00	8.30	0.00	5.59	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
546	98.400	21.40	0.00	8.30	0.00	5.59	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
547	98.300	21.40	0.00	8.30	0.00	5.59	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
548	98.200	21.40	0.00	8.30	0.00	5.59	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
549	98.100	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
550	98.000	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
551	97.900	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
552	97.800	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
553	97.700	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
554	97.600	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
555	97.500	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
556	97.400	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
557	97.300	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
558	97.200	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
559	97.100	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
560	97.000	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
561	96.900	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
562	96.800	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
563	96.700	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
564	96.600	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																
565	96.500	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 21 MOODY CREEK - BULL CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
566	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.59	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.68

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
566	96.50	96.40	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
567	96.40	96.30	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
568	96.30	96.20	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
569	96.20	96.10	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
570	96.10	96.00	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
571	96.00	95.90	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
572	95.90	95.80	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
573	95.80	95.70	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
574	95.70	95.60	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
575	95.60	95.50	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
576	95.50	95.40	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
577	95.40	95.30	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000
578	95.30	95.20	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000	0.000

579	95.20	95.10	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
580	95.10	95.00	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
581	95.00	94.90	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
582	94.90	94.80	0.00280	0.00	0.00033	3.50	0.77	11.01	847.21	1100.95	8.47	0.00	0.000	0.000
0.000														
TOT						59.53			14402.57	18716.19				
AVG					0.00033		0.77	11.01			8.47			
CUM						1889.45								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS
****

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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																	
566	96.400	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
567	96.300	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
568	96.200	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
569	96.100	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
570	96.000	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
571	95.900	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
572	95.800	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
573	95.700	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
574	95.600	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
575	95.500	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
576	95.400	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
577	95.300	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
578	95.200	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
579	95.100	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	
580	95.000	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.05																	

581	94.900	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18 0.05
582	94.800	8.85	0.94	0.06	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18 0.05
20 DEG C RATE				0.06		0.00	1.91			0.00		0.00	0.00	0.00	0.00			0.00	0.16
AVG 20 DEG C RATE			0.91		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
566	96.400	21.40	0.00	8.30	0.00	5.61	3.02	3.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
567	96.300	21.40	0.00	8.30	0.00	5.62	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
568	96.200	21.40	0.00	8.30	0.00	5.62	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
569	96.100	21.40	0.00	8.30	0.00	5.62	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
570	96.000	21.40	0.00	8.30	0.00	5.62	3.01	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
571	95.900	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
572	95.800	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
573	95.700	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
574	95.600	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
575	95.500	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
576	95.400	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
577	95.300	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
578	95.200	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
579	95.100	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
580	95.000	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
581	94.900	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
582	94.800	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.61

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 22 BULL CREEK - SWEETWATER CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
583	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.63	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
583	94.80	94.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
584	94.70	94.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
585	94.60	94.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
586	94.50	94.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
587	94.40	94.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
588	94.30	94.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
589	94.20	94.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
590	94.10	94.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
591	94.00	93.90	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
592	93.90	93.80	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
593	93.80	93.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	

594	93.70	93.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
595	93.60	93.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
596	93.50	93.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
597	93.40	93.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
598	93.30	93.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
599	93.20	93.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
600	93.10	93.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
601	93.00	92.90	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
602	92.90	92.80	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
603	92.80	92.70	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
604	92.70	92.60	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
605	92.60	92.50	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
606	92.50	92.40	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
607	92.40	92.30	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
608	92.30	92.20	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
609	92.20	92.10	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
610	92.10	92.00	0.00280	0.00	0.00033	3.46	0.76	11.01	836.20	1100.95	8.36	0.00	0.000	0.000	0.000
TOT						96.78			23413.63	30826.68					
AVG					0.00033		0.76	11.01			8.36				
CUM						1986.23									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
583	94.700	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
584	94.600	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

585	94.500	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
586	94.400	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
587	94.300	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
588	94.200	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
589	94.100	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
590	94.000	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
591	93.900	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
592	93.800	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
593	93.700	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
594	93.600	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
595	93.500	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
596	93.400	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
597	93.300	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
598	93.200	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
599	93.100	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
600	93.000	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
601	92.900	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
602	92.800	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
603	92.700	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
604	92.600	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
605	92.500	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
606	92.400	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
607	92.300	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
608	92.200	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
609	92.100	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
610	92.000	8.85	0.95	0.06	0.05	0.00	2.13	2.13	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16

20 DEG C RATE				0.06	0.00	1.95			0.00		0.00	0.00	0.00	0.00		0.00	0.15
AVG 20 DEG C RATE			0.92		0.05					0.00							0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
583	94.700	21.40	0.00	8.30	0.00	5.60	2.99	2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
584	94.600	21.40	0.00	8.30	0.00	5.60	2.98	2.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
585	94.500	21.40	0.00	8.30	0.00	5.61	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43
586	94.400	21.40	0.00	8.30	0.00	5.61	2.97	2.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
587	94.300	21.40	0.00	8.30	0.00	5.61	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
588	94.200	21.40	0.00	8.30	0.00	5.62	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
589	94.100	21.40	0.00	8.30	0.00	5.62	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
590	94.000	21.40	0.00	8.30	0.00	5.62	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
591	93.900	21.40	0.00	8.30	0.00	5.62	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
592	93.800	21.40	0.00	8.30	0.00	5.62	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
593	93.700	21.40	0.00	8.30	0.00	5.62	2.96	2.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
594	93.600	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
595	93.500	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
596	93.400	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
597	93.300	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
598	93.200	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
599	93.100	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
600	93.000	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
601	92.900	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39

602	92.800	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
603	92.700	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
604	92.600	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
605	92.500	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
606	92.400	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
607	92.300	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
608	92.200	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
609	92.100	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
610	92.000	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 23 SWEETWATER CREEK - BRUSHY CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
611	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.62	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.39

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
611	92.00	91.90	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000
612	91.90	91.80	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000	0.000

613	91.80	91.70	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
614	91.70	91.60	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
615	91.60	91.50	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
616	91.50	91.40	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
617	91.40	91.30	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
618	91.30	91.20	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
619	91.20	91.10	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
620	91.10	91.00	0.00280	0.00	0.00034	3.41	0.75	11.01	825.19	1100.95	8.25	0.00	0.000	0.000
TOT						34.11			8251.91	11009.52				
AVG					0.00034		0.75	11.01			8.25			
CUM						2020.34								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
611	91.900	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
612	91.800	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
613	91.700	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
614	91.600	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
615	91.500	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
616	91.400	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
617	91.300	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
618	91.200	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
619	91.100	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
620	91.000	8.85	0.96	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.05
20 DEG C RATE				0.05		0.00	1.97			0.00		0.00	0.00	0.00	0.00			0.00		

0.15
AVG 20 DEG C RATE 0.93 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
611	91.900	21.40	0.00	8.30	0.00	5.61	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
612	91.800	21.40	0.00	8.30	0.00	5.59	3.19	3.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
613	91.700	21.40	0.00	8.30	0.00	5.59	3.26	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
614	91.600	21.40	0.00	8.30	0.00	5.58	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
615	91.500	21.40	0.00	8.30	0.00	5.58	3.35	3.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
616	91.400	21.40	0.00	8.30	0.00	5.57	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
617	91.300	21.40	0.00	8.30	0.00	5.57	3.40	3.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
618	91.200	21.40	0.00	8.30	0.00	5.57	3.42	3.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
619	91.100	21.40	0.00	8.30	0.00	5.57	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
620	91.000	21.40	0.00	8.30	0.00	5.57	3.44	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 24 BRUSHY CREEK - WHITE OAK CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS
****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
621	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.57	3.44	3.44	0.00	0.00	0.00	0.00	0.00	0.00	

0.56

********** HYDRAULIC PARAMETER VALUES
****

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
621	91.00	90.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
622	90.90	90.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
623	90.80	90.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
624	90.70	90.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
625	90.60	90.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
626	90.50	90.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
627	90.40	90.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
628	90.30	90.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
629	90.20	90.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
630	90.10	90.00	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
631	90.00	89.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
632	89.90	89.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
633	89.80	89.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
634	89.70	89.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
635	89.60	89.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
636	89.50	89.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
637	89.40	89.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
638	89.30	89.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
639	89.20	89.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
640	89.10	89.00	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	0.000
641	89.00	88.90	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000	

0.000														
642	88.90	88.80	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
643	88.80	88.70	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
644	88.70	88.60	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
645	88.60	88.50	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
646	88.50	88.40	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
647	88.40	88.30	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
648	88.30	88.20	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
649	88.20	88.10	0.00280	0.00	0.00034	3.37	0.74	11.01	814.18	1100.95	8.14	0.00	0.000	0.000
0.000														
TOT						97.60			23611.27	31927.63				
AVG					0.00034		0.74	11.01			8.14			
CUM						2117.94								

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
621	90.900	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
622	90.800	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
623	90.700	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
624	90.600	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
625	90.500	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
626	90.400	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
627	90.300	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
628	90.200	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
629	90.100	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
630	90.000	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
631	89.900	8.85	0.97	0.05	0.05	0.00	2.15	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

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0.15  0.05
 632   89.800  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 633   89.700  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 634   89.600  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 635   89.500  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 636   89.400  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 637   89.300  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 638   89.200  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 639   89.100  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 640   89.000  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 641   88.900  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 642   88.800  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 643   88.700  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 644   88.600  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 645   88.500  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 646   88.400  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 647   88.300  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 648   88.200  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05
 649   88.100  8.85    0.97   0.05  0.05   0.00  2.15  2.15  2.15   0.00  0.00   0.00  0.00   0.00  0.00  0.00  0.00   0.00
0.15  0.05

 20 DEG C RATE                 0.05         0.00  1.97               0.00         0.00  0.00   0.00  0.00                0.00
0.14
 AVG 20 DEG C RATE     0.95         0.05                                   0.00
0.05

 * g/m²/d              ** mg/L/day


 ************************************************ WATER QUALITY CONSTITUENT VALUES
************************************************

 ELEM  ENDING   TEMP  SALN     CM-I    CM-II    DO     BOD   EBOD   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   µg/L     **     #/100mL
*
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621	90.900	21.40	0.00	8.30	0.00	5.59	3.38	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50																
622	90.800	21.40	0.00	8.30	0.00	5.60	3.34	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.46																
623	90.700	21.40	0.00	8.30	0.00	5.60	3.31	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.44																
624	90.600	21.40	0.00	8.30	0.00	5.61	3.29	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43																
625	90.500	21.40	0.00	8.30	0.00	5.61	3.27	3.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
626	90.400	21.40	0.00	8.30	0.00	5.61	3.26	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
627	90.300	21.40	0.00	8.30	0.00	5.61	3.25	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42																
628	90.200	21.40	0.00	8.30	0.00	5.61	3.25	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
629	90.100	21.40	0.00	8.30	0.00	5.61	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
630	90.000	21.40	0.00	8.30	0.00	5.61	3.24	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
631	89.900	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
632	89.800	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
633	89.700	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
634	89.600	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
635	89.500	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
636	89.400	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
637	89.300	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
638	89.200	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
639	89.100	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
640	89.000	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
641	88.900	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
642	88.800	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
643	88.700	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
644	88.600	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
645	88.500	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
646	88.400	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																
647	88.300	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.41																

648	88.200	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
649	88.100	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 25 WHITE OAK CREEK - BILLS CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
650	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.61	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.41

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
650	88.10	88.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
651	88.00	87.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
652	87.90	87.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
653	87.80	87.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
654	87.70	87.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
655	87.60	87.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
656	87.50	87.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
657	87.40	87.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
658	87.30	87.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000

659	87.20	87.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
660	87.10	87.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
661	87.00	86.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
662	86.90	86.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
663	86.80	86.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
664	86.70	86.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
665	86.60	86.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
666	86.50	86.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
667	86.40	86.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
668	86.30	86.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
669	86.20	86.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
670	86.10	86.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
671	86.00	85.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
672	85.90	85.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
673	85.80	85.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
674	85.70	85.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
675	85.60	85.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
676	85.50	85.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
677	85.40	85.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
678	85.30	85.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
679	85.20	85.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
680	85.10	85.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
681	85.00	84.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
682	84.90	84.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
683	84.80	84.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
684	84.70	84.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
685	84.60	84.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000

686	84.50	84.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
687	84.40	84.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
688	84.30	84.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
689	84.20	84.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
690	84.10	84.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
691	84.00	83.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
692	83.90	83.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
693	83.80	83.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
694	83.70	83.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
695	83.60	83.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
696	83.50	83.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
697	83.40	83.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
698	83.30	83.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
699	83.20	83.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
700	83.10	83.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
701	83.00	82.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
702	82.90	82.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
703	82.80	82.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
704	82.70	82.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
705	82.60	82.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
706	82.50	82.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
707	82.40	82.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
708	82.30	82.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
709	82.20	82.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
710	82.10	82.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
711	82.00	81.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
712	81.90	81.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000

713	81.80	81.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
714	81.70	81.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
715	81.60	81.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
716	81.50	81.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
717	81.40	81.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
718	81.30	81.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
719	81.20	81.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
720	81.10	81.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
721	81.00	80.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
722	80.90	80.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
723	80.80	80.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
724	80.70	80.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
725	80.60	80.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
726	80.50	80.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
727	80.40	80.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
728	80.30	80.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
729	80.20	80.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
730	80.10	80.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
731	80.00	79.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
732	79.90	79.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
733	79.80	79.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
734	79.70	79.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
735	79.60	79.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
736	79.50	79.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
737	79.40	79.30	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
738	79.30	79.20	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000
739	79.20	79.10	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000

740	79.10	79.00	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
741	79.00	78.90	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
742	78.90	78.80	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
743	78.80	78.70	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
744	78.70	78.60	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
745	78.60	78.50	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
746	78.50	78.40	0.00280	0.00	0.00036	3.24	0.72	10.91	784.97	1090.95	7.85	0.00	0.000	0.000	0.000
TOT						314.74			76141.91	105822.44					
AVG					0.00036		0.72	10.91			7.85				
CUM						2432.67									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
650	88.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
651	87.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
652	87.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
653	87.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
654	87.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
655	87.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
656	87.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
657	87.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
658	87.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
659	87.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
660	87.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
661	86.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05

662	86.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
663	86.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
664	86.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
665	86.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
666	86.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
667	86.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
668	86.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
669	86.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
670	86.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
671	85.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
672	85.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
673	85.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
674	85.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
675	85.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
676	85.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
677	85.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
678	85.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
679	85.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
680	85.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
681	84.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
682	84.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
683	84.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
684	84.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
685	84.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
686	84.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
687	84.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
688	84.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

689	84.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
690	84.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
691	83.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
692	83.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
693	83.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
694	83.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
695	83.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
696	83.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
697	83.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
698	83.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
699	83.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
700	83.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
701	82.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
702	82.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
703	82.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
704	82.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
705	82.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
706	82.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
707	82.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
708	82.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
709	82.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
710	82.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
711	81.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
712	81.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
713	81.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
714	81.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
715	81.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

716	81.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
717	81.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
718	81.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
719	81.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
720	81.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
721	80.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
722	80.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
723	80.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
724	80.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
725	80.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
726	80.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
727	80.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
728	80.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
729	80.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
730	80.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
731	79.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
732	79.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
733	79.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
734	79.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
735	79.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
736	79.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
737	79.300	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
738	79.200	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
739	79.100	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
740	79.000	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
741	78.900	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
742	78.800	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14

743	78.700	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
744	78.600	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
745	78.500	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
746	78.400	8.85	1.00	0.04	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
20 DEG C RATE				0.04		0.00	1.98			0.00		0.00	0.00	0.00	0.00			0.00	0.13	
AVG 20 DEG C RATE			0.97		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
650	88.000	21.40	0.00	8.30	0.00	5.63	3.29	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44
651	87.900	21.40	0.00	8.30	0.00	5.63	3.33	3.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
652	87.800	21.40	0.00	8.30	0.00	5.63	3.37	3.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
653	87.700	21.40	0.00	8.30	0.00	5.63	3.39	3.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46
654	87.600	21.40	0.00	8.30	0.00	5.63	3.41	3.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
655	87.500	21.40	0.00	8.30	0.00	5.63	3.43	3.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
656	87.400	21.40	0.00	8.30	0.00	5.63	3.44	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
657	87.300	21.40	0.00	8.30	0.00	5.63	3.45	3.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
658	87.200	21.40	0.00	8.30	0.00	5.63	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
659	87.100	21.40	0.00	8.30	0.00	5.62	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
660	87.000	21.40	0.00	8.30	0.00	5.62	3.47	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
661	86.900	21.40	0.00	8.30	0.00	5.62	3.47	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
662	86.800	21.40	0.00	8.30	0.00	5.62	3.47	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
663	86.700	21.40	0.00	8.30	0.00	5.62	3.47	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47
664	86.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.47																
665	86.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
666	86.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
667	86.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
668	86.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
669	86.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
670	86.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
671	85.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
672	85.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
673	85.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
674	85.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
675	85.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
676	85.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
677	85.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
678	85.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
679	85.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
680	85.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
681	84.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
682	84.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
683	84.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
684	84.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
685	84.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
686	84.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
687	84.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
688	84.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
689	84.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
690	84.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
691	83.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

692	83.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
693	83.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
694	83.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
695	83.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
696	83.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
697	83.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
698	83.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
699	83.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700	83.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
701	82.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
702	82.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
703	82.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
704	82.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
705	82.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
706	82.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
707	82.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
708	82.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
709	82.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
710	82.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
711	81.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
712	81.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
713	81.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
714	81.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
715	81.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
716	81.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
717	81.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
718	81.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.47																
719	81.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
720	81.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
721	80.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
722	80.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
723	80.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
724	80.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
725	80.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
726	80.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
727	80.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
728	80.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
729	80.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
730	80.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
731	79.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
732	79.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
733	79.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
734	79.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
735	79.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
736	79.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
737	79.300	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
738	79.200	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
739	79.100	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
740	79.000	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
741	78.900	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
742	78.800	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
743	78.700	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
744	78.600	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47																
745	78.500	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

746	78.400	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL

REACH NO. 26 BILLS CREEK - LOST CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
747	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.62	3.48	3.48	0.00	0.00	0.00	0.00	0.00	0.00	0.47

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
747	78.40	78.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
748	78.30	78.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
749	78.20	78.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
750	78.10	78.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
751	78.00	77.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
752	77.90	77.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
753	77.80	77.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
754	77.70	77.60	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
755	77.60	77.50	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
756	77.50	77.40	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	

757	77.40	77.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
758	77.30	77.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
759	77.20	77.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
760	77.10	77.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
761	77.00	76.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
762	76.90	76.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
763	76.80	76.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
764	76.70	76.60	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
765	76.60	76.50	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
766	76.50	76.40	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
767	76.40	76.30	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
768	76.30	76.20	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
769	76.20	76.10	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
770	76.10	76.00	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
771	76.00	75.90	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
772	75.90	75.80	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
773	75.80	75.70	0.00280	0.00	0.00037	3.11	0.69	10.91	752.24	1090.95	7.52	0.00	0.000	0.000	0.000
TOT						83.96			20310.45	29455.72					
AVG					0.00037		0.69	10.91			7.52				
CUM						2516.62									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
747	78.300	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
748	78.200	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.12	0.05																		
749	78.100	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
750	78.000	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
751	77.900	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
752	77.800	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
753	77.700	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
754	77.600	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
755	77.500	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
756	77.400	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
757	77.300	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
758	77.200	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
759	77.100	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
760	77.000	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
761	76.900	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
762	76.800	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
763	76.700	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
764	76.600	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
765	76.500	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
766	76.400	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
767	76.300	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
768	76.200	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
769	76.100	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
770	76.000	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
771	75.900	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
772	75.800	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
773	75.700	8.85	1.04	0.03	0.05	0.00	2.21	2.21	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.12	0.05																		
20 DEG C RATE				0.03		0.00	2.02			0.00		0.00	0.00	0.00	0.00			0.00	
0.11																			

AVG 20 DEG C RATE 1.02 0.05 0.00
0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
747	78.300	21.40	0.00	8.30	0.00	5.62	3.49	3.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51
748	78.200	21.40	0.00	8.30	0.00	5.61	3.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53
749	78.100	21.40	0.00	8.30	0.00	5.61	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
750	78.000	21.40	0.00	8.30	0.00	5.61	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
751	77.900	21.40	0.00	8.30	0.00	5.61	3.51	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
752	77.800	21.40	0.00	8.30	0.00	5.61	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
753	77.700	21.40	0.00	8.30	0.00	5.61	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
754	77.600	21.40	0.00	8.30	0.00	5.61	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
755	77.500	21.40	0.00	8.30	0.00	5.61	3.52	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
756	77.400	21.40	0.00	8.30	0.00	5.61	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
757	77.300	21.40	0.00	8.30	0.00	5.61	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
758	77.200	21.40	0.00	8.30	0.00	5.61	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
759	77.100	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
760	77.000	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
761	76.900	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
762	76.800	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
763	76.700	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
764	76.600	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
765	76.500	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
766	76.400	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

767	76.300	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
768	76.200	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
769	76.100	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
770	76.000	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
771	75.900	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
772	75.800	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
773	75.700	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 27 LOST CREEK - MESSER CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
774	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.60	3.53	3.53	0.00	0.00	0.00	0.00	0.00	0.00	0.57

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
774	75.70	75.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
775	75.60	75.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
776	75.50	75.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000
777	75.40	75.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000	0.000

778	75.30	75.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
779	75.20	75.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
780	75.10	75.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
781	75.00	74.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
782	74.90	74.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
783	74.80	74.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
784	74.70	74.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
785	74.60	74.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
786	74.50	74.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
787	74.40	74.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
788	74.30	74.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
789	74.20	74.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
790	74.10	74.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
791	74.00	73.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
792	73.90	73.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
793	73.80	73.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
794	73.70	73.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
795	73.60	73.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
796	73.50	73.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
797	73.40	73.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
798	73.30	73.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
799	73.20	73.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
800	73.10	73.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
801	73.00	72.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
802	72.90	72.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
803	72.80	72.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
804	72.70	72.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000

805	72.60	72.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
806	72.50	72.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
807	72.40	72.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
808	72.30	72.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
809	72.20	72.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
810	72.10	72.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
811	72.00	71.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
812	71.90	71.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
813	71.80	71.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
814	71.70	71.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
815	71.60	71.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
816	71.50	71.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
817	71.40	71.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
818	71.30	71.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
819	71.20	71.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
820	71.10	71.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
821	71.00	70.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
822	70.90	70.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
823	70.80	70.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
824	70.70	70.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
825	70.60	70.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
826	70.50	70.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
827	70.40	70.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
828	70.30	70.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
829	70.20	70.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
830	70.10	70.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
831	70.00	69.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000

832	69.90	69.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
833	69.80	69.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
834	69.70	69.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
835	69.60	69.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
836	69.50	69.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
837	69.40	69.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
838	69.30	69.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
839	69.20	69.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
840	69.10	69.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
841	69.00	68.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
842	68.90	68.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
843	68.80	68.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
844	68.70	68.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
845	68.60	68.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
846	68.50	68.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
847	68.40	68.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
848	68.30	68.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
849	68.20	68.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
850	68.10	68.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
851	68.00	67.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
852	67.90	67.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
853	67.80	67.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
854	67.70	67.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
855	67.60	67.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
856	67.50	67.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
857	67.40	67.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
858	67.30	67.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														

859	67.20	67.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
860	67.10	67.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
861	67.00	66.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
862	66.90	66.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
863	66.80	66.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
864	66.70	66.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
865	66.60	66.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
866	66.50	66.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
867	66.40	66.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
868	66.30	66.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
869	66.20	66.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
870	66.10	66.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
871	66.00	65.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
872	65.90	65.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
873	65.80	65.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
874	65.70	65.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
875	65.60	65.50	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
876	65.50	65.40	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
877	65.40	65.30	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
878	65.30	65.20	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
879	65.20	65.10	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
880	65.10	65.00	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
881	65.00	64.90	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
882	64.90	64.80	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
883	64.80	64.70	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
884	64.70	64.60	0.00280	0.00	0.00039	2.95	0.66	10.81	712.92	1080.95	7.13	0.00	0.000	0.000
0.000														
TOT						327.11			79133.53	119985.78				

AVG 0.00039 0.66 10.81 7.13
CUM 2843.74

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
774	75.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
775	75.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
776	75.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
777	75.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
778	75.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
779	75.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
780	75.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
781	74.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
782	74.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
783	74.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
784	74.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
785	74.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
786	74.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
787	74.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
788	74.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
789	74.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
790	74.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
791	73.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
792	73.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
793	73.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05

794	73.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
795	73.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
796	73.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
797	73.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
798	73.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
799	73.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
800	73.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
801	72.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
802	72.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
803	72.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
804	72.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
805	72.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
806	72.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
807	72.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
808	72.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
809	72.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
810	72.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
811	71.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
812	71.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
813	71.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
814	71.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
815	71.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
816	71.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
817	71.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
818	71.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
819	71.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
820	71.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

821	70.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
822	70.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
823	70.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
824	70.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
825	70.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
826	70.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
827	70.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
828	70.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
829	70.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
830	70.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
831	69.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
832	69.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
833	69.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
834	69.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
835	69.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
836	69.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
837	69.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
838	69.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
839	69.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
840	69.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
841	68.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
842	68.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
843	68.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
844	68.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
845	68.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
846	68.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
847	68.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

848	68.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
849	68.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
850	68.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
851	67.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
852	67.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
853	67.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
854	67.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
855	67.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
856	67.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
857	67.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
858	67.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
859	67.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
860	67.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
861	66.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
862	66.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
863	66.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
864	66.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
865	66.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
866	66.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
867	66.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
868	66.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
869	66.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
870	66.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
871	65.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
872	65.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
873	65.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
874	65.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

875	65.500	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
876	65.400	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
877	65.300	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
878	65.200	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
879	65.100	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
880	65.000	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
881	64.900	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
882	64.800	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
883	64.700	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
884	64.600	8.85	1.09	0.04	0.05	0.00	2.22	2.22	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11 0.05
20 DEG C RATE				0.04		0.00	2.03			0.00		0.00	0.00	0.00	0.00			0.00	0.10
AVG 20 DEG C RATE			1.06		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
774	75.600	21.40	0.00	8.30	0.00	5.58	3.26	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
775	75.500	21.40	0.00	8.30	0.00	5.57	3.04	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
776	75.400	21.40	0.00	8.30	0.00	5.57	2.88	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
777	75.300	21.40	0.00	8.30	0.00	5.57	2.75	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
778	75.200	21.40	0.00	8.30	0.00	5.57	2.64	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
779	75.100	21.40	0.00	8.30	0.00	5.57	2.56	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
780	75.000	21.40	0.00	8.30	0.00	5.57	2.50	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91
781	74.900	21.40	0.00	8.30	0.00	5.57	2.45	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92
782	74.800	21.40	0.00	8.30	0.00	5.58	2.41	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

783	74.700	21.40	0.00	8.30	0.00	5.58	2.38	2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
784	74.600	21.40	0.00	8.30	0.00	5.58	2.36	2.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
785	74.500	21.40	0.00	8.30	0.00	5.58	2.34	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
786	74.400	21.40	0.00	8.30	0.00	5.58	2.33	2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
787	74.300	21.40	0.00	8.30	0.00	5.58	2.32	2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
788	74.200	21.40	0.00	8.30	0.00	5.58	2.31	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
789	74.100	21.40	0.00	8.30	0.00	5.58	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
790	74.000	21.40	0.00	8.30	0.00	5.58	2.30	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
791	73.900	21.40	0.00	8.30	0.00	5.58	2.29	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
792	73.800	21.40	0.00	8.30	0.00	5.58	2.29	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
793	73.700	21.40	0.00	8.30	0.00	5.58	2.29	2.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
794	73.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
795	73.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
796	73.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
797	73.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
798	73.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
799	73.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
800	73.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
801	72.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
802	72.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
803	72.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
804	72.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
805	72.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
806	72.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
807	72.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
808	72.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
809	72.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.94																
810	72.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
811	71.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
812	71.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
813	71.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
814	71.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
815	71.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
816	71.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
817	71.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
818	71.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
819	71.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
820	71.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
821	70.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
822	70.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
823	70.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
824	70.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
825	70.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
826	70.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
827	70.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
828	70.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
829	70.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
830	70.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
831	69.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
832	69.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
833	69.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
834	69.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
835	69.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
836	69.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

837	69.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
838	69.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
839	69.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
840	69.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
841	68.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
842	68.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
843	68.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
844	68.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
845	68.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
846	68.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
847	68.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
848	68.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
849	68.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
850	68.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
851	67.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
852	67.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
853	67.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
854	67.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
855	67.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
856	67.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
857	67.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
858	67.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
859	67.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
860	67.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
861	66.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
862	66.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
863	66.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.94																
864	66.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
865	66.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
866	66.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
867	66.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
868	66.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
869	66.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
870	66.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
871	65.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
872	65.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
873	65.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
874	65.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
875	65.500	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
876	65.400	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
877	65.300	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
878	65.200	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
879	65.100	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
880	65.000	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
881	64.900	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
882	64.800	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
883	64.700	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																
884	64.600	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.94																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 28 MESSER CREEK - RICHLAND CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS

****

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
885	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.58	2.28	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.94

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
885	64.60	64.50	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
886	64.50	64.40	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
887	64.40	64.30	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
888	64.30	64.20	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
889	64.20	64.10	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
890	64.10	64.00	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
891	64.00	63.90	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
892	63.90	63.80	0.00280	0.00	0.00041	2.86	0.64	10.81	691.30	1080.95	6.91	0.00	0.000	0.000	0.000
TOT						22.86			5530.37	8647.62					
AVG					0.00041		0.64	10.81			6.91				
CUM						2866.60									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O. mg/L	REAER RATE 1/da	CBOD DECAY 1/da	CBOD SETT 1/da	ANBOD DECAY 1/da	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
885	64.500	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.10	0.05																		
886	64.400	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.10	0.05																		
887	64.300	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.10	0.05																		
888	64.200	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.10	0.05																		
889	64.100	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.10	0.05																		
890	64.000	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.10	0.05																		
891	63.900	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.10	0.05																		
892	63.800	8.85	1.13	0.04	0.05	0.00	2.09	2.09	2.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.10	0.05																		
20 DEG C RATE				0.04		0.00	1.91			0.00		0.00	0.00	0.00	0.00			0.00	
0.09																			
AVG 20 DEG C RATE			1.09		0.05						0.00								
0.05																			

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
885	64.500	21.40	0.00	8.30	0.00	5.72	2.61	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
886	64.400	21.40	0.00	8.30	0.00	5.74	2.87	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
887	64.300	21.40	0.00	8.30	0.00	5.73	3.07	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11
888	64.200	21.40	0.00	8.30	0.00	5.73	3.23	3.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
889	64.100	21.40	0.00	8.30	0.00	5.72	3.36	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16
890	64.000	21.40	0.00	8.30	0.00	5.71	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17
891	63.900	21.40	0.00	8.30	0.00	5.71	3.54	3.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
892	63.800	21.40	0.00	8.30	0.00	5.71	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 29 RICHLAND CREEK - PINEY CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
893	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.71	3.60	3.60	0.00	0.00	0.00	0.00	0.00	0.00	1.19

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
893	63.80	63.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
894	63.70	63.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
895	63.60	63.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
896	63.50	63.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
897	63.40	63.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
898	63.30	63.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
899	63.20	63.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
900	63.10	63.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
901	63.00	62.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
902	62.90	62.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
903	62.80	62.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
904	62.70	62.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
905	62.60	62.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
906	62.50	62.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

907	62.40	62.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
908	62.30	62.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
909	62.20	62.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
910	62.10	62.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
911	62.00	61.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
912	61.90	61.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
913	61.80	61.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
914	61.70	61.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
915	61.60	61.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
916	61.50	61.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
917	61.40	61.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
918	61.30	61.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
919	61.20	61.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
920	61.10	61.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
921	61.00	60.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
922	60.90	60.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
923	60.80	60.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
924	60.70	60.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
925	60.60	60.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
926	60.50	60.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
927	60.40	60.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
928	60.30	60.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
929	60.20	60.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
930	60.10	60.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
931	60.00	59.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
932	59.90	59.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
933	59.80	59.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

934	59.70	59.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
935	59.60	59.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
936	59.50	59.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
937	59.40	59.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
938	59.30	59.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
939	59.20	59.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
940	59.10	59.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
941	59.00	58.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
942	58.90	58.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
943	58.80	58.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
944	58.70	58.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
945	58.60	58.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
946	58.50	58.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
947	58.40	58.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
948	58.30	58.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
949	58.20	58.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
950	58.10	58.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
951	58.00	57.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
952	57.90	57.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
953	57.80	57.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
954	57.70	57.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
955	57.60	57.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
956	57.50	57.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
957	57.40	57.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
958	57.30	57.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
959	57.20	57.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000
960	57.10	57.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000

961	57.00	56.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
962	56.90	56.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
963	56.80	56.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
964	56.70	56.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
965	56.60	56.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
966	56.50	56.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
967	56.40	56.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
968	56.30	56.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
969	56.20	56.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
970	56.10	56.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
971	56.00	55.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
972	55.90	55.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
973	55.80	55.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
974	55.70	55.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
975	55.60	55.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
976	55.50	55.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
977	55.40	55.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
978	55.30	55.20	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
979	55.20	55.10	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
980	55.10	55.00	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
981	55.00	54.90	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
982	54.90	54.80	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
983	54.80	54.70	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
984	54.70	54.60	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
985	54.60	54.50	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
986	54.50	54.40	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000
987	54.40	54.30	0.00280	0.00	0.00042	2.77	0.62	10.81	669.68	1080.95	6.70	0.00	0.000	0.000	0.000

988 54.30 54.20 0.00280 0.00 0.00042 2.77 0.62 10.81 669.68 1080.95 6.70 0.00 0.000 0.000
0.000

TOT							265.74				64288.95	103771.48											
AVG						0.00042		0.62	10.81					6.70									
CUM							3132.34																

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS
****

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
893	63.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
894	63.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
895	63.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
896	63.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
897	63.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
898	63.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
899	63.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
900	63.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
901	62.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
902	62.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
903	62.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
904	62.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
905	62.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
906	62.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
907	62.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
908	62.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
909	62.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
910	62.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05

911	61.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
912	61.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
913	61.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
914	61.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
915	61.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
916	61.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
917	61.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
918	61.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
919	61.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
920	61.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
921	60.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
922	60.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
923	60.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
924	60.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
925	60.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
926	60.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
927	60.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
928	60.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
929	60.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
930	60.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
931	59.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
932	59.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
933	59.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
934	59.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
935	59.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
936	59.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
937	59.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05

938	59.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
939	59.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
940	59.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
941	58.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
942	58.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
943	58.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
944	58.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
945	58.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
946	58.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
947	58.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
948	58.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
949	58.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
950	58.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
951	57.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
952	57.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
953	57.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
954	57.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
955	57.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
956	57.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
957	57.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
958	57.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
959	57.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
960	57.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
961	56.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
962	56.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
963	56.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12
964	56.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12

965	56.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
966	56.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
967	56.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
968	56.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
969	56.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
970	56.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
971	55.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
972	55.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
973	55.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
974	55.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
975	55.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
976	55.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
977	55.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
978	55.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
979	55.100	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
980	55.000	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
981	54.900	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
982	54.800	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
983	54.700	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
984	54.600	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
985	54.500	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
986	54.400	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
987	54.300	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
988	54.200	8.85	1.16	0.04	0.05	0.00	2.06	2.06	2.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.05
20 DEG C RATE				0.04		0.00	1.89			0.00		0.00	0.00	0.00	0.00			0.00	0.11	
AVG 20 DEG C RATE			1.13		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
893	63.700	21.40	0.00	8.30	0.00	5.73	3.68	3.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
894	63.600	21.40	0.00	8.30	0.00	5.74	3.73	3.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
895	63.500	21.40	0.00	8.30	0.00	5.75	3.78	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86
896	63.400	21.40	0.00	8.30	0.00	5.75	3.82	3.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82
897	63.300	21.40	0.00	8.30	0.00	5.75	3.85	3.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79
898	63.200	21.40	0.00	8.30	0.00	5.75	3.87	3.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
899	63.100	21.40	0.00	8.30	0.00	5.76	3.89	3.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
900	63.000	21.40	0.00	8.30	0.00	5.76	3.90	3.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
901	62.900	21.40	0.00	8.30	0.00	5.76	3.91	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
902	62.800	21.40	0.00	8.30	0.00	5.76	3.92	3.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
903	62.700	21.40	0.00	8.30	0.00	5.76	3.93	3.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
904	62.600	21.40	0.00	8.30	0.00	5.76	3.94	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
905	62.500	21.40	0.00	8.30	0.00	5.76	3.94	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
906	62.400	21.40	0.00	8.30	0.00	5.76	3.94	3.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
907	62.300	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
908	62.200	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
909	62.100	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
910	62.000	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
911	61.900	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
912	61.800	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
913	61.700	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
914	61.600	21.40	0.00	8.30	0.00	5.76	3.95	3.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.72																
915	61.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
916	61.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
917	61.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
918	61.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
919	61.100	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
920	61.000	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
921	60.900	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
922	60.800	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
923	60.700	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
924	60.600	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
925	60.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
926	60.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
927	60.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
928	60.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
929	60.100	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
930	60.000	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
931	59.900	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
932	59.800	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
933	59.700	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
934	59.600	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
935	59.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
936	59.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
937	59.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
938	59.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
939	59.100	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
940	59.000	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72																
941	58.900	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

942	58.800	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
943	58.700	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
944	58.600	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
945	58.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
946	58.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
947	58.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
948	58.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
949	58.100	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
950	58.000	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
951	57.900	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
952	57.800	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
953	57.700	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
954	57.600	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
955	57.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
956	57.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
957	57.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
958	57.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
959	57.100	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
960	57.000	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
961	56.900	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
962	56.800	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
963	56.700	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
964	56.600	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
965	56.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
966	56.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
967	56.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
968	56.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

969	56.100	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
970	56.000	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
971	55.900	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
972	55.800	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
973	55.700	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
974	55.600	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
975	55.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
976	55.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
977	55.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
978	55.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
979	55.100	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
980	55.000	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
981	54.900	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
982	54.800	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
983	54.700	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
984	54.600	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
985	54.500	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
986	54.400	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
987	54.300	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
988	54.200	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 30 PINEY CREEK - BEAUCOUP CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
989	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.76	3.96	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.72

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
989	54.20	54.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
990	54.10	54.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
991	54.00	53.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
992	53.90	53.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
993	53.80	53.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
994	53.70	53.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
995	53.60	53.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
996	53.50	53.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
997	53.40	53.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
998	53.30	53.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
999	53.20	53.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1000	53.10	53.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1001	53.00	52.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1002	52.90	52.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1003	52.80	52.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1004	52.70	52.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1005	52.60	52.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	0.000
1006	52.50	52.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	

0.000															
1007	52.40	52.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1008	52.30	52.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1009	52.20	52.10	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1010	52.10	52.00	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1011	52.00	51.90	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1012	51.90	51.80	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1013	51.80	51.70	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1014	51.70	51.60	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1015	51.60	51.50	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1016	51.50	51.40	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1017	51.40	51.30	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
1018	51.30	51.20	0.00280	0.00	0.00044	2.61	0.59	10.71	631.35	1070.95	6.31	0.00	0.000	0.000	
0.000															
TOT						78.29			18940.60	32128.58					
AVG					0.00044		0.59	10.71			6.31				
CUM						3210.63									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
989	54.100	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
990	54.000	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
991	53.900	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
992	53.800	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
993	53.700	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
994	53.600	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05
995	53.500	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

996	53.400	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
997	53.300	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
998	53.200	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
999	53.100	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1000	53.000	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1001	52.900	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1002	52.800	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1003	52.700	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1004	52.600	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1005	52.500	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1006	52.400	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1007	52.300	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1008	52.200	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1009	52.100	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1010	52.000	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1011	51.900	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1012	51.800	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1013	51.700	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1014	51.600	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1015	51.500	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1016	51.400	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1017	51.300	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
1018	51.200	8.85	1.22	0.03	0.05	0.00	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
20 DEG C RATE				0.03		0.00	1.86			0.00		0.00	0.00	0.00	0.00			0.00	0.13
AVG 20 DEG C RATE			1.19		0.05						0.00								0.05

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES
****

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
989	54.100	21.40	0.00	8.30	0.00	5.81	4.27	4.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
990	54.000	21.40	0.00	8.30	0.00	5.83	4.52	4.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62
991	53.900	21.40	0.00	8.30	0.00	5.83	4.73	4.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59
992	53.800	21.40	0.00	8.30	0.00	5.83	4.90	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
993	53.700	21.40	0.00	8.30	0.00	5.82	5.04	5.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
994	53.600	21.40	0.00	8.30	0.00	5.82	5.15	5.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
995	53.500	21.40	0.00	8.30	0.00	5.82	5.25	5.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
996	53.400	21.40	0.00	8.30	0.00	5.82	5.32	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
997	53.300	21.40	0.00	8.30	0.00	5.82	5.39	5.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
998	53.200	21.40	0.00	8.30	0.00	5.82	5.44	5.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55
999	53.100	21.40	0.00	8.30	0.00	5.81	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1000	53.000	21.40	0.00	8.30	0.00	5.81	5.52	5.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1001	52.900	21.40	0.00	8.30	0.00	5.81	5.55	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1002	52.800	21.40	0.00	8.30	0.00	5.81	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1003	52.700	21.40	0.00	8.30	0.00	5.81	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1004	52.600	21.40	0.00	8.30	0.00	5.81	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1005	52.500	21.40	0.00	8.30	0.00	5.81	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1006	52.400	21.40	0.00	8.30	0.00	5.81	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1007	52.300	21.40	0.00	8.30	0.00	5.81	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1008	52.200	21.40	0.00	8.30	0.00	5.81	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1009	52.100	21.40	0.00	8.30	0.00	5.81	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
1010	52.000	21.40	0.00	8.30	0.00	5.81	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54

1011	51.900	21.40	0.00	8.30	0.00	5.81	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1012	51.800	21.40	0.00	8.30	0.00	5.81	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1013	51.700	21.40	0.00	8.30	0.00	5.81	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1014	51.600	21.40	0.00	8.30	0.00	5.81	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1015	51.500	21.40	0.00	8.30	0.00	5.81	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1016	51.400	21.40	0.00	8.30	0.00	5.81	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1017	51.300	21.40	0.00	8.30	0.00	5.81	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																
1018	51.200	21.40	0.00	8.30	0.00	5.81	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.54																

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 31 BEAUCOUP CREEK - BANISTER CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1019	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.81	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.54

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1019	51.20	51.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1020	51.10	51.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1021	51.00	50.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000

1022	50.90	50.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1023	50.80	50.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1024	50.70	50.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1025	50.60	50.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1026	50.50	50.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1027	50.40	50.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1028	50.30	50.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1029	50.20	50.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1030	50.10	50.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1031	50.00	49.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1032	49.90	49.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1033	49.80	49.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1034	49.70	49.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1035	49.60	49.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1036	49.50	49.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1037	49.40	49.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1038	49.30	49.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1039	49.20	49.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1040	49.10	49.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1041	49.00	48.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1042	48.90	48.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1043	48.80	48.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1044	48.70	48.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1045	48.60	48.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1046	48.50	48.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1047	48.40	48.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														
1048	48.30	48.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000
0.000														

1049	48.20	48.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1050	48.10	48.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1051	48.00	47.90	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1052	47.90	47.80	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1053	47.80	47.70	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1054	47.70	47.60	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1055	47.60	47.50	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1056	47.50	47.40	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1057	47.40	47.30	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1058	47.30	47.20	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1059	47.20	47.10	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
1060	47.10	47.00	0.00280	0.00	0.00045	2.57	0.58	10.71	620.64	1070.95	6.21	0.00	0.000	0.000	0.000
TOT						107.75			26067.04	44980.02					
AVG					0.00045		0.58	10.71			6.21				
CUM						3318.38									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1019	51.100	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1020	51.000	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1021	50.900	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1022	50.800	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1023	50.700	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1024	50.600	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1025	50.500	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05

1026	50.400	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1027	50.300	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1028	50.200	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1029	50.100	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1030	50.000	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1031	49.900	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1032	49.800	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1033	49.700	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1034	49.600	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1035	49.500	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1036	49.400	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1037	49.300	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1038	49.200	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1039	49.100	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1040	49.000	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1041	48.900	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1042	48.800	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1043	48.700	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1044	48.600	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1045	48.500	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1046	48.400	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1047	48.300	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1048	48.200	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1049	48.100	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1050	48.000	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1051	47.900	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1052	47.800	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05

1053	47.700	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1054	47.600	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1055	47.500	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1056	47.400	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1057	47.300	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1058	47.200	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1059	47.100	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1060	47.000	8.85	1.24	0.03	0.05	0.00	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
20 DEG C RATE				0.03		0.00	1.75			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.21		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1019	51.100	21.40	0.00	8.30	0.00	5.93	5.89	5.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61
1020	51.000	21.40	0.00	8.30	0.00	5.94	6.06	6.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1021	50.900	21.40	0.00	8.30	0.00	5.94	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
1022	50.800	21.40	0.00	8.30	0.00	5.94	6.32	6.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
1023	50.700	21.40	0.00	8.30	0.00	5.94	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
1024	50.600	21.40	0.00	8.30	0.00	5.93	6.50	6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
1025	50.500	21.40	0.00	8.30	0.00	5.93	6.57	6.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
1026	50.400	21.40	0.00	8.30	0.00	5.93	6.62	6.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
1027	50.300	21.40	0.00	8.30	0.00	5.93	6.67	6.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
1028	50.200	21.40	0.00	8.30	0.00	5.92	6.70	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
1029	50.100	21.40	0.00	8.30	0.00	5.92	6.73	6.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.74																	
1030	50.000	21.40	0.00	8.30	0.00	5.92	6.76	6.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1031	49.900	21.40	0.00	8.30	0.00	5.92	6.78	6.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1032	49.800	21.40	0.00	8.30	0.00	5.92	6.80	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1033	49.700	21.40	0.00	8.30	0.00	5.92	6.81	6.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1034	49.600	21.40	0.00	8.30	0.00	5.92	6.82	6.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1035	49.500	21.40	0.00	8.30	0.00	5.92	6.83	6.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1036	49.400	21.40	0.00	8.30	0.00	5.92	6.84	6.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1037	49.300	21.40	0.00	8.30	0.00	5.92	6.85	6.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1038	49.200	21.40	0.00	8.30	0.00	5.92	6.85	6.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1039	49.100	21.40	0.00	8.30	0.00	5.92	6.86	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1040	49.000	21.40	0.00	8.30	0.00	5.92	6.86	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1041	48.900	21.40	0.00	8.30	0.00	5.92	6.86	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1042	48.800	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1043	48.700	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1044	48.600	21.40	0.00	8.30	0.00E+00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1045	48.500	21.40	0.00	8.30	0.00E+00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1046	48.400	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1047	48.300	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1048	48.200	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1049	48.100	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1050	48.000	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1051	47.900	21.40	0.00	8.30	0.00	5.92	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1052	47.800	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1053	47.700	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1054	47.600	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1055	47.500	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.75																	
1056	47.400	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1057	47.300	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
1058	47.200	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
1059	47.100	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
1060	47.000	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 32 BANISTER CREEK - BRUSHY CREEK2 CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1061	UPR RCH	0.00280	21.40	0.00	8.30	0.00	5.92	6.88	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.75
EACH	INCR	0.0005	21.40	0.00	6.00	4.20	8.00	5.53	5.53	0.00	0.00	0.00	0.00		0.00	0.22

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1061	47.00	46.90	0.00327	0.00	0.00055	2.12	0.56	10.71	599.91	1071.01	6.00	0.00	0.000	0.000	0.001
1062	46.90	46.80	0.00374	0.00	0.00062	1.86	0.56	10.71	600.54	1071.07	6.01	0.00	0.000	0.000	0.001
1063	46.80	46.70	0.00421	0.00	0.00070	1.65	0.56	10.71	601.13	1071.12	6.01	0.00	0.000	0.000	0.001
1064	46.70	46.60	0.00468	0.00	0.00078	1.49	0.56	10.71	601.67	1071.17	6.02	0.00	0.000	0.000	0.001
1065	46.60	46.50	0.00515	0.00	0.00086	1.35	0.56	10.71	602.19	1071.22	6.02	0.00	0.000	0.000	0.001
1066	46.50	46.40	0.00562	0.00	0.00093	1.24	0.56	10.71	602.68	1071.26	6.03	0.00	0.000	0.000	

0.001														
1067	46.40	46.30	0.00609	0.00	0.00101	1.15	0.56	10.71	603.14	1071.30	6.03	0.00	0.000	0.000
0.001														
1068	46.30	46.20	0.00656	0.00	0.00109	1.06	0.56	10.71	603.58	1071.34	6.04	0.00	0.000	0.000
0.001														
1069	46.20	46.10	0.00703	0.00	0.00116	0.99	0.56	10.71	604.00	1071.38	6.04	0.00	0.000	0.000
0.001														
1070	46.10	46.00	0.00750	0.00	0.00124	0.93	0.56	10.71	604.41	1071.41	6.04	0.00	0.000	0.000
0.001														
1071	46.00	45.90	0.00797	0.00	0.00132	0.88	0.56	10.71	604.80	1071.45	6.05	0.00	0.000	0.000
0.001														
1072	45.90	45.80	0.00844	0.00	0.00139	0.83	0.56	10.71	605.18	1071.48	6.05	0.00	0.000	0.000
0.001														
1073	45.80	45.70	0.00891	0.00	0.00147	0.79	0.57	10.72	605.55	1071.51	6.06	0.00	0.000	0.000
0.001														
1074	45.70	45.60	0.00938	0.00	0.00155	0.75	0.57	10.72	605.90	1071.54	6.06	0.00	0.000	0.000
0.002														
1075	45.60	45.50	0.00985	0.00	0.00162	0.71	0.57	10.72	606.25	1071.58	6.06	0.00	0.000	0.001
0.002														
1076	45.50	45.40	0.01032	0.00	0.00170	0.68	0.57	10.72	606.58	1071.60	6.07	0.00	0.000	0.001
0.002														
1077	45.40	45.30	0.01079	0.00	0.00178	0.65	0.57	10.72	606.91	1071.63	6.07	0.00	0.000	0.001
0.002														
1078	45.30	45.20	0.01126	0.00	0.00185	0.62	0.57	10.72	607.22	1071.66	6.07	0.00	0.000	0.001
0.002														
1079	45.20	45.10	0.01173	0.00	0.00193	0.60	0.57	10.72	607.53	1071.69	6.08	0.00	0.000	0.001
0.002														
1080	45.10	45.00	0.01220	0.00	0.00201	0.58	0.57	10.72	607.84	1071.72	6.08	0.00	0.000	0.001
0.002														
1081	45.00	44.90	0.01267	0.00	0.00208	0.56	0.57	10.72	608.13	1071.74	6.08	0.00	0.000	0.001
0.002														
1082	44.90	44.80	0.01314	0.00	0.00216	0.54	0.57	10.72	608.42	1071.77	6.08	0.00	0.000	0.001
0.002														
1083	44.80	44.70	0.01361	0.00	0.00224	0.52	0.57	10.72	608.70	1071.79	6.09	0.00	0.000	0.001
0.002														
1084	44.70	44.60	0.01408	0.00	0.00231	0.50	0.57	10.72	608.98	1071.82	6.09	0.00	0.000	0.001
0.002														
1085	44.60	44.50	0.01455	0.00	0.00239	0.48	0.57	10.72	609.25	1071.84	6.09	0.00	0.000	0.001
0.002														
1086	44.50	44.40	0.01502	0.00	0.00246	0.47	0.57	10.72	609.52	1071.86	6.10	0.00	0.000	0.001
0.002														
1087	44.40	44.30	0.01549	0.00	0.00254	0.46	0.57	10.72	609.78	1071.89	6.10	0.00	0.000	0.001
0.003														
1088	44.30	44.20	0.01596	0.00	0.00262	0.44	0.57	10.72	610.03	1071.91	6.10	0.00	0.000	0.001
0.003														
1089	44.20	44.10	0.01643	0.00	0.00269	0.43	0.57	10.72	610.28	1071.93	6.10	0.00	0.000	0.001
0.003														
1090	44.10	44.00	0.01690	0.00	0.00277	0.42	0.57	10.72	610.53	1071.95	6.11	0.00	0.000	0.001
0.003														
1091	44.00	43.90	0.01737	0.00	0.00284	0.41	0.57	10.72	610.78	1071.98	6.11	0.00	0.000	0.001
0.003														
1092	43.90	43.80	0.01784	0.00	0.00292	0.40	0.57	10.72	611.02	1072.00	6.11	0.00	0.000	0.001
0.003														
1093	43.80	43.70	0.01831	0.00	0.00300	0.39	0.57	10.72	611.25	1072.02	6.11	0.00	0.000	0.001

0.003															
1094	43.70	43.60	0.01878	0.00	0.00307	0.38	0.57	10.72	611.48	1072.04	6.11	0.00	0.000	0.001	
0.003															
1095	43.60	43.50	0.01925	0.00	0.00315	0.37	0.57	10.72	611.71	1072.06	6.12	0.00	0.000	0.001	
0.003															
1096	43.50	43.40	0.01972	0.00	0.00322	0.36	0.57	10.72	611.94	1072.08	6.12	0.00	0.000	0.001	
0.003															
1097	43.40	43.30	0.02019	0.00	0.00330	0.35	0.57	10.72	612.16	1072.10	6.12	0.00	0.000	0.001	
0.003															
1098	43.30	43.20	0.02066	0.00	0.00337	0.34	0.57	10.72	612.38	1072.12	6.12	0.00	0.000	0.001	
0.003															
1099	43.20	43.10	0.02113	0.00	0.00345	0.34	0.57	10.72	612.60	1072.14	6.13	0.00	0.000	0.001	
0.003															
1100	43.10	43.00	0.02160	0.00	0.00352	0.33	0.57	10.72	612.81	1072.16	6.13	0.00	0.000	0.001	
0.004															
1101	43.00	42.90	0.02207	0.00	0.00360	0.32	0.57	10.72	613.02	1072.18	6.13	0.00	0.000	0.001	
0.004															
1102	42.90	42.80	0.02254	0.00	0.00368	0.31	0.57	10.72	613.23	1072.19	6.13	0.00	0.000	0.001	
0.004															
1103	42.80	42.70	0.02301	0.00	0.00375	0.31	0.57	10.72	613.43	1072.21	6.13	0.00	0.000	0.001	
0.004															
1104	42.70	42.60	0.02348	0.00	0.00383	0.30	0.57	10.72	613.64	1072.23	6.14	0.00	0.000	0.001	
0.004															
1105	42.60	42.50	0.02395	0.00	0.00390	0.30	0.57	10.72	613.84	1072.25	6.14	0.00	0.000	0.001	
0.004															
1106	42.50	42.40	0.02442	0.00	0.00398	0.29	0.57	10.72	614.03	1072.27	6.14	0.00	0.000	0.001	
0.004															
1107	42.40	42.30	0.02489	0.00	0.00405	0.29	0.57	10.72	614.23	1072.28	6.14	0.00	0.000	0.001	
0.004															
1108	42.30	42.20	0.02536	0.00	0.00413	0.28	0.57	10.72	614.42	1072.30	6.14	0.00	0.000	0.001	
0.004															
1109	42.20	42.10	0.02583	0.00	0.00420	0.28	0.57	10.72	614.62	1072.32	6.15	0.00	0.000	0.001	
0.004															
1110	42.10	42.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	
0.004															
TOT						32.35			30438.03	53589.89					
AVG					0.00179		0.57	10.72			6.09				
CUM						3350.73									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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
1061	46.900	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1062	46.800	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

0.15	0.05																		
1063	46.700	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1064	46.600	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1065	46.500	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1066	46.400	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1067	46.300	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1068	46.200	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1069	46.100	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1070	46.000	8.85	1.28	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1071	45.900	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1072	45.800	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1073	45.700	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1074	45.600	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1075	45.500	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1076	45.400	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1077	45.300	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1078	45.200	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1079	45.100	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1080	45.000	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1081	44.900	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1082	44.800	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1083	44.700	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1084	44.600	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1085	44.500	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1086	44.400	8.85	1.27	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1087	44.300	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1088	44.200	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.15	0.05																		
1089	44.100	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1090	44.000	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1091	43.900	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1092	43.800	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1093	43.700	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1094	43.600	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1095	43.500	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1096	43.400	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1097	43.300	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1098	43.200	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1099	43.100	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1100	43.000	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1101	42.900	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1102	42.800	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1103	42.700	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1104	42.600	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1105	42.500	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1106	42.400	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1107	42.300	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1108	42.200	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1109	42.100	8.85	1.26	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
1110	42.000	8.85	1.25	0.03	0.05	0.00	1.88	1.88	1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.05
20 DEG C RATE				0.03		0.00	1.72			0.00		0.00	0.00	0.00	0.00			0.00	0.14	
AVG 20 DEG C RATE			1.23		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1061	46.900	21.40	0.00	7.97	0.61	6.04	6.76	6.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
1062	46.800	21.40	0.00	7.72	1.06	6.07	6.68	6.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
1063	46.700	21.40	0.00	7.53	1.41	6.08	6.62	6.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
1064	46.600	21.40	0.00	7.38	1.69	6.09	6.58	6.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
1065	46.500	21.40	0.00	7.25	1.92	6.09	6.55	6.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
1066	46.400	21.40	0.00	7.15	2.11	6.09	6.53	6.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
1067	46.300	21.40	0.00	7.06	2.27	6.09	6.51	6.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
1068	46.200	21.40	0.00	6.98	2.41	6.09	6.50	6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
1069	46.100	21.40	0.00	6.92	2.53	6.09	6.49	6.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
1070	46.000	21.40	0.00	6.86	2.63	6.09	6.48	6.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1071	45.900	21.40	0.00	6.81	2.72	6.09	6.47	6.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1072	45.800	21.40	0.00	6.76	2.81	6.09	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1073	45.700	21.40	0.00	6.72	2.88	6.09	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1074	45.600	21.40	0.00	6.69	2.95	6.09	6.45	6.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1075	45.500	21.40	0.00	6.65	3.01	6.09	6.44	6.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1076	45.400	21.40	0.00	6.62	3.06	6.09	6.44	6.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1077	45.300	21.40	0.00	6.60	3.11	6.09	6.44	6.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1078	45.200	21.40	0.00	6.57	3.16	6.09	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1079	45.100	21.40	0.00	6.55	3.20	6.09	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1080	45.000	21.40	0.00	6.53	3.24	6.09	6.43	6.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1081	44.900	21.40	0.00	6.51	3.27	6.09	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1082	44.800	21.40	0.00	6.49	3.31	6.09	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1083	44.700	21.40	0.00	6.47	3.34	6.09	6.42	6.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1084	44.600	21.40	0.00	6.46	3.36	6.09	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66

1085	44.500	21.40	0.00	6.44	3.39	6.09	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1086	44.400	21.40	0.00	6.43	3.42	6.09	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1087	44.300	21.40	0.00	6.42	3.44	6.09	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1088	44.200	21.40	0.00	6.40	3.46	6.09	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1089	44.100	21.40	0.00	6.39	3.48	6.09	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1090	44.000	21.40	0.00	6.38	3.50	6.09	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1091	43.900	21.40	0.00	6.37	3.52	6.09	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1092	43.800	21.40	0.00	6.36	3.54	6.09	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1093	43.700	21.40	0.00	6.35	3.56	6.09	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1094	43.600	21.40	0.00	6.34	3.57	6.09	6.40	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1095	43.500	21.40	0.00	6.33	3.59	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1096	43.400	21.40	0.00	6.33	3.60	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1097	43.300	21.40	0.00	6.32	3.62	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1098	43.200	21.40	0.00	6.31	3.63	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1099	43.100	21.40	0.00	6.30	3.64	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1100	43.000	21.40	0.00	6.30	3.66	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1101	42.900	21.40	0.00	6.29	3.67	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1102	42.800	21.40	0.00	6.29	3.68	6.09	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1103	42.700	21.40	0.00	6.28	3.69	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1104	42.600	21.40	0.00	6.27	3.70	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.66																
1105	42.500	21.40	0.00	6.27	3.71	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1106	42.400	21.40	0.00	6.26	3.72	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1107	42.300	21.40	0.00	6.26	3.73	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1108	42.200	21.40	0.00	6.25	3.74	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1109	42.100	21.40	0.00	6.25	3.74	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1110	42.000	21.40	0.00	6.24	3.75	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																

* CM-I = CHLORIDES CM-II = SULFATES NCM = NBOD

MG/L MG/L MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 33 BRUSHY CREEK2 - MCCLELLEN BR CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1111	UPR RCH	0.02630	21.40	0.00	6.24	3.75	6.09	6.38	6.38	0.00	0.00	0.00	0.00	0.00	0.00	0.65

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1111	42.00	41.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1112	41.90	41.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1113	41.80	41.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1114	41.70	41.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1115	41.60	41.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1116	41.50	41.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1117	41.40	41.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1118	41.30	41.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1119	41.20	41.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1120	41.10	41.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1121	41.00	40.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1122	40.90	40.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1123	40.80	40.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1124	40.70	40.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1125	40.60	40.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1126	40.50	40.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1127	40.40	40.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1128	40.30	40.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1129	40.20	40.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1130	40.10	40.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1131	40.00	39.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1132	39.90	39.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1133	39.80	39.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1134	39.70	39.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1135	39.60	39.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1136	39.50	39.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1137	39.40	39.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1138	39.30	39.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1139	39.20	39.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1140	39.10	39.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1141	39.00	38.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1142	38.90	38.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1143	38.80	38.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1144	38.70	38.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1145	38.60	38.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1146	38.50	38.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1147	38.40	38.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1148	38.30	38.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1149	38.20	38.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1150	38.10	38.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1151	38.00	37.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1152	37.90	37.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1153	37.80	37.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1154	37.70	37.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1155	37.60	37.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1156	37.50	37.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1157	37.40	37.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1158	37.30	37.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1159	37.20	37.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1160	37.10	37.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1161	37.00	36.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1162	36.90	36.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1163	36.80	36.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1164	36.70	36.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1165	36.60	36.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1166	36.50	36.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1167	36.40	36.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1168	36.30	36.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1169	36.20	36.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1170	36.10	36.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1171	36.00	35.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1172	35.90	35.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1173	35.80	35.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1174	35.70	35.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1175	35.60	35.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1176	35.50	35.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004

1177	35.40	35.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1178	35.30	35.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1179	35.20	35.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1180	35.10	35.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1181	35.00	34.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1182	34.90	34.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1183	34.80	34.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1184	34.70	34.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1185	34.60	34.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1186	34.50	34.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1187	34.40	34.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1188	34.30	34.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1189	34.20	34.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1190	34.10	34.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1191	34.00	33.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1192	33.90	33.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1193	33.80	33.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1194	33.70	33.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1195	33.60	33.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
TOT						23.00			52258.40	91148.36					
AVG					0.00428		0.57	10.72			6.15				
CUM						3373.72									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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

1111	41.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1112	41.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1113	41.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1114	41.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1115	41.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1116	41.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1117	41.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1118	41.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1119	41.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1120	41.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1121	40.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1122	40.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1123	40.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1124	40.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1125	40.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1126	40.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1127	40.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1128	40.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1129	40.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1130	40.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1131	39.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1132	39.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1133	39.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1134	39.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1135	39.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1136	39.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1137	39.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			

1138	39.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1139	39.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1140	39.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1141	38.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1142	38.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1143	38.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1144	38.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1145	38.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1146	38.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1147	38.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1148	38.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1149	38.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1150	38.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1151	37.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1152	37.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1153	37.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1154	37.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1155	37.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1156	37.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1157	37.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1158	37.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1159	37.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1160	37.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1161	36.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1162	36.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1163	36.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1164	36.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			

1165	36.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1166	36.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1167	36.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1168	36.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1169	36.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1170	36.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1171	35.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1172	35.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1173	35.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1174	35.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1175	35.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1176	35.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1177	35.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1178	35.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1179	35.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1180	35.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1181	34.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1182	34.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1183	34.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1184	34.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1185	34.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1186	34.400	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1187	34.300	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1188	34.200	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1189	34.100	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1190	34.000	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			
1191	33.900	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
0.05																			

1192	33.800	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1193	33.700	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1194	33.600	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
1195	33.500	8.85	1.25	0.03	0.05	0.00	2.16	2.16	2.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05
20 DEG C RATE				0.03		0.00	1.98			0.00		0.00	0.00	0.00	0.00			0.00	0.06	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1111	41.900	21.40	0.00	6.24	3.75	5.98	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1112	41.800	21.40	0.00	6.24	3.75	5.89	6.33	6.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1113	41.700	21.40	0.00	6.24	3.75	5.83	6.30	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1114	41.600	21.40	0.00	6.24	3.75	5.78	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1115	41.500	21.40	0.00	6.24	3.75	5.75	6.26	6.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1116	41.400	21.40	0.00	6.24	3.75	5.72	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1117	41.300	21.40	0.00	6.24	3.75	5.70	6.21	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1118	41.200	21.40	0.00	6.24	3.75	5.69	6.19	6.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1119	41.100	21.40	0.00	6.24	3.75	5.68	6.17	6.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1120	41.000	21.40	0.00	6.24	3.75	5.67	6.15	6.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1121	40.900	21.40	0.00	6.24	3.75	5.67	6.13	6.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1122	40.800	21.40	0.00	6.24	3.75	5.66	6.11	6.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1123	40.700	21.40	0.00	6.24	3.75	5.66	6.09	6.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1124	40.600	21.40	0.00	6.24	3.75	5.66	6.08	6.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1125	40.500	21.40	0.00	6.24	3.75	5.66	6.06	6.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

0.65																
1126	40.400	21.40	0.00	6.24	3.75	5.65	6.04	6.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1127	40.300	21.40	0.00	6.24	3.75	5.65	6.02	6.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1128	40.200	21.40	0.00	6.24	3.75	5.65	6.01	6.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1129	40.100	21.40	0.00	6.24	3.75	5.65	5.99	5.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1130	40.000	21.40	0.00	6.24	3.75	5.65	5.97	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1131	39.900	21.40	0.00	6.24	3.75	5.65	5.96	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1132	39.800	21.40	0.00	6.24	3.75	5.65	5.94	5.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1133	39.700	21.40	0.00	6.24	3.75	5.65	5.93	5.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1134	39.600	21.40	0.00	6.24	3.75	5.65	5.91	5.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1135	39.500	21.40	0.00	6.24	3.75	5.65	5.90	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1136	39.400	21.40	0.00	6.24	3.75	5.65	5.88	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1137	39.300	21.40	0.00	6.24	3.75	5.66	5.87	5.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1138	39.200	21.40	0.00	6.24	3.75	5.66	5.86	5.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1139	39.100	21.40	0.00	6.24	3.75	5.66	5.84	5.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1140	39.000	21.40	0.00	6.24	3.75	5.66	5.83	5.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1141	38.900	21.40	0.00	6.24	3.75	5.66	5.82	5.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1142	38.800	21.40	0.00	6.24	3.75	5.66	5.80	5.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1143	38.700	21.40	0.00	6.24	3.75	5.66	5.79	5.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1144	38.600	21.40	0.00	6.24	3.75	5.66	5.78	5.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1145	38.500	21.40	0.00	6.24	3.75	5.66	5.77	5.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1146	38.400	21.40	0.00	6.24	3.75	5.66	5.76	5.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1147	38.300	21.40	0.00	6.24	3.75	5.66	5.75	5.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1148	38.200	21.40	0.00	6.24	3.75	5.66	5.74	5.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1149	38.100	21.40	0.00	6.24	3.75	5.66	5.73	5.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1150	38.000	21.40	0.00	6.24	3.75	5.66	5.72	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1151	37.900	21.40	0.00	6.24	3.75	5.66	5.71	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1152	37.800	21.40	0.00	6.24	3.75	5.66	5.70	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.65																
1153	37.700	21.40	0.00	6.24	3.75	5.66	5.69	5.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1154	37.600	21.40	0.00	6.24	3.75	5.66	5.68	5.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1155	37.500	21.40	0.00	6.24	3.75	5.66	5.67	5.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1156	37.400	21.40	0.00	6.24	3.75	5.66	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1157	37.300	21.40	0.00	6.24	3.75	5.66	5.65	5.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1158	37.200	21.40	0.00	6.24	3.75	5.66	5.64	5.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1159	37.100	21.40	0.00	6.24	3.75	5.66	5.63	5.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1160	37.000	21.40	0.00	6.24	3.75	5.66	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1161	36.900	21.40	0.00	6.24	3.75	5.66	5.62	5.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1162	36.800	21.40	0.00	6.24	3.75	5.66	5.61	5.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1163	36.700	21.40	0.00	6.24	3.75	5.66	5.60	5.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1164	36.600	21.40	0.00	6.24	3.75	5.66	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1165	36.500	21.40	0.00	6.24	3.75	5.66	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1166	36.400	21.40	0.00	6.24	3.75	5.66	5.58	5.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1167	36.300	21.40	0.00	6.24	3.75	5.66	5.57	5.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1168	36.200	21.40	0.00	6.24	3.75	5.66	5.56	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1169	36.100	21.40	0.00	6.24	3.75	5.66	5.56	5.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1170	36.000	21.40	0.00	6.24	3.75	5.66	5.55	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1171	35.900	21.40	0.00	6.24	3.75	5.66	5.54	5.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1172	35.800	21.40	0.00	6.24	3.75	5.66	5.54	5.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1173	35.700	21.40	0.00	6.24	3.75	5.66	5.53	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1174	35.600	21.40	0.00	6.24	3.75	5.66	5.53	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1175	35.500	21.40	0.00	6.24	3.75	5.66	5.52	5.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1176	35.400	21.40	0.00	6.24	3.75	5.66	5.51	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1177	35.300	21.40	0.00	6.24	3.75	5.66	5.51	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1178	35.200	21.40	0.00	6.24	3.75	5.66	5.50	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65																
1179	35.100	21.40	0.00	6.24	3.75	5.67	5.50	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1180	35.000	21.40	0.00	6.24	3.75	5.67	5.49	5.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1181	34.900	21.40	0.00	6.24	3.75	5.67	5.49	5.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1182	34.800	21.40	0.00	6.24	3.75	5.67	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1183	34.700	21.40	0.00	6.24	3.75	5.67	5.48	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1184	34.600	21.40	0.00	6.24	3.75	5.67	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1185	34.500	21.40	0.00	6.24	3.75	5.67	5.47	5.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1186	34.400	21.40	0.00	6.24	3.75	5.67	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1187	34.300	21.40	0.00	6.24	3.75	5.67	5.46	5.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1188	34.200	21.40	0.00	6.24	3.75	5.67	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1189	34.100	21.40	0.00	6.24	3.75	5.67	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1190	34.000	21.40	0.00	6.24	3.75	5.67	5.45	5.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1191	33.900	21.40	0.00	6.24	3.75	5.67	5.44	5.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1192	33.800	21.40	0.00	6.24	3.75	5.67	5.44	5.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1193	33.700	21.40	0.00	6.24	3.75	5.67	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1194	33.600	21.40	0.00	6.24	3.75	5.67	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1195	33.500	21.40	0.00	6.24	3.75	5.67	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 34 MCCLELLEN BR - FLAT CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO. *	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM
1196	UPR RCH	0.02630	21.40	0.00	6.24	3.75	5.67	5.43	5.43	0.00	0.00	0.00	0.00	0.00	0.00	0.65

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1196	33.50	33.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1197	33.40	33.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1198	33.30	33.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1199	33.20	33.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1200	33.10	33.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1201	33.00	32.90	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1202	32.90	32.80	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1203	32.80	32.70	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1204	32.70	32.60	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1205	32.60	32.50	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1206	32.50	32.40	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1207	32.40	32.30	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1208	32.30	32.20	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1209	32.20	32.10	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
1210	32.10	32.00	0.02630	0.00	0.00428	0.27	0.57	10.72	614.80	1072.33	6.15	0.00	0.000	0.001	0.004
TOT						4.06			9222.07	16085.00					
AVG					0.00428		0.57	10.72			6.15				
CUM						3377.78									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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 SETT	NCM DECAY

		mg/L	1/da	1/da	1/da	1/da	*	*	*	1/da	1/da	1/da	*	1/da	*	**	**	1/da	1/da	1/da	
1196	33.400	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1197	33.300	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1198	33.200	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1199	33.100	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1200	33.000	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1201	32.900	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1202	32.800	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1203	32.700	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1204	32.600	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1205	32.500	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1206	32.400	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1207	32.300	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1208	32.200	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1209	32.100	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
1210	32.000	8.85	1.25	0.03	0.05	0.00	1.87	1.87	1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	
20 DEG C RATE				0.03		0.00	1.71			0.00		0.00	0.00	0.00	0.00			0.00	0.06		
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05		

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1196	33.400	21.40	0.00	6.24	3.75	5.77	5.51	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1197	33.300	21.40	0.00	6.24	3.75	5.85	5.59	5.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67

1198	33.200	21.40	0.00	6.24	3.75	5.90	5.66	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
1199	33.100	21.40	0.00	6.24	3.75	5.95	5.74	5.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
1200	33.000	21.40	0.00	6.24	3.75	5.98	5.81	5.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
1201	32.900	21.40	0.00	6.24	3.75	6.00	5.88	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
1202	32.800	21.40	0.00	6.24	3.75	6.01	5.95	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
1203	32.700	21.40	0.00	6.24	3.75	6.03	6.02	6.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71
1204	32.600	21.40	0.00	6.24	3.75	6.03	6.09	6.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
1205	32.500	21.40	0.00	6.24	3.75	6.04	6.16	6.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
1206	32.400	21.40	0.00	6.24	3.75	6.04	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73
1207	32.300	21.40	0.00	6.24	3.75	6.04	6.28	6.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
1208	32.200	21.40	0.00	6.24	3.75	6.05	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
1209	32.100	21.40	0.00	6.24	3.75	6.05	6.41	6.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
1210	32.000	21.40	0.00	6.24	3.75	6.05	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L

** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 35 FLAT CREEK - SANDY CREEK CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1211	UPR RCH	0.02630	21.40	0.00	6.24	3.75	6.05	6.46	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.75
1211	WSTLD	0.00280	21.40	0.00	0.00	0.00	8.00	3.46	3.46	0.00	0.00	0.00	0.00	0.00	0.00	0.22

********** HYDRAULIC PARAMETER VALUES **********

ELEM	BEGIN	ENDING	FLOW	PCT	ADVCTV	TRAVEL	DEPTH	WIDTH	VOLUME	SURFACE	X-SECT	TIDAL	TIDAL	DISPRSN

NO.	DIST	DIST		EFF	VELO	TIME				AREA	AREA	PRISM	VELO	MEAN VELO
	km	km	m³/		m/s	days	m	m	m³	m²	m²	m³	m/s	m²/s m/s
1211	32.00	31.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1212	31.90	31.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1213	31.80	31.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1214	31.70	31.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1215	31.60	31.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1216	31.50	31.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1217	31.40	31.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1218	31.30	31.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1219	31.20	31.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1220	31.10	31.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1221	31.00	30.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1222	30.90	30.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1223	30.80	30.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1224	30.70	30.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1225	30.60	30.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1226	30.50	30.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1227	30.40	30.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1228	30.30	30.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1229	30.20	30.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1230	30.10	30.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1231	30.00	29.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1232	29.90	29.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
1233	29.80	29.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001 0.005
TOT						5.63			14165.55	24665.88				

AVG 0.00472 0.57 10.72 6.16
CUM 3383.41

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
1211	31.900	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1212	31.800	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1213	31.700	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1214	31.600	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1215	31.500	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1216	31.400	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1217	31.300	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1218	31.200	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1219	31.100	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1220	31.000	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1221	30.900	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1222	30.800	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1223	30.700	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1224	30.600	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1225	30.500	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1226	30.400	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1227	30.300	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1228	30.200	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1229	30.100	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1230	30.000	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05

1231	29.900	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1232	29.800	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
1233	29.700	8.85	1.25	0.03	0.05	0.00	1.83	1.83	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.05
20 DEG C RATE				0.03		0.00	1.68			0.00		0.00	0.00	0.00	0.00			0.00	0.07	
AVG 20 DEG C RATE			1.22		0.05						0.00								0.05	

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1211	31.900	21.40	0.00	5.64	3.39	6.20	6.22	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70
1212	31.800	21.40	0.00	5.64	3.39	6.18	6.27	6.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
1213	31.700	21.40	0.00	5.64	3.39	6.16	6.31	6.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69
1214	31.600	21.40	0.00	5.64	3.39	6.14	6.35	6.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
1215	31.500	21.40	0.00	5.64	3.39	6.13	6.39	6.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
1216	31.400	21.40	0.00	5.64	3.39	6.12	6.44	6.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
1217	31.300	21.40	0.00	5.64	3.39	6.11	6.48	6.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
1218	31.200	21.40	0.00	5.64	3.39	6.11	6.52	6.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67
1219	31.100	21.40	0.00	5.64	3.39	6.10	6.55	6.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1220	31.000	21.40	0.00	5.64	3.39	6.10	6.59	6.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1221	30.900	21.40	0.00	5.64	3.39	6.10	6.63	6.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66
1222	30.800	21.40	0.00	5.64	3.39	6.09	6.66	6.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1223	30.700	21.40	0.00	5.64	3.39	6.09	6.70	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1224	30.600	21.40	0.00	5.64	3.39	6.09	6.74	6.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
1225	30.500	21.40	0.00	5.64	3.39	6.09	6.77	6.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
1226	30.400	21.40	0.00	5.64	3.39	6.09	6.80	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1227	30.300	21.40	0.00	5.64	3.39	6.09	6.84	6.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
1228	30.200	21.40	0.00	5.64	3.39	6.08	6.87	6.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
1229	30.100	21.40	0.00	5.64	3.39	6.08	6.90	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
1230	30.000	21.40	0.00	5.64	3.39	6.08	6.93	6.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
1231	29.900	21.40	0.00	5.64	3.39	6.08	6.96	6.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
1232	29.800	21.40	0.00	5.64	3.39	6.08	6.99	6.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
1233	29.700	21.40	0.00	5.64	3.39	6.08	7.02	7.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

FINAL REPORT HEADWATER CASTOR CREEK WATERSHED MODEL
REACH NO. 36 SANDY CREEK - HWY 124 CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

********** REACH INPUTS **********

ELEM NO.	TYPE	FLOW m³/	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	PHOS mg/L	CHL A µg/L	COLI #/100mL	NCM *
1234	UPR RCH	0.02910	21.40	0.00	5.64	3.39	6.08	7.02	7.02	0.00	0.00	0.00	0.00	0.00	0.00	0.62

********** HYDRAULIC PARAMETER VALUES **********

ELEM NO.	BEGIN DIST km	ENDING DIST km	FLOW m³/	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
1234	29.70	29.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1235	29.60	29.50	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1236	29.50	29.40	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1237	29.40	29.30	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	

1238	29.30	29.20	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1239	29.20	29.10	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1240	29.10	29.00	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1241	29.00	28.90	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1242	28.90	28.80	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1243	28.80	28.70	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
1244	28.70	28.60	0.02910	9.62	0.00472	0.24	0.57	10.72	615.89	1072.43	6.16	0.00	0.000	0.001	0.005
TOT						2.69			6774.83	11796.73					
AVG					0.00472		0.57	10.72			6.16				
CUM						3386.11									

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

ELEM NO.	ENDING NCM DIST	SAT D.O.	REAER RATE	CBOD DECAY	CBOD SETT	ANBOD 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	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
1234	29.600	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1235	29.500	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1236	29.400	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1237	29.300	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1238	29.200	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1239	29.100	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1240	29.000	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1241	28.900	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1242	28.800	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1243	28.700	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
1244	28.600	8.85	1.25	0.03	0.05	0.00	2.18	2.18	2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05

20 DEG C RATE			0.03		0.00	2.00			0.00		0.00	0.00	0.00	0.00		0.00
0.09																
AVG 20 DEG C RATE			1.22		0.05					0.00						
0.05																

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

ELEM NO.	ENDING DIST	TEMP DEG C	SALN PPT	CM-I *	CM-II *	DO mg/L	BOD mg/L	EBOD mg/L	ORGN mg/L	NH3 mg/L	NO3+2 mg/L	TOTN mg/L	PHOS mg/L	CHL A µg/L	MACRO **	COLI #/100mL	NCM *
1234	29.600	21.40	0.00	5.64	3.39	5.96	6.98	6.98	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.60
1235	29.500	21.40	0.00	5.64	3.39	5.87	6.95	6.95	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.58
1236	29.400	21.40	0.00	5.64	3.39	5.81	6.92	6.92	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.56
1237	29.300	21.40	0.00	5.64	3.39	5.76	6.88	6.88	0.00	0.00	0.01	0.01	0.03	0.00	0.00	0.00	0.54
1238	29.200	21.40	0.00	5.64	3.39	5.72	6.85	6.85	0.00	0.00	0.01	0.01	0.04	0.00	0.00	0.00	0.52
1239	29.100	21.40	0.00	5.64	3.39	5.69	6.82	6.82	0.00	0.00	0.02	0.02	0.05	0.00	0.00	0.00	0.50
1240	29.000	21.40	0.00	5.64	3.39	5.67	6.79	6.79	0.00	0.00	0.02	0.02	0.06	0.00	0.00	0.00	0.48
1241	28.900	21.40	0.00	5.64	3.39	5.65	6.76	6.76	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.47
1242	28.800	21.40	0.00	5.64	3.39	5.64	6.73	6.73	0.00	0.00	0.02	0.02	0.07	0.00	0.00	0.00	0.45
1243	28.700	21.40	0.00	5.64	3.39	5.63	6.70	6.70	0.00	0.00	0.03	0.03	0.08	0.00	0.00	0.00	0.43
1244	28.600	21.40	0.00	5.64	3.39	5.63	6.67	6.67	0.00	0.00	0.03	0.03	0.09	0.00	0.00	0.00	0.42

* CM-I = CHLORIDES MG/L CM-II = SULFATES MG/L NCM = NBOD MG/L
** g/m³

STREAM SUMMARY
HEADWATER

CASTOR CREEK WATERSHED MODEL
CASTOR CREEK PROPOSED WINTER RUN 90% REDUCTION MAN-MADE

TRAVEL TIME = 3386.11 DAYS

MAXIMUM EFFLUENT = 9.62 PERCENT

FLOW = 0.00280 TO 0.02910 m³/s
DISPERSION = 0.0001 TO 0.0015 m²/s
VELOCITY = 0.00029 TO 0.00472 m/s

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DEPTH            =   0.54    TO    0.87    m
WIDTH            =  10.71    TO   11.91    m

BOD DECAY        =    0.03   TO    0.07    per day
NH3 DECAY        =    0.00   TO    0.00    per day
SDMNT OXYGEN DMND=    1.83   TO    2.35    g/m²/d
NH3 SOURCE       =    0.00   TO    0.00    g/m²/d
REAERATION       =    0.83   TO    1.33    per day
BOD SETTLING     =    0.05   TO    0.05    per day
ORGN DECAY       =    0.00   TO    0.00    per day
ORGN SETTLING    =    0.00   TO    0.00    per day

TEMPERATURE      =   21.40   TO   21.40    deg C
DISSOLVED OXYGEN =    5.39   TO    6.20    mg/L


    .....EXECUTION COMPLETED
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APPENDIX B11 - Proposed 3.0 winter projection justifications

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
2	McDowell Branch - Horse Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
3	Horse Creek - Guice Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
4	Guice Branch - Curr Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
5	Curr Creek - Poplar Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
6	Poplar Branch - White Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
7	White Branch - Colston Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
8	White Branch - Colston Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
9	Fourmile Creek - Pool Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
10	Pool Branch - Ginney Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
11	Ginney Branch - Edwards Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
12	Edwards Branch - Little Flat	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
13	Little Flat - Glade Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
14	Glade Creek - Cub Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
15	Cub Creek - Cow Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
21.4	Cow Creek - Bear Creek Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
17	Bear Creek Branch - Biles Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
18	Biles Branch - Hurricane Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
19	Hurricane Creek - Indian Branch	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
20	Indian Branch - Moody Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
21	Moody Creek - Bull Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
22	Bull Creek - Sweetwater Creek	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 11, INITIAL CONDITIONS

Reach #	REACH DESCRIPTION	Initial Parameter	Units	Value	Source/Justification
23	Sweetwater Creek - Brushy Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
24	Brushy Creek - White Oak Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
25	White Oak Creek - Bills Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
26	Bills Creek - Lost Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
27	Lost Creek - Messer Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
28	Messer Creek - Richland Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
29	Richland Creek - Piney Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
30	Piney Creek - Beaucoup Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
31	Beaucoup Creek - Banister Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
32	Banister Creek - Brushy Creek2	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
33	Brushy Creek 2 - McClellen Branch	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
34	McClellen Branch - Flat Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
35	Flat Creek - Sandy Creek	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard
36	Sandy Creek - Hwy 124	Temperature	°Celcius	21.4	Winter Season 90th Percentile Temperature
		Dissolved O_2	mg/l	5	Winter Season Standard

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 3, Program Constants			
Description of Constant	**Value**	**Result**	**Source/Justification**
Maximum iteration limit	1000.0		Standard
KL Minimum	0.7	Minimum KL to be used.	The minimum KL of 2.3 ft/day converted to 0.70 m/day.
Inhibition control value	3.0	Inhibits all decay rate except SOD for low DO.	Standard LA modeling procedure.
Ocean exchange ratio	0.0	Set 0% tidal exchange at lower boundary.	This was done to allow dispersion in the model but not to force the bottom element through the boundary conditions.
Hydraulic calculation method	2.0	Sets the Hydraulic calc. to width and depth coef.	The low slopes in this waterbody cause a substantial amount of water to be present during critical flow conditions, making the Leopold relationships inaccurate. This method allows the model to predict a more accurate depth and width during low flow conditions.
Settled rate units.	2.0	Sets the settled rate to a velocity (m/day).	By making the settling rate a velocity the rate becomes dependent upon the depth.
K2 Max	25.0	Max K2 at 20 C allowed for any computational element	EPA Policy in the absence of a measured value.
NCM Oxygen Uptake	1.0	Oxygen Uptake Rate per Unit of NBOD decay.	Standard LA modeling procedure

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 27, Lower Boundary Conditions

Reach #	NAME	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	Temperature	^{o}Celcius	21.4	Winter Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	10.4	Site 1
		Conservative Matl. II		5	Site 1
		Dissolved O_2	mg/l	8	Winter Season 90 percent DO Sat
		BOD	mg/l	9.58	Site 1
		Org.- N	mg/l	0	
		NH_3-N	mg/l	0	
		NO_{2+3}-N	mg/l	0.03	
		Chlorophyll a	ug/l	0	
		Nonconservative	mg/l	0.62	Site 1

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 26, Wastewater Data for NCM					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		NCM	mg/l	0.22	Reference Stream Data

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 25, Wastewater Data for DO, BOD, and Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Dissolved O_2	mg/l	8	90 percent of DO Sat at Winter 90th Percentile Temperature
		CBOD	mg/l	3.46	Reference Stream Data

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 24, Wastewater Data for Flow, Temperature, Salinity, and Conservatives					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
	Flat Creek	Element # of input		1211	
		Wasteload description		Tributary	
		Wasteload inflow	cms	0.028	LTP Winter Projection Value
		Temperature	^{o}Celcius	21.4	90th percentile Temperature for Winter Season
		Salinity	ppt		
		Conservative Matl. I	mg/l		
		Conservative Matl. II	mg/l		

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 22, Headwater Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		NCM	mg/l	0.22	Background per reference stream data

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 21, Headwater Data for DO, BOD, and Nitrogen					
Reach #	**NAME**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Headwater - McDowell Branch	Element # of input		1	
		Dissolved O_2	mg/l	8	Winter Season 90 percent DO Sat
		BOD	mg/l	5.53	Background per reference stream data

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 20, Headwater Data for Flow, Temperature, Salinity, and Conservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Element # of input		1	
		Headwater name		Castor Creek	
		Headwater flow	cms	0.0280	Per LTP
		Temperature	°Celcius	21.40	Winter Season 90th Percentile Temperature
		Conservative Matl. I	mg/l	8.30	Site 5
		Conservative Matl. II	mg/l	0.00	Site 5

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	BOD	kg/day	11	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
2	McDowell Branch - Horse Creek	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
3	Horse Creek - Guice Branch	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
4	Guice Branch - Curr Creek	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
5	Curr Creek - Poplar Branch	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
6	Poplar Branch - White Branch	BOD	kg/day	0	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
7	White Branch - Colston Creek	BOD	kg/day	6	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
8	White Branch - Colston Creek	BOD	kg/day	1	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
9	Fourmile Creek - Pool Branch	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
10	Pool Branch - Ginney Branch	BOD	kg/day	0	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading
11	Ginney Branch - Edwards Branch	BOD	kg/day	13	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
12	Edwards Branch - Little Flat	BOD	kg/day	13	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
13	Little Flat - Glade Creek	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
14	Glade Creek - Cub Creek	BOD	kg/day	4	90% reduction man-made loading
		Nonconservative matl.		8	90% reduction man-made loading
15	Cub Creek - Cow Creek	BOD	kg/day	1	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
16	Cow Creek - Bear Creek Branch	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
17	Bear Creek Branch - Biles Branch	BOD	kg/day	0	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
18	Biles Branch - Hurricane Creek	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		3	90% reduction man-made loading

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
19	Hurricane Creek - Indian Branch	BOD	kg/day	6	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
20	Indian Branch - Moody Creek	BOD	kg/day	9	90% reduction man-made loading
		Nonconservative matl.		4	90% reduction man-made loading
21	Moody Creek - Bull Creek	BOD	kg/day	5	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
22	Bull Creek - Sweetwater Creek	BOD	kg/day	8	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
23	Sweetwater Creek - Brushy Creek	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
24	Brushy Creek - White Oak Creek	BOD	kg/day	8	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
25	White Oak Creek - Bills Creek	BOD	kg/day	25	90% reduction man-made loading
		Nonconservative matl.		7	90% reduction man-made loading
26	Bills Creek - Lost Creek	BOD	kg/day	6	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
27	Lost Creek - Messer Creek	BOD	kg/day	17	90% reduction man-made loading
		Nonconservative matl.		12	90% reduction man-made loading
28	Messer Creek - Richland Creek	BOD	kg/day	2	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
29	Richland Creek - Piney Creek	BOD	kg/day	24	90% reduction man-made loading
		Nonconservative matl.		8	90% reduction man-made loading
30	Piney Creek - Beaucoup Creek	BOD	kg/day	9	90% reduction man-made loading
		Nonconservative matl.		2	90% reduction man-made loading
31	Beaucoup Creek - Banister Creek	BOD	kg/day	15	90% reduction man-made loading
		Nonconservative matl.		4	90% reduction man-made loading
32	Banister Creek - Brushy Creek2	BOD	kg/day	18	90% reduction man-made loading
		Nonconservative matl.		5	90% reduction man-made loading
33	Brushy Creek 2 - McClellen Branch	BOD	kg/day	23	90% reduction man-made loading
		Nonconservative matl.		4	90% reduction man-made loading
34	McClellen Branch - Flat Creek	BOD	kg/day	7	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading
35	Flat Creek - Sandy Creek	BOD	kg/day	10	90% reduction man-made loading
		Nonconservative matl.		1	90% reduction man-made loading

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 19, Nonpoint Source Data

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	BOD	kg/day	3	90% reduction man-made loading
		Nonconservative matl.		0	90% reduction man-made loading

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 18, Incremetal Data for Phosphorus, Chlorophyll, Coliform, and Nonconservatives

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Reach 32	NCM	mg/l	0.22	Background from reference streams

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 17, Incremetal Data for DO, BOD, Nitrogen					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
1	Reach 32	Dissolved O_2	mg/l	8	Winter Season 90 percent DO Sat
		BOD	mg/l	5.53	Background from reference streams
		Org.-N	mg/l		
		NH_3-N	mg/l		
		NO_{2+3} - N	mg/l		

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 16, Incremental Data for Flow, Temperature, Salinity, and Conservatives					
Reach #	**REACH DESCRIPTION**	**Parameter**	**Units**	**Value**	**Source/Justification**
32	Reach 32	Incremental Outflow	m^3/s		
		Incremental Inflow	m^3/s	0.0235	
		Temperature	$^oCelcius$	21.4	Winter Season 90th Percentile Temperature
		Salinity	ppt		
		Conservative Matl. I	mg/l	6	Site 3
		Conservative Matl. II	mg/l	4.2	Site 3

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
8	White Branch - Colston Creek	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	NCM Decay	1/day	0.04	Bottle Rate Site 8
		NCM Settling Rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	NCM Decay	1/day	0.18	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
15	Cub Creek - Cow Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 6-7
		NCM Settling Rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	NCM Decay	1/day	0.17	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 15, Coliform and Nonconservative Coefficents

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
		NCM Settling Rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	NCM Decay	1/day	0.16	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
22	Bull Creek - Sweetwater Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	NCM Decay	1/day	0.15	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 5-6
		NCM Settling Rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	NCM Decay	1/day	0.1	Interpolation of Bottle Rates from sites 4-5
		NCM Settling Rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	NCM Decay	1/day	0.09	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
29	Richland Creek - Piney Creek	NCM Decay	1/day	0.11	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	NCM Decay	1/day	0.13	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 3-4
		NCM Settling Rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	NCM Decay	1/day	0.14	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 2-3
		NCM Settling Rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	NCM Decay	1/day	0.06	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	NCM Decay	1/day	0.07	Interpolation of Bottle Rates from sites 1-2
		NCM Settling Rate	m/day	0.05	Calibration
36	Sandy Creek - Hwy 124	NCM Decay	1/day	0.09	Bottle Rate Site 1
		NCM Settling Rate	m/day	0.05	Calibration

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.07	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
2	McDowell Branch - Horse Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
3	Horse Creek - Guice Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
4	Guice Branch - Curr Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
5	Curr Creek - Poplar Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
6	Poplar Branch - White Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
7	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
9	Fourmile Creek - Pool Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
10	Pool Branch - Ginney Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
11	Ginney Branch - Edwards Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.08	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate for Site 8
		BOD Settling rate	m/day	0.05	Calibration
12	Edwards Branch - Little Flat	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.12	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
13	Little Flat - Glade Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.15	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
14	Glade Creek - Cub Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.13	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
15	Cub Creek - Cow Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
16	Cow Creek - Bear Creek Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
17	Bear Creek Branch - Biles Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
18	Biles Branch - Hurricane Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.11	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 6 and 7
		BOD Settling rate	m/day	0.05	Calibration
19	Hurricane Creek - Indian Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.02	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.07	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
20	Indian Branch - Moody Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.92	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
21	Moody Creek - Bull Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.91	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
22	Bull Creek - Sweetwater Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.95	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.06	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
23	Sweetwater Creek - Brushy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.97	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
24	Brushy Creek - White Oak Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.97	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.05	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
25	White Oak Creek - Bills Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.98	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
26	Bills Creek - Lost Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	2.02	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 5 and 6
		BOD Settling rate	m/day	0.05	Calibration
27	Lost Creek - Messer Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.03	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 4 and 5
		BOD Settling rate	m/day	0.05	Calibration
28	Messer Creek - Richland Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.91	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
29	Richland Creek - Piney Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.89	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.04	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
30	Piney Creek - Beaucoup Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.86	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
31	Beaucoup Creek - Banister Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.75	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 3 and 4
		BOD Settling rate	m/day	0.05	Calibration
32	Banister Creek - Brushy Creek2	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.72	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
33	Brushy Creek 2 - McClellen Branch	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.98	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 2 and 3
		BOD Settling rate	m/day	0.05	Calibration
34	McClellen Branch - Flat Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m^2-day	1.71	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration
35	Flat Creek - Sandy Creek	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	1.68	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate Interpolated between sites 1 and 2
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 12, Reaeration, Sediment Oxygen Demand and BOD Coeff.

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	K_2 option	Unitless	20	0.7/Depth
		Oxygen Transfer Coefficient	m/day	0.7	Louisiana Standard in metric units
		Background SOD	g/m2-day	2.00	90% reduction man-made loading
		Aerobic BOD decay	1/day	0.03	Bottle Rate for Site 1
		BOD Settling rate	m/day	0.05	Calibration

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
1	Headwater - McDowell Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
2	McDowell Branch - Horse Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross sectio
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
3	Horse Creek - Guice Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
4	Guice Branch - Curr Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
5	Curr Creek - Poplar Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
6	Poplar Branch - White Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
			Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
7	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
8	White Branch - Colston Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
9	Fourmile Creek - Pool Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
10	Pool Branch - Ginney Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
11	Ginney Branch - Edwards Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.53	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
12	Edwards Branch - Little Flat	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.20	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.86	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
13	Little Flat - Glade Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.84	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
14	Glade Creek - Cub Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.82	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
15	Cub Creek - Cow Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.81	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
16	Cow Creek - Bear Creek Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.10	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.8	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
17	Bear Creek Branch - Biles Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
18	Biles Branch - Hurricane Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.79	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
19	Hurricane Creek - Indian Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.78	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
20	Indian Branch - Moody Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.77	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
21	Moody Creek - Bull Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.76	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
22	Bull Creek - Sweetwater Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.75	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
23	Sweetwater Creek - Brushy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.74	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
24	Brushy Creek - White Oak Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	11.00	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.73	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
25	White Oak Creek - Bills Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.71	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
26	Bills Creek - Lost Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.90	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.68	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
27	Lost Creek - Messer Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.65	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
28	Messer Creek - Richland Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.63	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
29	Richland Creek - Piney Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.80	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.61	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
30	Piney Creek - Beaucoup Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.58	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
31	Beaucoup Creek - Banister Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.57	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
32	Banister Creek - Brushy Creek2	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
33	Brushy Creek 2 - McClellen Branch	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.
34	McClellen Branch - Flat Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.27	Value determined by considering sluggish stream.
35	Flat Creek - Sandy Creek	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

Castor Creek Water Quality Winter Proposed Standard Model Input Description

DATA TYPE 9, Advective Hydraulic Coefficients

Reach #	REACH DESCRIPTION	Parameter	Units	Value	Source/Justification
36	Sandy Creek - Hwy 124	Width Coef "A"	Unitless	0.10	Calibration
		Width Exp "B"	Unitless	0.40	Calibration
		Width Const "C"	Meter	10.70	Zero flow cross section
		Depth Coef "D"	Unitless	0.10	Calibration
		Depth Exp "E"	Unitless	0.40	Calibration
		Depth Const "F"	Meter	0.55	Zero flow cross section
		Mannings - N	Unitless	0.027	Value determined by considering sluggish stream.

APPENDIX B12 - Proposed 3.0 winter loading calculations

Winter Projection, Non-Point Benthic Load Input and TMDL Calculations:

Modeled stream or water body:	Castor Creek - Proposed Standards Loading

Shaded cells are input values for calculations.
Values to be used in the projection models.

	Calibration Model Values										Projection Model Equivalents				Projected Model Loads			
Reach Number and Description	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Total Calib. Benthic Load (TCBL)	Reach Length	Back-ground Benthic Load	Proj. Model Avg. Reach Width	Proj. Temp	Percentage Reduction of man-made sources	TCBL adjusted for % reduction (Reduced TCBL)	Reduced TCBL adjusted for MOS	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Total Projection Benthic Load (LA+MOS)
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	Kilo-meters	gm O_2 / [(m^2)(day)]	Meters	(degrees Celcius)	%	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	A_n (note 1)	**B_n** (note 1)	**C_n** (note 1)	**D_n** (note 1)	**E_n** (note 1)	**F**	**G**	**I**	**H**	**J**, (note 2)	**K_n** (note 3)	**L_n = (K)(A / D)**	**M_n = (K)(B / D)**	**N_n = (K)(C / D)**	**Q = (E)(G)(L)**	**P = (E)(G)(M)**	**Q**, (note 4)	**O + P + Q**
1	0.271	0.031	3.65	3.952	5.90	0.00	11.90	16.00	60.0%	1.58	1.98	0.135	0.016	1.83	10	1	100	110.20
2	0.263	0.032	3.65	3.944	1.60	0.00	11.90	16.00	60.0%	1.58	1.97	0.131	0.016	1.83	3	0	27	29.81
3	0.261	0.031	3.65	3.942	0.90	0.00	11.90	16.00	60.0%	1.58	1.97	0.131	0.015	1.83	1	0	15	16.76
4	0.259	0.030	3.65	3.938	1.30	0.00	11.90	16.00	60.0%	1.58	1.97	0.129	0.015	1.83	2	0	22	24.18
5	0.261	0.030	3.65	3.941	2.80	0.00	11.90	16.00	60.0%	1.58	1.97	0.131	0.015	1.83	4	1	47	52.12
6	0.261	0.029	3.65	3.940	0.10	0.00	11.90	16.00	60.0%	1.58	1.97	0.130	0.015	1.83	0	0	2	1.86
7	0.250	0.031	3.65	3.931	3.80	0.00	11.90	16.00	60.0%	1.57	1.97	0.125	0.015	1.83	6	1	64	70.50
8	0.252	0.030	3.65	3.932	0.50	0.00	11.90	16.00	60.0%	1.57	1.97	0.126	0.015	1.83	1	0	8	9.28
9	0.252	0.030	3.65	3.932	3.10	0.00	11.90	16.00	60.0%	1.57	1.97	0.126	0.015	1.83	5	1	52	57.53
10	0.252	0.032	3.65	3.934	0.20	0.00	11.90	16.00	60.0%	1.57	1.97	0.126	0.016	1.83	0	0	3	3.71
11	0.251	0.031	3.65	3.932	7.70	0.00	11.90	16.00	60.0%	1.57	1.97	0.126	0.015	1.83	12	1	130	142.89
12	0.326	0.117	4.30	4.743	7.40	0.00	11.20	16.00	60.0%	1.90	2.37	0.163	0.059	2.15	14	5	139	156.86
13	0.146	0.219	4.30	4.665	3.70	0.00	11.10	16.00	60.0%	1.87	2.33	0.073	0.110	2.15	3	5	69	76.14
14	0.131	0.246	4.20	4.577	5.50	0.00	11.10	16.00	60.0%	1.83	2.29	0.066	0.123	2.10	4	8	100	111.16
15	0.150	0.255	4.10	4.505	1.20	0.00	11.10	16.00	60.0%	1.80	2.25	0.075	0.128	2.05	1	2	21	23.93
16	0.141	0.253	4.10	4.494	3.20	0.00	11.10	16.00	60.0%	1.80	2.25	0.070	0.127	2.05	3	5	57	63.60
17	0.136	0.250	4.10	4.486	0.40	0.00	11.00	16.00	60.0%	1.79	2.24	0.068	0.125	2.05	0	1	7	7.86
18	0.144	0.254	4.10	4.497	1.90	0.00	11.00	16.00	60.0%	1.80	2.25	0.072	0.127	2.05	2	3	33	37.45
19	0.455	0.198	4.10	4.752	2.30	0.00	11.00	16.00	60.0%	1.90	2.38	0.227	0.099	2.05	6	3	40	48.57
20	0.515	0.242	3.70	4.458	3.00	0.00	11.00	16.00	60.0%	1.78	2.23	0.258	0.121	1.85	9	4	47	59.96
21	0.519	0.241	3.70	4.459	1.70	0.00	11.00	16.00	60.0%	1.78	2.23	0.259	0.120	1.85	5	2	27	33.99
22	0.506	0.146	3.70	4.353	2.80	0.00	11.00	16.00	60.0%	1.74	2.18	0.253	0.073	1.85	8	2	44	54.34
23	0.473	0.136	3.70	4.309	1.00	0.00	11.00	16.00	60.0%	1.72	2.15	0.236	0.068	1.85	3	1	16	19.17
24	0.470	0.125	3.70	4.296	2.90	0.00	11.00	16.00	60.0%	1.72	2.15	0.235	0.063	1.85	8	2	46	55.37
25	0.435	0.123	3.70	4.258	9.70	0.00	10.90	16.00	60.0%	1.70	2.13	0.218	0.061	1.85	23	7	152	181.54
26	0.374	0.112	3.75	4.236	2.70	0.00	10.90	16.00	60.0%	1.69	2.12	0.187	0.056	1.88	6	2	43	50.04
27	0.264	0.192	3.75	4.206	11.10	0.00	10.80	16.00	60.0%	1.68	2.10	0.132	0.096	1.88	16	12	175	202.07
28	0.347	0.116	3.10	3.563	0.80	0.00	10.80	16.00	60.0%	1.43	1.78	0.174	0.058	1.55	2	1	10	12.41
29	0.386	0.125	3.10	3.611	9.60	0.00	10.80	16.00	60.0%	1.44	1.81	0.193	0.063	1.55	20	7	125	151.42
30	0.467	0.125	3.10	3.692	3.00	0.00	10.70	16.00	60.0%	1.48	1.85	0.234	0.062	1.55	8	2	39	48.18
31	0.512	0.122	2.70	3.334	4.20	0.00	10.70	16.00	60.0%	1.33	1.67	0.256	0.061	1.35	12	3	47	61.41
32	0.505	0.125	2.55	3.180	5.00	0.00	10.70	16.00	60.0%	1.27	1.59	0.252	0.063	1.28	14	3	53	69.87
33	0.462	0.071	3.65	4.183	8.50	0.00	10.70	16.00	60.0%	1.67	2.09	0.231	0.036	1.83	21	3	129	153.27
34	0.623	0.062	2.60	3.285	1.50	0.00	10.70	16.00	60.0%	1.31	1.64	0.312	0.031	1.30	5	1	16	21.72
35	0.610	0.081	2.50	3.191	2.30	0.00	10.70	16.00	60.0%	1.28	1.60	0.305	0.041	1.25	8	1	24	32.41
36	0.060	0.005	2.40	2.465	6.20	0.00	10.70	16.00	60.0%	0.99	1.23	0.030	0.002	1.20	2	0	62	64.03
Sub-Total										58.05					239	85	1991	**2316**

	Margin of Safety Loads							Man-made Model equivalents				Man-made Model loads				Background Model loads			
Reach Number and Description	MOS Total Benthic Load @ 20°C	MOS SOD @ 20°C	Non-Point UCBOD MOS Loads	Non-Point UNBOD MOS Loads	Adjusted SOD MOS @ Proj. temp	Adjusted Total MOS @ Proj. temp	Manmade portion of TCBL	Non-Point UCBOD	Non-Point UNBOD	SOD @ 20°C	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load	Non-Point UCBOD INPUTS	Non-Point UNBOD INPUTS	SOD load @ Proj. temp.	Man-made Total Projection Benthic Load
	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	gm O_2 / [(m^2)(day)]	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)	(kg/day)
	R_n = (K-J)(E)(G)	**S_n = (R)(C/D)**	**T_n = (R)(A/D)**	**U_n = (R)(B/D)**	**V_n**, (note 5)	**T + U + V**	**W = K - F**	**X_n = (W)(A / D)**	**Y_n = (W)(B / D)**	**Z_n = (W)(C / D)**	**AA = (E)(G)(X)**	**AB = (E)(G)(Y)**	**AC**, (note 6)	**AA + AB + AC**	**AD = O - AA**	**AE = P - AB**	**AF = Q - AC**	**AD + AE + AF**
1	28	26	2	0	20	22	1.98	0.135	0.016	1.83	10	1	100	110.20	0	0	0	0.00
2	8	7	1	0	5	6	1.97	0.131	0.016	1.83	3	0	27	29.81	0	0	0	0.00
3	4	4	0	0	3	3	1.97	0.131	0.015	1.83	1	0	15	16.76	0	0	0	0.00
4	6	6	0	0	4	5	1.97	0.129	0.015	1.83	2	0	22	24.18	0	0	0	0.00
5	13	12	1	0	9	10	1.97	0.131	0.015	1.83	4	1	47	52.12	0	0	0	0.00
6	0	0	0	0	0	0	1.97	0.130	0.015	1.83	0	0	2	1.86	0	0	0	0.00
7	18	17	1	0	13	14	1.97	0.125	0.015	1.83	6	1	64	70.50	0	0	0	0.00
8	2	2	0	0	2	2	1.97	0.126	0.015	1.83	1	0	8	9.28	0	0	0	0.00
9	15	13	1	0	10	12	1.97	0.126	0.015	1.83	5	1	52	57.53	0	0	0	0.00
10	1	1	0	0	1	1	1.97	0.126	0.016	1.83	0	0	3	3.71	0	0	0	0.00
11	36	33	2	0	26	29	1.97	0.126	0.015	1.83	12	1	130	142.89	0	0	0	0.00
12	39	36	3	1	28	31	2.37	0.163	0.059	2.15	14	5	139	156.86	0	0	0	0.00
13	19	18	1	1	14	15	2.33	0.073	0.110	2.15	3	5	69	76.14	0	0	0	0.00
14	28	26	1	2	20	22	2.29	0.066	0.123	2.10	4	8	100	111.16	0	0	0	0.00
15	6	5	0	0	4	5	2.25	0.075	0.128	2.05	1	2	21	23.93	0	0	0	0.00
16	16	15	1	1	11	13	2.25	0.070	0.127	2.05	3	5	57	63.60	0	0	0	0.00
17	2	2	0	0	1	2	2.24	0.068	0.125	2.05	0	1	7	7.86	0	0	0	0.00
18	9	9	0	1	7	7	2.25	0.072	0.127	2.05	2	3	33	37.45	0	0	0	0.00
19	12	10	1	1	8	10	2.38	0.227	0.099	2.05	6	3	40	48.57	0	0	0	0.00
20	15	12	2	1	9	12	2.23	0.258	0.121	1.85	9	4	47	59.96	0	0	0	0.00
21	8	7	1	0	5	7	2.23	0.259	0.120	1.85	5	2	27	33.99	0	0	0	0.00
22	13	11	2	0	9	11	2.18	0.253	0.073	1.85	8	2	44	54.34	0	0	0	0.00
23	5	4	1	0	3	4	2.15	0.236	0.068	1.85	3	1	16	19.17	0	0	0	0.00
24	14	12	2	0	9	11	2.15	0.235	0.063	1.85	8	2	46	55.37	0	0	0	0.00
25	45	39	5	1	30	36	2.13	0.218	0.061	1.85	23	7	152	181.54	0	0	0	0.00
26	12	11	1	0	9	10	2.12	0.187	0.056	1.88	6	2	43	50.04	0	0	0	0.00
27	50	45	3	2	35	40	2.10	0.132	0.096	1.88	16	12	175	202.07	0	0	0	0.00
28	3	3	0	0	2	2	1.78	0.174	0.058	1.55	2	1	10	12.41	0	0	0	0.00
29	37	32	4	1	25	30	1.81	0.193	0.063	1.55	20	7	125	151.42	0	0	0	0.00
30	12	10	2	0	8	10	1.85	0.234	0.062	1.55	8	2	39	48.18	0	0	0	0.00
31	15	12	2	1	9	12	1.67	0.256	0.061	1.35	12	3	47	61.41	0	0	0	0.00
32	17	14	3	1	11	14	1.59	0.252	0.063	1.28	14	3	53	69.87	0	0	0	0.00
33	38	33	4	1	26	31	2.09	0.231	0.036	1.83	21	3	129	153.27	0	0	0	0.00
34	5	4	1	0	3	4	1.64	0.312	0.031	1.30	5	1	16	21.72	0	0	0	0.00
35	8	6	2	0	5	6	1.60	0.305	0.041	1.25	8	1	24	32.41	0	0	0	0.00
36	16	16	0	0	12	13	1.23	0.030	0.002	1.20	2	0	62	64.03	0	0	0	0.00
Sub-Total	577		48	17	398	**463**					239	85	1991	**2316**	0	0	0	**0**

Notes: Note 1, Data was calculated in and brought from the Calibration worksheet dataset.
Note 2, **J** = [(1 - **H**) x (**D** - **F**) ÷ **F**]
Note 3, **K** = [(**J** - **F**) / (1 - MOS) + **F**]
Note 4, **Q** = **E** x **G** x **N** x $1.065^{(I-20)}$
Note 5, **V** = **S** x $1.065^{(I-20)}$
Note 6, **AC** = **E** x **G** x **Z** x $1.065^{(I-20)}$

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) = [MOG + MOU] =	20%

Winter TMDL calculations and Projection model calculations for Headwater / Tributary loads:

Castor Creek - Proposed Standards Loading

Shaded cells are input values for calculations.
Values to be used in the projection models.

Headwater / Tributary load determinations

Headwater / Tributary Description and Reach #	Seasonal Critical flow (cms)	UCBOD (mg/l)	UNBOD (mg/l)	UCBOD (kg/day)	UNBOD (kg/day)	Background UCBOD conc. (mg/l)	Background UNBOD conc. (mg/l)	Background UCBOD Load (kg/day)	Background UNBOD Load (kg/day)	Percent reduction of Man-Made loads	UCBOD load adjusted for % Reduction (kg/day)	UNBOD load adjusted for % Reduction (kg/day)	Reduced UCBOD load adjusted for MOS (kg/day)	Reduced UNBOD load adjusted for MOS (kg/day)	Projection UCBOD input conc. (mg/l)	Projection UNBOD input conc. (mg/l)	**Total MOS (kg/day)**	**Total LA (kg/day)**
	A	**B**	**C**	**D = (86.4)(A)(B)**	**E = (86.4)(A)(C)**	**F**	**G**	**H = (86.4)(A)(F)**	**I = (86.4)(A)(G)**	**J**	**K = (D-H)(1-J) + H**	**L = (D-I)(1-J) + I**	**M = (K - H) / (1 - MOS) + H**	**N = (L - I) / (1 - MOS) + I**	**(M)/[(A)(86.4)]**	**(N)/[(A)(86.4)]**	**(M+N) - (K+L)**	**K + L**
Headwater	0.0280	2.7	3.44	6.53	8.32	0.00	0.00	0.00	0.00	60%	2.61	3.33	3.27	4.16	1.35	1.72	**1.49**	**5.94**
Flat Creek	0.0280	3.46	0.50	8.37	1.21	0.00	0.00	0.00	0.00	60%	3.35	0.48	4.19	0.60	1.73	0.25	**0.96**	**3.83**
SUB-TOTAL TMDL LOADING				**15**	**10**			**0**	**0**		**6**	**4**	**7**	**5**			**2**	**10**

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) =	**20%**

Winter TMDL calculations and Projection model calculations for Incremental loads:

Castor Creek - Proposed Standards Loading

Shaded cells are input values for calculations.
Values to be used in the projection models.

Incremental Load Determinations:

Reach Description and #	Calibration Load determinations:									Percentage Reduction calculations:			Projection Model Input determinations:				Projection Model Input determinations:			
	Projection Flow (cms)	Calb. UCBOD conc. (mg/l)	Unadjusted UCBOD (kg/day)	Calb. UNBOD conc. (mg/l)	Unadjusted UNBOD (kg/day)	Background Conc. UCBOD (mg/l)	Background Conc. UNBOD (mg/l)	Background Load UCBOD (kg/day)	Background Load UNBOD (kg/day)	Actual % Reduction of Man Made Loads	Increm. UCBOD Load Adjusted For % Reduction **(LA load)**	Increm. UNBOD Load Adjusted For % Reduction **(LA load)**	Increm. UCBOD Adjusted for MOS (kg/day) (1)	Increm. UNBOD Adjusted for MOS (kg/day) (1)	Projection UCBOD conc. (mg/l)	Projection UNBOD conc. (mg/l)	Proj. UCBOD MOS load (kg/day)	Proj. UNBOD MOS load (kg/day)	**Sub-total MOS load (kg/day)**	**Sub-total LA load (kg/day)**
	A	**B**	**C = (86.4)(A)(B)**	**D**	**E = (86.4)(A)(D)**	**F**	**G**	**H = (86.4)(A)(F)**	**I = (86.4)(A)(G)**	**J,** Note 1	**K = (C-H)(1-J) + H**	**L = (E-I)(1-J) + I**	**M = (K-H) / (1-MOS) + H**	**N = (L-I) / (1-MOS) + I**	**M / [(A)(86.4)]**	**N / [(A)(86.4)]**	**O = M - K**	**P = N - L**	**O + P**	**K + L**
1										60%										
2										60%										
3										60%										
4										60%										
5										60%										
6										60%										
7										60%										
8										60%										
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28										60%										
29										60%										
30										60%										
31										60%										
32	0.02350	9.19	18.66	0.84	1.71	0.00	0.00	0.00	0.00	60%	7.4637504	0.6822144	9	1	4.60	0.42	2	0	2	8
33										60%										
34										60%										
35										60%										
36										60%										
Sub-Total benthic loading								**0**	**0**		**7**	**1**	**9**	**1**			**2**	**0**	**2**	**8**

Note 1: The percentage reduction values are taken from the "Non-Point Benthic Load Input and TMDL Calculations" worksheet.

EXPLICIT MARGINS:

MARGIN OF SAFETY (MOS) (%) =	**20%**

2/21/2002

APPENDIX C - Survey Data Measurements and Analysis Results

APPENDIX C1 - Overview of survey water quality data

Sample_ID	Site_Number	Sample_Description	Location	Analysis_Name	Results
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field Depth	1
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field Gage Height	NR
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field pH	6.63
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field Temp.	27.5
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field D.O.	2.72
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field Conductivity	95
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field Secchi Disc	NR
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Field Salinity	NR
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	TSS	9
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	TDS	76
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Alkalinity	23.8
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Turbidity	12
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Specific Conductance	95.76
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Color	110
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Chloride (IC)	10.4
AA24308	CC1	Castor Creek	@ Hwy. 124 above spillway	Sulfate	5
AA24309	CC1	Castor Creek	@ Hwy. 124 above spillway	Sodium	7.2
AA24310	CC1	Castor Creek	@ Hwy. 124 above spillway	Hardness	23.8
AA24310	CC1	Castor Creek	@ Hwy. 124 above spillway	Nitrate+Nitrite-Nitrogen	0.03
AA24310	CC1	Castor Creek	@ Hwy. 124 above spillway	Total Phosphorus	0.09
AA24310	CC1	Castor Creek	@ Hwy. 124 above spillway	TKN	0.72
AA24310	CC1	Castor Creek	@ Hwy. 124 above spillway	Ammonia-Nitrogen	ND
AA24311	CC1	Castor Creek	@ Hwy. 124 above spillway	TOC	12.1
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	pH (60 Day BOD)	6.23
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	TOC (60 Day BOD)	10.2
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 1	0.5
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 2	1.8
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 3	2.3
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 4	3
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 5	3.6
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 6	4.5
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 7	5.9
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 8	7.3
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Reading 9	8.2
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	BOD60-Final Reading	9
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 1	0.05
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 2	0.04
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 3	0.04
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 4	0.05
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 5	0.02
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 6	0.07
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 7	0.13
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 8	0.15
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3- Reading 9	0.14
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	NO2NO3-Final Reading	0.18
AA24312	CC1	Castor Creek	@ Hwy. 124 above spillway	TKN (60 Day BOD)	0.49
AA24313	CC2	Castor Creek	@ Hwy. 127	Field Depth	1
AA24313	CC2	Castor Creek	@ Hwy. 127	Field Gage Height	19.45
AA24313	CC2	Castor Creek	@ Hwy. 127	Field pH	6.64
AA24313	CC2	Castor Creek	@ Hwy. 127	Field Temp.	26.1
AA24313	CC2	Castor Creek	@ Hwy. 127	Field D.O.	0.71

AA24313	CC2	Castor Creek	@ Hwy. 127	Field Conductivity	103
AA24313	CC2	Castor Creek	@ Hwy. 127	Field Secchi Disc	NR
AA24313	CC2	Castor Creek	@ Hwy. 127	Field Salinity	NR
AA24313	CC2	Castor Creek	@ Hwy. 127	TSS	7.3
AA24313	CC2	Castor Creek	@ Hwy. 127	TDS	87
AA24313	CC2	Castor Creek	@ Hwy. 127	Alkalinity	37.5
AA24313	CC2	Castor Creek	@ Hwy. 127	Turbidity	15
AA24313	CC2	Castor Creek	@ Hwy. 127	Specific Conductance	99.99
AA24313	CC2	Castor Creek	@ Hwy. 127	Color	110
AA24313	CC2	Castor Creek	@ Hwy. 127	Chloride (IC)	6
AA24313	CC2	Castor Creek	@ Hwy. 127	Sulfate	3.4
AA24314	CC2	Castor Creek	@ Hwy. 127	Sodium	5.9
AA24315	CC2	Castor Creek	@ Hwy. 127	Hardness	36.3
AA24315	CC2	Castor Creek	@ Hwy. 127	Nitrate+Nitrite-Nitrogen	0.03
AA24315	CC2	Castor Creek	@ Hwy. 127	Total Phosphorus	0.12
AA24315	CC2	Castor Creek	@ Hwy. 127	TKN	0.89
AA24315	CC2	Castor Creek	@ Hwy. 127	Ammonia-Nitrogen	ND
AA24316	CC2	Castor Creek	@ Hwy. 127	TOC	11.8
AA24317	CC2	Castor Creek	@ Hwy. 127	pH (60 Day BOD)	6.55
AA24317	CC2	Castor Creek	@ Hwy. 127	TOC (60 Day BOD)	9.7
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 1	0.6
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 2	1.8
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 3	2.3
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 4	3.1
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 5	4.2
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 6	5
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 7	6.5
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 8	8
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Reading 9	8.9
AA24317	CC2	Castor Creek	@ Hwy. 127	BOD60-Final Reading	9.9
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 1	0.02
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 2	0.02
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 3	0.02
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 4	0.02
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 5	0.07
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 6	0.13
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 7	0.17
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 8	0.18
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3- Reading 9	0.17
AA24317	CC2	Castor Creek	@ Hwy. 127	NO2NO3-Final Reading	0.28
AA24317	CC2	Castor Creek	@ Hwy. 127	TKN (60 Day BOD)	0.56
AA24318	CC3	Castor Creek	@ Hwy. 506	Field Depth	1
AA24318	CC3	Castor Creek	@ Hwy. 506	Field Gage Height	NR
AA24318	CC3	Castor Creek	@ Hwy. 506	Field pH	6.3
AA24318	CC3	Castor Creek	@ Hwy. 506	Field Temp.	25.12
AA24318	CC3	Castor Creek	@ Hwy. 506	Field D.O.	3.06
AA24318	CC3	Castor Creek	@ Hwy. 506	Field Conductivity	89
AA24318	CC3	Castor Creek	@ Hwy. 506	Field Secchi Disc	NR
AA24318	CC3	Castor Creek	@ Hwy. 506	Field Salinity	NR
AA24318	CC3	Castor Creek	@ Hwy. 506	TSS	5
AA24318	CC3	Castor Creek	@ Hwy. 506	TDS	83
AA24318	CC3	Castor Creek	@ Hwy. 506	Alkalinity	34.8

AA24318	CC3	Castor Creek	@ Hwy. 506	Turbidity	13
AA24318	CC3	Castor Creek	@ Hwy. 506	Specific Conductance	111.8
AA24318	CC3	Castor Creek	@ Hwy. 506	Color	110
AA24318	CC3	Castor Creek	@ Hwy. 506	Chloride (IC)	5.99
AA24318	CC3	Castor Creek	@ Hwy. 506	Sulfate	4.2
AA24319	CC3	Castor Creek	@ Hwy. 506	Sodium	5.9
AA24320	CC3	Castor Creek	@ Hwy. 506	Hardness	34
AA24320	CC3	Castor Creek	@ Hwy. 506	Nitrate+Nitrite-Nitrogen	0.07
AA24320	CC3	Castor Creek	@ Hwy. 506	Total Phosphorus	0.11
AA24320	CC3	Castor Creek	@ Hwy. 506	TKN	0.89
AA24320	CC3	Castor Creek	@ Hwy. 506	Ammonia-Nitrogen	ND
AA24321	CC3	Castor Creek	@ Hwy. 506	TOC	14
AA24322	CC3	Castor Creek	@ Hwy. 506	pH (60 Day BOD)	6.65
AA24322	CC3	Castor Creek	@ Hwy. 506	TOC (60 Day BOD)	11.1
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 1	0.6
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 2	1.7
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 3	2.1
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 4	3
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 5	3.8
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 6	4.6
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 7	6
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 8	7.3
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Reading 9	8.2
AA24322	CC3	Castor Creek	@ Hwy. 506	BOD60-Final Reading	9
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 1	0.07
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 2	0.06
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 3	0.06
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 4	0.06
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 5	0.11
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 6	0.18
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 7	0.25
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 8	0.24
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3- Reading 9	0.24
AA24322	CC3	Castor Creek	@ Hwy. 506	NO2NO3-Final Reading	0.27
AA24322	CC3	Castor Creek	@ Hwy. 506	TKN (60 Day BOD)	0.53
AA24323	CC4	Castor Creek	@ Hwy. 126	Field Depth	1
AA24323	CC4	Castor Creek	@ Hwy. 126	Field Gage Height	NR
AA24323	CC4	Castor Creek	@ Hwy. 126	Field pH	6.76
AA24323	CC4	Castor Creek	@ Hwy. 126	Field Temp.	24.32
AA24323	CC4	Castor Creek	@ Hwy. 126	Field D.O.	1.6
AA24323	CC4	Castor Creek	@ Hwy. 126	Field Conductivity	91.5
AA24323	CC4	Castor Creek	@ Hwy. 126	Field Secchi Disc	NR
AA24323	CC4	Castor Creek	@ Hwy. 126	Field Salinity	NR
AA24323	CC4	Castor Creek	@ Hwy. 126	TSS	13.6
AA24323	CC4	Castor Creek	@ Hwy. 126	TDS	109
AA24323	CC4	Castor Creek	@ Hwy. 126	Alkalinity	58.1
AA24323	CC4	Castor Creek	@ Hwy. 126	Turbidity	20
AA24323	CC4	Castor Creek	@ Hwy. 126	Specific Conductance	140.6
AA24323	CC4	Castor Creek	@ Hwy. 126	Color	110
AA24323	CC4	Castor Creek	@ Hwy. 126	Chloride (IC)	6.2
AA24323	CC4	Castor Creek	@ Hwy. 126	Sulfate	1.5
AA24324	CC4	Castor Creek	@ Hwy. 126	Sodium	5.8

AA24325	CC4	Castor Creek	@ Hwy. 126	Hardness	58.6
AA24325	CC4	Castor Creek	@ Hwy. 126	Nitrate+Nitrite-Nitrogen	0.04
AA24325	CC4	Castor Creek	@ Hwy. 126	Total Phosphorus	0.12
AA24325	CC4	Castor Creek	@ Hwy. 126	TKN	1.4
AA24325	CC4	Castor Creek	@ Hwy. 126	Ammonia-Nitrogen	ND
AA24326	CC4	Castor Creek	@ Hwy. 126	TOC	15.3
AA24327	CC4	Castor Creek	@ Hwy. 126	pH (60 Day BOD)	6.72
AA24327	CC4	Castor Creek	@ Hwy. 126	TOC (60 Day BOD)	10.9
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 1	1.2
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 2	3.4
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 3	4.3
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 4	5.8
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 5	7.3
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 6	9
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 7	11.2
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 8	13.1
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Reading 9	14.4
AA24327	CC4	Castor Creek	@ Hwy. 126	BOD60-Final Reading	15.5
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 1	0.03
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 2	0.03
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 3	0.03
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 4	0.05
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 5	0.16
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 6	0.28
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 7	0.36
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 8	0.35
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3- Reading 9	0.38
AA24327	CC4	Castor Creek	@ Hwy. 126	NO2NO3-Final Reading	0.48
AA24327	CC4	Castor Creek	@ Hwy. 126	TKN (60 Day BOD)	0.67
AA24328	CC5	Castor Creek	@ Hwy. 846	Field Depth	1
AA24328	CC5	Castor Creek	@ Hwy. 846	Field Gage Height	NR
AA24328	CC5	Castor Creek	@ Hwy. 846	Field pH	6.75
AA24328	CC5	Castor Creek	@ Hwy. 846	Field Temp.	24.28
AA24328	CC5	Castor Creek	@ Hwy. 846	Field D.O.	1.67
AA24328	CC5	Castor Creek	@ Hwy. 846	Field Conductivity	90.9
AA24328	CC5	Castor Creek	@ Hwy. 846	Field Secchi Disc	NR
AA24328	CC5	Castor Creek	@ Hwy. 846	Field Salinity	NR
AA24328	CC5	Castor Creek	@ Hwy. 846	TSS	15
AA24328	CC5	Castor Creek	@ Hwy. 846	TDS	101
AA24328	CC5	Castor Creek	@ Hwy. 846	Alkalinity	57.1
AA24328	CC5	Castor Creek	@ Hwy. 846	Turbidity	20
AA24328	CC5	Castor Creek	@ Hwy. 846	Specific Conductance	135.3
AA24328	CC5	Castor Creek	@ Hwy. 846	Color	120
AA24328	CC5	Castor Creek	@ Hwy. 846	Chloride (IC)	5.9
AA24328	CC5	Castor Creek	@ Hwy. 846	Sulfate	1.3
AA24329	CC5	Castor Creek	@ Hwy. 846	Sodium	6
AA24330	CC5	Castor Creek	@ Hwy. 846	Hardness	57.1
AA24330	CC5	Castor Creek	@ Hwy. 846	Nitrate+Nitrite-Nitrogen	0.03
AA24330	CC5	Castor Creek	@ Hwy. 846	Total Phosphorus	0.15
AA24330	CC5	Castor Creek	@ Hwy. 846	TKN	1.12
AA24330	CC5	Castor Creek	@ Hwy. 846	Ammonia-Nitrogen	ND
AA24331	CC5	Castor Creek	@ Hwy. 846	TOC	16.1

AA24332	CC5	Castor Creek	@ Hwy. 846	pH (60 Day BOD)	6.77
AA24332	CC5	Castor Creek	@ Hwy. 846	TOC (60 Day BOD)	11.1
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 1	0.9
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 2	3
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 3	3.9
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 4	5.5
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 5	6.9
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 6	8.1
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 7	10.6
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 8	12.8
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Reading 9	14.3
AA24332	CC5	Castor Creek	@ Hwy. 846	BOD60-Final Reading	15.5
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 1	0.04
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 2	0.02
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 3	0.02
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 4	0.04
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 5	0.12
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 6	0.16
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 7	0.2
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 8	0.21
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3- Reading 9	0.22
AA24332	CC5	Castor Creek	@ Hwy. 846	NO2NO3-Final Reading	0.25
AA24332	CC5	Castor Creek	@ Hwy. 846	TKN (60 Day BOD)	0.68
AA24333	CC6	Castor Creek	@ Hwy. 4	Field Depth	1
AA24333	CC6	Castor Creek	@ Hwy. 4	Field Gage Height	NR
AA24333	CC6	Castor Creek	@ Hwy. 4	Field pH	6.75
AA24333	CC6	Castor Creek	@ Hwy. 4	Field Temp.	24.61
AA24333	CC6	Castor Creek	@ Hwy. 4	Field D.O.	0.88
AA24333	CC6	Castor Creek	@ Hwy. 4	Field Conductivity	84.5
AA24333	CC6	Castor Creek	@ Hwy. 4	Field Secchi Disc	18
AA24333	CC6	Castor Creek	@ Hwy. 4	Field Salinity	NR
AA24333	CC6	Castor Creek	@ Hwy. 4	TSS	18
AA24333	CC6	Castor Creek	@ Hwy. 4	TDS	97
AA24333	CC6	Castor Creek	@ Hwy. 4	Alkalinity	51.7
AA24333	CC6	Castor Creek	@ Hwy. 4	Turbidity	18
AA24333	CC6	Castor Creek	@ Hwy. 4	Specific Conductance	133.3
AA24333	CC6	Castor Creek	@ Hwy. 4	Color	100
AA24333	CC6	Castor Creek	@ Hwy. 4	Chloride (IC)	7.7
AA24333	CC6	Castor Creek	@ Hwy. 4	Sulfate	1.7
AA24334	CC6	Castor Creek	@ Hwy. 4	Sodium	7.3
AA24335	CC6	Castor Creek	@ Hwy. 4	Hardness	47
AA24335	CC6	Castor Creek	@ Hwy. 4	Nitrate+Nitrite-Nitrogen	0.06
AA24335	CC6	Castor Creek	@ Hwy. 4	Total Phosphorus	0.13
AA24335	CC6	Castor Creek	@ Hwy. 4	TKN	1.29
AA24335	CC6	Castor Creek	@ Hwy. 4	Ammonia-Nitrogen	ND
AA24336	CC6	Castor Creek	@ Hwy. 4	TOC	14.4
AA24337	CC6	Castor Creek	@ Hwy. 4	pH (60 Day BOD)	6.87
AA24337	CC6	Castor Creek	@ Hwy. 4	TOC (60 Day BOD)	10.2
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 1	1.6
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 2	3.8
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 3	5
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 4	6.6

AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 5	8
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 6	9.4
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 7	11.3
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 8	12.7
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Reading 9	13.6
AA24337	CC6	Castor Creek	@ Hwy. 4	BOD60-Final Reading	14.4
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 1	0.04
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 2	0.06
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 3	0.04
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 4	0.07
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 5	0.22
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 6	0.38
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 7	0.47
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 8	0.48
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3- Reading 9	0.53
AA24337	CC6	Castor Creek	@ Hwy. 4	NO2NO3-Final Reading	0.51
AA24337	CC6	Castor Creek	@ Hwy. 4	TKN (60 Day BOD)	0.54
AA24338	CC7	Castor Creek	@ Hwy. 34	Field Depth	0.46
AA24338	CC7	Castor Creek	@ Hwy. 34	Field Gage Height	NR
AA24338	CC7	Castor Creek	@ Hwy. 34	Field pH	6.69
AA24338	CC7	Castor Creek	@ Hwy. 34	Field Temp.	22.66
AA24338	CC7	Castor Creek	@ Hwy. 34	Field D.O.	1.39
AA24338	CC7	Castor Creek	@ Hwy. 34	Field Conductivity	161
AA24338	CC7	Castor Creek	@ Hwy. 34	Field Secchi Disc	NR
AA24338	CC7	Castor Creek	@ Hwy. 34	Field Salinity	NR
AA24338	CC7	Castor Creek	@ Hwy. 34	TSS	20
AA24338	CC7	Castor Creek	@ Hwy. 34	TDS	124
AA24338	CC7	Castor Creek	@ Hwy. 34	Alkalinity	80.9
AA24338	CC7	Castor Creek	@ Hwy. 34	Turbidity	20
AA24338	CC7	Castor Creek	@ Hwy. 34	Specific Conductance	182.6
AA24338	CC7	Castor Creek	@ Hwy. 34	Color	110
AA24338	CC7	Castor Creek	@ Hwy. 34	Chloride (IC)	7.4
AA24338	CC7	Castor Creek	@ Hwy. 34	Sulfate	ND
AA24339	CC7	Castor Creek	@ Hwy. 34	Sodium	6.4
AA24340	CC7	Castor Creek	@ Hwy. 34	Hardness	81.8
AA24340	CC7	Castor Creek	@ Hwy. 34	Nitrate+Nitrite-Nitrogen	0.03
AA24340	CC7	Castor Creek	@ Hwy. 34	Total Phosphorus	0.12
AA24340	CC7	Castor Creek	@ Hwy. 34	TKN	1.21
AA24340	CC7	Castor Creek	@ Hwy. 34	Ammonia-Nitrogen	ND
AA24341	CC7	Castor Creek	@ Hwy. 34	TOC	16.1
AA24342	CC7	Castor Creek	@ Hwy. 34	pH (60 Day BOD)	6.86
AA24342	CC7	Castor Creek	@ Hwy. 34	TOC (60 Day BOD)	10
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 1	0.5
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 2	1.7
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 3	2.2
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 4	3.3
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 5	4.3
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 6	5.3
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 7	7.1
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 8	9.8
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 9	12.3
AA24342	CC7	Castor Creek	@ Hwy. 34	BOD60-Final Reading	13.8

AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 1	0.03
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 2	0.02
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 3	0.02
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 4	0.03
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 5	0.11
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 6	0.14
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 7	0.18
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 8	0.17
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 9	0.16
AA24342	CC7	Castor Creek	@ Hwy. 34	NO2NO3-Final Reading	0.19
AA24342	CC7	Castor Creek	@ Hwy. 34	TKN (60 Day BOD)	0.55
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field Depth	0.46
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field Gage Height	NR
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field pH	6.6
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field Temp.	22.36
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field D.O.	2.55
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field Conductivity	136
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field Secchi Disc	NR
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Field Salinity	NR
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	TSS	66.7
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	TDS	111
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Alkalinity	64
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Turbidity	40
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Specific Conductance	152.7
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Color	110
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Chloride (IC)	8.3
AA24343	CC8	Castor Creek	@ Chatham Cemetery Road	Sulfate	ND
AA24344	CC8	Castor Creek	@ Chatham Cemetery Road	Sodium	8.9
AA24345	CC8	Castor Creek	@ Chatham Cemetery Road	Hardness	58.6
AA24345	CC8	Castor Creek	@ Chatham Cemetery Road	Nitrate+Nitrite-Nitrogen	0.07
AA24345	CC8	Castor Creek	@ Chatham Cemetery Road	Total Phosphorus	0.13
AA24345	CC8	Castor Creek	@ Chatham Cemetery Road	TKN	1.33
AA24345	CC8	Castor Creek	@ Chatham Cemetery Road	Ammonia-Nitrogen	0.12
AA24346	CC8	Castor Creek	@ Chatham Cemetery Road	TOC	14.5
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	pH (60 Day BOD)	6.56
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	TOC (60 Day BOD)	10.8
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 1	0.4
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 2	1.4
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 3	2.2
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 4	3.4
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 5	4.7
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 6	7.1
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 7	9.2
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 8	11
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Reading 9	12.3
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	BOD60-Final Reading	13.3
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 1	0.06
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 2	0.06
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 3	0.08
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 4	0.09
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 5	0.12
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 6	0.13

AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 7	0.16
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 8	0.16
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3- Reading 9	0.16
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	NO2NO3-Final Reading	0.2
AA24347	CC8	Castor Creek	@ Chatham Cemetery Road	TKN (60 Day BOD)	0.75
AA24348	Blank	Castor Creek		Field Depth	NR
AA24348	Blank	Castor Creek		Field Gage Height	NR
AA24348	Blank	Castor Creek		Field pH	NR
AA24348	Blank	Castor Creek		Field Temp.	NR
AA24348	Blank	Castor Creek		Field D.O.	NR
AA24348	Blank	Castor Creek		Field Conductivity	NR
AA24348	Blank	Castor Creek		Field Secchi Disc	NR
AA24348	Blank	Castor Creek		Field Salinity	NR
AA24348	Blank	Castor Creek		TSS	ND
AA24348	Blank	Castor Creek		TDS	ND
AA24348	Blank	Castor Creek		Alkalinity	2.1
AA24348	Blank	Castor Creek		Turbidity	ND
AA24348	Blank	Castor Creek		Specific Conductance	1.443
AA24348	Blank	Castor Creek		Color	ND
AA24348	Blank	Castor Creek		Chloride (IC)	ND
AA24348	Blank	Castor Creek		Sulfate	ND
AA24349	Blank	Castor Creek		Sodium	ND
AA24350	Blank	Castor Creek		Hardness	ND
AA24350	Blank	Castor Creek		Nitrate+Nitrite-Nitrogen	0.03
AA24350	Blank	Castor Creek		Total Phosphorus	0.07
AA24350	Blank	Castor Creek		TKN	0.11
AA24350	Blank	Castor Creek		Ammonia-Nitrogen	ND
AA24351	Blank	Castor Creek		TOC	ND
AA24352	Blank	Castor Creek		pH (60 Day BOD)	4.9
AA24352	Blank	Castor Creek		TOC (60 Day BOD)	ND
AA24352	Blank	Castor Creek		BOD60-Reading 1	0.1
AA24352	Blank	Castor Creek		BOD60-Reading 2	0.4
AA24352	Blank	Castor Creek		BOD60-Reading 3	0.4
AA24352	Blank	Castor Creek		BOD60-Reading 4	0.4
AA24352	Blank	Castor Creek		BOD60-Reading 5	0.4
AA24352	Blank	Castor Creek		BOD60-Reading 6	0.4
AA24352	Blank	Castor Creek		BOD60-Reading 7	0.3
AA24352	Blank	Castor Creek		BOD60-Reading 8	0.4
AA24352	Blank	Castor Creek		BOD60-Reading 9	0.4
AA24352	Blank	Castor Creek		BOD60-Final Reading	0.4
AA24352	Blank	Castor Creek		NO2NO3- Reading 1	0.02
AA24352	Blank	Castor Creek		NO2NO3- Reading 2	0.05
AA24352	Blank	Castor Creek		NO2NO3- Reading 3	0.03
AA24352	Blank	Castor Creek		NO2NO3- Reading 4	0.03
AA24352	Blank	Castor Creek		NO2NO3- Reading 5	ND
AA24352	Blank	Castor Creek		NO2NO3- Reading 6	0.02
AA24352	Blank	Castor Creek		NO2NO3- Reading 7	0.03
AA24352	Blank	Castor Creek		NO2NO3- Reading 8	0.03
AA24352	Blank	Castor Creek		NO2NO3- Reading 9	ND
AA24352	Blank	Castor Creek		NO2NO3-Final Reading	0.04
AA24352	Blank	Castor Creek		TKN (60 Day BOD)	ND
AA24353	CC7	Castor Creek	@ Hwy. 34	Field Depth	0.46

AA24353	CC7	Castor Creek	@ Hwy. 34	Field Gage Height	NR
AA24353	CC7	Castor Creek	@ Hwy. 34	Field pH	6.69
AA24353	CC7	Castor Creek	@ Hwy. 34	Field Temp.	22.66
AA24353	CC7	Castor Creek	@ Hwy. 34	Field D.O.	1.39
AA24353	CC7	Castor Creek	@ Hwy. 34	Field Conductivity	161
AA24353	CC7	Castor Creek	@ Hwy. 34	Field Secchi Disc	NR
AA24353	CC7	Castor Creek	@ Hwy. 34	Field Salinity	NR
AA24353	CC7	Castor Creek	@ Hwy. 34	TSS	20.7
AA24353	CC7	Castor Creek	@ Hwy. 34	TDS	124
AA24353	CC7	Castor Creek	@ Hwy. 34	Alkalinity	81
AA24353	CC7	Castor Creek	@ Hwy. 34	Turbidity	19
AA24353	CC7	Castor Creek	@ Hwy. 34	Specific Conductance	180.6
AA24353	CC7	Castor Creek	@ Hwy. 34	Color	110
AA24353	CC7	Castor Creek	@ Hwy. 34	Chloride (IC)	7.3
AA24353	CC7	Castor Creek	@ Hwy. 34	Sulfate	ND
AA24354	CC7	Castor Creek	@ Hwy. 34	Sodium	6.5
AA24355	CC7	Castor Creek	@ Hwy. 34	Hardness	81.5
AA24355	CC7	Castor Creek	@ Hwy. 34	Nitrate+Nitrite-Nitrogen	0.03
AA24355	CC7	Castor Creek	@ Hwy. 34	Total Phosphorus	0.17
AA24355	CC7	Castor Creek	@ Hwy. 34	TKN	1.2
AA24355	CC7	Castor Creek	@ Hwy. 34	Ammonia-Nitrogen	ND
AA24356	CC7	Castor Creek	@ Hwy. 34	TOC	14.7
AA24357	CC7	Castor Creek	@ Hwy. 34	pH (60 Day BOD)	6.42
AA24357	CC7	Castor Creek	@ Hwy. 34	TOC (60 Day BOD)	10.5
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 1	0.5
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 2	1.7
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 3	2.2
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 4	3.2
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 5	4.4
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 6	5.5
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 7	7.7
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 8	11
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Reading 9	12.7
AA24357	CC7	Castor Creek	@ Hwy. 34	BOD60-Final Reading	14
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 1	0.02
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 2	0.02
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 3	0.02
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 4	0.03
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 5	0.12
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 6	0.15
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 7	0.2
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 8	0.18
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3- Reading 9	0.19
AA24357	CC7	Castor Creek	@ Hwy. 34	NO2NO3-Final Reading	0.25
AA24357	CC7	Castor Creek	@ Hwy. 34	TKN (60 Day BOD)	0.67

Units	Analysis_SetUp	Analysis_Read	Nitrate_Sampled	Comments
M	7/26/2000	7/26/2000		
ft	7/26/2000	7/26/2000		
	7/26/2000	7/26/2000		
degrees C	7/26/2000	7/26/2000		
ppm	7/26/2000	7/26/2000		
umhos	7/26/2000	7/26/2000		
inches	7/26/2000	7/26/2000		
ppt	7/26/2000	7/26/2000		
ppm	7/28/2000	7/28/2000		
ppm	8/1/2000	8/1/2000		
ppm	7/27/2000	7/27/2000		
NTU	7/27/2000	7/27/2000		
umhos/cm	7/31/2000	7/31/2000		
PCU	7/27/2000	7/27/2000		
ppm	8/2/2000	8/2/2000		
ppm	8/2/2000	8/2/2000		
ppm	8/11/2000	8/11/2000		
ppm	7/27/2000	7/27/2000		
ppm	7/27/2000	7/27/2000		
ppm	8/1/2000	8/1/2000		
ppm	8/1/2000	8/1/2000		
ppm	8/1/2000	8/1/2000		
ppm	7/31/2000	8/1/2000		
pH Units	9/25/2000	9/25/2000	9/25/2000	
ppm	10/9/2000	10/10/2000	9/25/2000	
ppm	7/27/2000	7/28/2000		
ppm	7/27/2000	7/31/2000		
ppm	7/27/2000	8/3/2000		
ppm	7/27/2000	8/7/2000		
ppm	7/27/2000	8/11/2000		
ppm	7/27/2000	8/16/2000		
ppm	7/27/2000	8/25/2000		
ppm	7/27/2000	9/5/2000		
ppm	7/27/2000	9/15/2000		
ppm	7/27/2000	9/25/2000		
ppm	8/2/2000	8/2/2000	7/28/2000	
ppm	8/2/2000	8/2/2000	7/31/2000	
ppm	8/3/2000	8/3/2000	8/3/2000	
ppm	8/9/2000	8/9/2000	8/7/2000	
ppm	8/16/2000	8/16/2000	8/11/2000	
ppm	8/16/2000	8/16/2000	8/16/2000	
ppm	8/25/2000	8/25/2000	8/25/2000	
ppm	9/6/2000	9/6/2000	9/5/2000	
ppm	9/20/2000	9/20/2000	9/15/2000	
ppm	9/27/2000	9/27/2000	9/25/2000	
ppm	10/2/2000	10/2/2000	9/25/2000	
M	7/26/2000	7/26/2000		
ft	7/26/2000	7/26/2000		
	7/26/2000	7/26/2000		
degrees C	7/26/2000	7/26/2000		
ppm	7/26/2000	7/26/2000		

umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	
ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	

NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	
ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/11/2000	8/11/2000	

ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	
ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	7/31/2000	8/1/2000	

pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	
ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/2/2000	8/2/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	

ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	
ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	

ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	
ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/3/2000	8/3/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000

ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	
ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/3/2000	8/3/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000
M	7/26/2000	7/26/2000	

ft	7/26/2000	7/26/2000	
	7/26/2000	7/26/2000	
degrees C	7/26/2000	7/26/2000	
ppm	7/26/2000	7/26/2000	
umhos	7/26/2000	7/26/2000	
inches	7/26/2000	7/26/2000	
ppt	7/26/2000	7/26/2000	
ppm	7/28/2000	7/28/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
NTU	7/27/2000	7/27/2000	
umhos/cm	7/31/2000	7/31/2000	
PCU	7/27/2000	7/27/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/7/2000	8/7/2000	
ppm	8/11/2000	8/11/2000	
ppm	7/27/2000	7/27/2000	
ppm	7/27/2000	7/27/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/1/2000	8/1/2000	
ppm	8/3/2000	8/3/2000	
ppm	7/31/2000	8/1/2000	
pH Units	9/25/2000	9/25/2000	9/25/2000
ppm	10/9/2000	10/10/2000	9/25/2000
ppm	7/27/2000	7/28/2000	
ppm	7/27/2000	7/31/2000	
ppm	7/27/2000	8/3/2000	
ppm	7/27/2000	8/7/2000	
ppm	7/27/2000	8/11/2000	
ppm	7/27/2000	8/16/2000	
ppm	7/27/2000	8/25/2000	
ppm	7/27/2000	9/5/2000	
ppm	7/27/2000	9/15/2000	
ppm	7/27/2000	9/25/2000	
ppm	8/2/2000	8/2/2000	7/28/2000
ppm	8/2/2000	8/2/2000	7/31/2000
ppm	8/3/2000	8/3/2000	8/3/2000
ppm	8/9/2000	8/9/2000	8/7/2000
ppm	8/16/2000	8/16/2000	8/11/2000
ppm	8/16/2000	8/16/2000	8/16/2000
ppm	8/25/2000	8/25/2000	8/25/2000
ppm	9/6/2000	9/6/2000	9/5/2000
ppm	9/20/2000	9/20/2000	9/15/2000
ppm	9/27/2000	9/27/2000	9/25/2000
ppm	10/2/2000	10/2/2000	9/25/2000

APPENDIX C2 - Survey cross-section and discharge sheets

STREAM CROSS-SECTION SPREADSHEET

Site Number: CC3 **Subsegmen** 081501 **Waterbody** Castor Creek

Site Description: Downstream of Hwy. 506 Bridge

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☐ RDB ☑ LDB

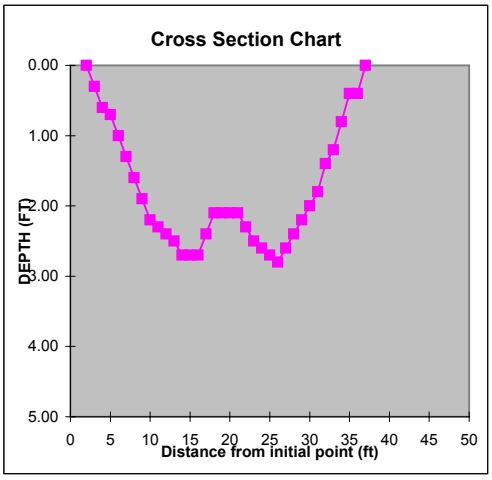
Tapedown:

Guage Height:

Date: 7/26/2000

WIDTH[1] (ft):	35.00
AREA[2] (ft[2]):	63.80
AVG. DEPTH[3](ft):	1.82

Subsection	Distance from initial point (ft)	Width[4] (ft)	Depth (ft)	Area[5] (sq.ft.)	Area of element as % of Total Area[6 & 7]
1	2.0	0.50	0.00	0.00	0.00%
2	3.0	1.00	0.30	0.30	0.47%
3	4.0	1.00	0.60	0.60	0.94%
4	5.0	1.00	0.70	0.70	1.10%
5	6.0	1.00	1.00	1.00	1.57%
6	7.0	1.00	1.30	1.30	2.04%
7	8.0	1.00	1.60	1.60	2.51%
8	9.0	1.00	1.90	1.90	2.98%
9	10.0	1.00	2.20	2.20	3.45%
10	11.0	1.00	2.30	2.30	3.61%
11	12.0	1.00	2.40	2.40	3.76%
12	13.0	1.00	2.50	2.50	3.92%
13	14.0	1.00	2.70	2.70	4.23%
14	15.0	1.00	2.70	2.70	4.23%
15	16.0	1.00	2.70	2.70	4.23%
16	17.0	1.00	2.40	2.40	3.76%
17	18.0	1.00	2.10	2.10	3.29%
18	19.0	1.00	2.10	2.10	3.29%
19	20.0	1.00	2.10	2.10	3.29%
20	21.0	1.00	2.10	2.10	3.29%
21	22.0	1.00	2.30	2.30	3.61%
22	23.0	1.00	2.50	2.50	3.92%
23	24.0	1.00	2.60	2.60	4.08%
24	25.0	1.00	2.70	2.70	4.23%
25	26.0	1.00	2.80	2.80	4.39%
26	27.0	1.00	2.60	2.60	4.08%
27	28.0	1.00	2.40	2.40	3.76%
28	29.0	1.00	2.20	2.20	3.45%
29	30.0	1.00	2.00	2.00	3.13%
30	31.0	1.00	1.80	1.80	2.82%
31	32.0	1.00	1.40	1.40	2.19%
32	33.0	1.00	1.20	1.20	1.88%
33	34.0	1.00	0.80	0.80	1.25%
34	35.0	1.00	0.40	0.40	0.63%
35	36.0	1.00	0.40	0.40	0.63%
36	37.0	0.50	0.00	0.00	0.00%
37					
38					
39					
40					
	Total	35.00		63.80	100.00%



Data Collection Crew		Office Data Work	
Measurement made by	Cooley	Data Inputed by / Date:	Brignac, 7-31-00
Notetaker/Record	Stone	Data Input Checked by / Date:	Stone, 7-31-00
Othe	Brignac		

Note 1: WIDTH (ft) = sum of the width column
Note 2: AREA (sq.ft.) = sum of the area column
Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
Note 4: Width of element
Note 5: Area=Width*Depth for element
Note 6: Percent area = element area/total area x 100%
Note 7: Percent area should be less than 10% as per USGS standard.
Note 8: Blank fields are cleared from all calculations.
Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: CC8 **Subsegmen** 081501 **Waterbody** Castor Creek

Site Description: Castor Creek at Chatham Cemetary Road Bridge

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

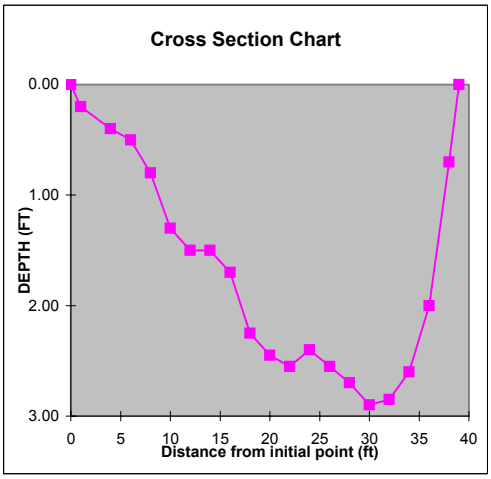
Tapedown: 10.60

Guage Height:

Date: 7/26/2000

WIDTH[1] (ft):	39.00
AREA[2] (ft[2]):	67.55
AVG. DEPTH[3](ft):	1.73

Subsection	Distance from initial point (ft)	Width[4] (ft)	Depth (ft)	Area[5] (sq.ft.)	Area of element as % of Total Area[6 & 7]
1	0.0	0.50	0.00	0.00	
2	1.0	2.00	0.20	0.40	0.59%
3	4.0	2.50	0.40	1.00	1.48%
4	6.0	2.00	0.50	1.00	1.48%
5	8.0	2.00	0.80	1.60	2.37%
6	10.0	2.00	1.30	2.60	3.85%
7	12.0	2.00	1.50	3.00	4.44%
8	14.0	2.00	1.50	3.00	4.44%
9	16.0	2.00	1.70	3.40	5.03%
10	18.0	2.00	2.25	4.50	6.66%
11	20.0	2.00	2.45	4.90	7.25%
12	22.0	2.00	2.55	5.10	7.55%
13	24.0	2.00	2.40	4.80	7.11%
14	26.0	2.00	2.55	5.10	7.55%
15	28.0	2.00	2.70	5.40	7.99%
16	30.0	2.00	2.90	5.80	8.59%
17	32.0	2.00	2.85	5.70	8.44%
18	34.0	2.00	2.60	5.20	7.70%
19	36.0	2.00	2.00	4.00	5.92%
20	38.0	1.50	0.70	1.05	1.55%
21	39.0	0.50	0.00	0.00	0.00%
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	39.00		67.55	100.00%



Data Collection Crew	Office Data Work	
Measurement made by	Farlow	Data Inputed by / Date: Farlow 07/27/00
Notetaker/Record	Andrus	Data Input Checked by / Date: Andrus 07/27/00
Other	Schwartzenburg	

Note 1: WIDTH (ft) = sum of the width column
Note 2: AREA (sq.ft.) = sum of the area column
Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
Note 4: Width of element
Note 5: Area=Width*Depth for element
Note 6: Percent area = element area/total area x 100%
Note 7: Percent area should be less than 10% as per USGS standard.
Note 8: Blank fields are cleared from all calculations.
Note 9: The cross sections are taken at areas representative of the stream.

STREAM CROSS-SECTION SPREADSHEET

Site Number: CC7 **Subsegmen** 081501 **Waterbody** Castor Creek

Site Description: Castor Creek at highway 34 Bridge

Type of Equipment: ☐ Fathometer ☐ Hydrotrac ☑ Manual

Initial Bank: ☑ RDB ☐ LDB

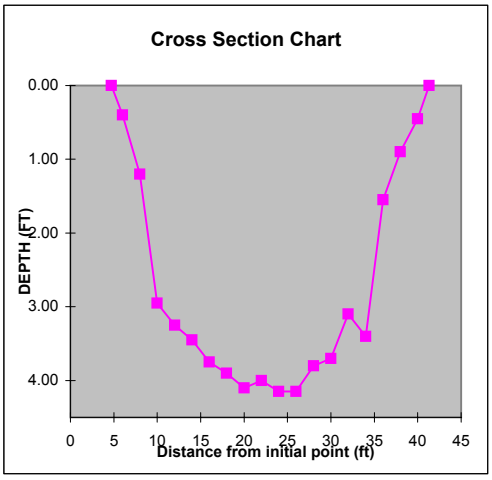
Tapedown: 12.45

Guage Height:

Date: 7/26/2000

WIDTH[1] (ft):	**36.60**
AREA[2] (ft²):	**104.10**
AVG. DEPTH[3] (ft):	**2.84**

Subsection	Distance from initial point (ft)	Width[4] (ft)	Depth (ft)	Area[5] (sq.ft.)	Area of element as % of Total Area[6 & 7]
1	4.7	0.65	0.00	0.00	0.00%
2	6.0	1.65	0.40	0.66	0.63%
3	8.0	2.00	1.20	2.40	2.31%
4	10.0	2.00	2.95	5.90	5.67%
5	12.0	2.00	3.25	6.50	6.24%
6	14.0	2.00	3.45	6.90	6.63%
7	16.0	2.00	3.75	7.50	7.20%
8	18.0	2.00	3.90	7.80	7.49%
9	20.0	2.00	4.10	8.20	7.88%
10	22.0	2.00	4.00	8.00	7.68%
11	24.0	2.00	4.15	8.30	7.97%
12	26.0	2.00	4.15	8.30	7.97%
13	28.0	2.00	3.80	7.60	7.30%
14	30.0	2.00	3.70	7.40	7.11%
15	32.0	2.00	3.10	6.20	5.96%
16	34.0	2.00	3.40	6.80	6.53%
17	36.0	2.00	1.55	3.10	2.98%
18	38.0	2.00	0.90	1.80	1.73%
19	40.0	1.65	0.45	0.74	0.71%
20	41.3	0.65	0.00	0.00	0.00%
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
	Total	36.60		104.10	100.00%



Data Collection Crew	Office Data Work	
Measurement made by Farlow	**Data Inputed by / Date:**	Farlow 07/27/00
Notetaker/Record Andrus	**Data Input Checked by / Date:**	Andrus 07/27/00
Othe Schwartzenburg		

Note 1: WIDTH (ft) = sum of the width column
Note 2: AREA (sq.ft.) = sum of the area column
Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
Note 4: Width of element
Note 5: Area=Width*Depth for element
Note 6: Percent area = element area/total area x 100%
Note 7: Percent area should be less than 10% as per USGS standard.
Note 8: Blank fields are cleared from all calculations.
Note 9: The cross sections are taken at areas representative of the stream.

STREAM DISCHARGE SPREADSHEET

Site Number: CC3 **Subsegmen** 081501 **Waterbody:** Castor Creek

Site Description: Downstream of Hwy. 506 Bridge

Type of Meter: ☐ Price A:A 1:1 ☑ Pygmy ☐ Price A:A 5:1 **Standard:** ☐ Standard 1 ☑ Standard 2

Type of Equipment: ☑ Wading ☑ Bridge Board ☐ Boat Board

Initial Bank: ☐ RDB ☑ LDB

Tapedown: 22.9

Guage Height:

Date: 7/26/2000

Start Time: 10:30 **End Time:** 11:35

WIDTH[1] (ft):	19.00
AREA[2] (ft^2):	5.97
AVG. DEPTH[3] (ft):	0.31
DISCHARGE[4] (cfs):	0.83
AVG. VELOCITY[5] (fps):	0.14

Subsection	Distance from initial point (ft)	Width of element[6] (ft)	Depth of element (ft)	Area of element[7] (ft^2)	Velocity of element (fps) .2D	.6D	.8D	Average[8]	Adjusted Angle	Discharge through element[10] (cfs)	Element discharge at % of total discharge[11]
1	1.0	0.50	0.00	0.00		0.00		0.00		0.00	0.00%
2	2.0	0.65	0.20	0.13		0.00		0.00		0.00	0.00%
3	2.3	0.30	0.20	0.06		0.00		0.00		0.00	0.00%
4	2.6	0.30	0.20	0.06		0.26		0.26		0.02	1.87%
5	2.9	0.30	0.20	0.06		0.73		0.73		0.04	5.27%
6	3.2	0.30	0.30	0.09		0.50		0.50		0.05	5.47%
7	3.5	0.30	0.30	0.09		0.82		0.82		0.07	8.96%
8	3.8	0.30	0.30	0.09		0.40		0.40		0.04	4.40%
9	4.1	0.30	0.30	0.09		0.62		0.62		0.06	6.69%
10	4.4	0.30	0.30	0.09		0.47		0.47		0.04	5.14%
11	4.7	0.30	0.30	0.09		0.40		0.40		0.04	4.31%
12	5.0	0.30	0.30	0.09		0.86		0.86		0.08	9.35%
13	5.3	0.30	0.40	0.12		0.45		0.45		0.05	6.47%
14	5.6	0.30	0.40	0.12		0.25		0.25		0.03	3.61%
15	5.9	0.30	0.40	0.12		0.11		0.11		0.01	1.62%
16	6.2	0.65	0.40	0.26		0.00		0.00		0.00	0.00%
17	7.2	1.00	0.50	0.50		0.00		0.00		0.00	0.00%
18	8.2	1.00	0.40	0.40		0.00		0.00		0.00	0.00%
19	9.2	1.00	0.50	0.50		0.00		0.00		0.00	0.00%
20	10.2	1.00	0.30	0.30		0.00		0.00		0.00	0.00%
21	11.2	1.00	0.40	0.40		0.00		0.00		0.00	0.00%
22	12.2	0.90	0.40	0.36		0.14		0.14		0.05	6.09%
23	13.0	0.65	0.30	0.20		0.16		0.16		0.03	3.65%
24	13.5	0.50	0.30	0.15		0.25		0.25		0.04	4.48%
25	14.0	0.50	0.40	0.20		0.09		0.09		0.02	2.22%
26	14.5	0.50	0.40	0.20		0.08		0.08		0.02	1.98%
27	15.0	0.50	0.50	0.25		0.20		0.20		0.05	6.17%
28	15.5	0.50	0.50	0.25		0.12		0.12		0.03	3.54%
29	16.0	0.75	0.40	0.30		0.08		0.08		0.02	2.76%
30	17.0	1.00	0.40	0.40		0.12		0.12		0.05	5.95%
31	18.0	1.50	0.00	0.00		0.00		0.00		0.00	0.00%
32	20.0	1.00	0.00	0.00		0.00		0.00		0.00	0.00%
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45											
	Total	19.00		5.97						0.83	100.00%

Data Collection Crew		Office Data Work	
Measurement mad	Stone	Data Inputed by / Date:	Brignac, 7-31-00
Notetaker/Reco	Cooley	Data Input Checked by / Date:	Stone 7-31-00
Other:			

Note 1: WIDTH (ft) = sum of the width column
Note 2: AREA (ft^2) = sum of the area column
Note 3: AVG. DEPTH (ft) = area/width (using the values from this table)
Note 4: DISCHARGE (cfs) = sum of the discharge column
Note 5: AVG. VELOCITY (fps) = discharge/area (using the values from this table)
Note 6: Width of element
Note 7: Area = width*depth for element. These areas are generally not representative of the stream.
Note 8: Average velocity = Use 0.6D velocity if depth is less than 2.5 ft or the average of 0.2D and 0.8D velocities if depth is greater than 2.5 ft.
Note 9: If blank assume 1
Note 10: Discharge through element = area of element*average velocity of element
Note 11: Element discharge percent = discharge through element/total discharge X 100%. Element discharge should not exceed 10%.

APPENDIX C3 - Survey field notes

Caster Creek Survey
Subsegment 081501

Crew: Fontenot, Lafleur, Blalock
07/25/00
Weather: Sunny, clear, low 90's

Site 10: Sandy Creek @ Hwy. 124
- No flow ; Refer to Brignac's log book

Site 11: Brushy Creek @ Hooterville Rd.
- Upstream-dry. Water pooled downstream side of road (no flow).

Site 12: Frith Creek @ Hooterville Rd.
- Upstream- pooled. Downstream- dry. No Flow

Site 13: Banister Creek @ Hwy. 506
- Streambed dry under bridge both upstream and downstream. Pooled in spots. No flow.

Site 14: Beaucoup Creek @ Beaucoup Rd.
- Dropped dye upstream of bridge. Waited 20 minutes. No flow.
- Bridge width 22.5'
- Stream width 75'

Site 15: Messer Creek @ Beaucoup (Childress) Rd.
- Upstream-dry, downstream-pooled. No flow.

Site 16: Richland Creek @ Hwy. 126
- Pooled upstream. Dry downstream. No flow

Site 17: White Oak Creek @ Hwy. 846 (P. R. 301)
- Dropped dye upstream of bridge. Waited 20 minutes. No flow.
- Bridge width- 26.6'
- Stream width- 26.2'

Caster Creek Survey
Subsegment 081501

Crew: Fontenot, Lafleur, Blalock
07/26/00
Weather: Clear, sunny and hot

Site 6: 0830 hrs.
- Dumped dye. Waited 20 minutes. No flow
- Stream width- 82.5'
- Bridge width- 32.7'
- Cross-section 100 yds. Upstream of bridge with fathometer. Stream width 49.0'
- In-situ and water quality taken.

Site 5: 1020 hrs.
- In-situ and water quality taken.
- Cross-section 100 yds. Upstream of bridge with fathometer. Stream width- 57.0'
- Did not dump dye because water appeared to be moving upstream possibly due to wind.

Site 4: 1140 hrs.
- In-situ and water quality taken.
- Cross-section 50 yds. Downstream of bridge with fathometer. Stream width 35.4'
- Did not dump dye because water appeared to be moving upstream possibly due to wind.

Caster Creek Survey
Subsegment 081501

Crew: Andrus, Schwartzenburg, Farlow
7/25/00
Weather: Clear, sunny, and hot

Site 18: Brushy Creek at Seven Runs Road
No Flow- Pooled

Site 19: Bill (or Bull Creek) at Country Wood Road
No Flow- Standing Pools

Site 20: Indian Bayou at Country Wood Road
No Flow- Standing Pools

Site 21: Bites Creek at Hwy. 4
Possible Flow

Site 22: Cow Creek at Hwy. 4
No Flow-Standing pool

Site 23: Edwards Branch Creek at Hwy. 34
Possible Flow

Site 24: Four Mile Creek
No Flow- puddles of water

Site 25: Poplar Branch at Hwy. 146
No Flow- Standing Pool

Caster Creek Survey
Subsegment 081501

Crew: Andrus, Schwartzenburg, Farlow
7/26/00
Weather: Clear, sunny, and hot

Site 21: Bites Creek at Hwy. 4
Poured dye and timed for 5 min. Observed no flow

Site 23: Edwards Branch Creek at Hwy. 34
Poured dye and timed for 5 min. Observed no significant movement of dye cloud.

Site 7: Insitu and water quality taken at 0855 hrs. Serial # Qt 00131- Quanta Hydrolab

Temp.- 22.66 C	pH-6.69
SpC- 161	Batt.- 3.9 V
DO- 1.39	DO%- 16.0

Insitu Readings and water quality taken at mid-depth of 1.5 ft.
80% canopy cover, receives 20% sunlight
Tannins present of surface of water
Cross-section, water quality and insitu taken upstream of the bridge
No flow observed, dumped dye and timed for 5 min.
GPS reading taken with B unit

Site 8: Insitu and water quality taken at 0955

Temp-22.36	pH-6.60
SpC-136	Batt- 4.0 V
DO- 2.55	DO%- 30.4

Insitu and water quality taken at mid depth
Canopy Cover- 90%, 10% filtered sunlight
Tannins present on water surface
Cross-section, water quality and insitu taken upstream of bridge
Dumped dye and timed for 5 min. No flow observed
GPS reading taken with unit B

Caster Creek Survey
Subsegment 081501

Crew: Brignac, Cooley, Stone
7/25/00
Weather: Clear, sunny, and hot

Site 10: Sandy Creek at Hwy. 124
Dumped dye at 0955 time for 2 minutes. No movement at all

Site 1: Castor Creek at Hwy. 124
GPS'd with system B at 0945
Deployed monitor at 0945

Water color, brown and murky
Site conditions- Silviculture

Site 2: Castor Creek at Hwy. 127
GPS'd at 1015
Deployed monitor at 1015
Canopy cover 50%
Water color, brown and murky with a lot of tannins on the water surface
Site conditions- silviculture

Site 3: Castor Creek at Hwy. 506
GPS'd at 1040
Deployed monitor at 1045
Water color, brown and very shallow
Siviculture
Canopy cover 50%

Site 9: Castor Creek at Vernon Eros Road
Headwaters of Castor Creek
Dry- No water up or downstream

Site 8: Castor Creek at Chatam Cemetery Road
Deployed monitor at 1235 changed from Vernon Eros Road due to no water
70% canopy
Silviculture
Water color, brown and shallow

Site 34: Moody Creek at Hwy. 4
Dumped dye at 1300- timed it for 3 min., had no measurable flow, influenced by wind only

Site 35: Humble Creek at Hwy 4
Dumped dye at 1315- timed it for 3 min., had no measurable flow, influenced by wind only

Site 36: Sweetwater Creek at Hwy. 4
Dumped dye at 1330- Timed it for 5 min., had no measurable flow

Site 37: Piney Creek at Reitzel Road
No measurable flow- Pooled looked at 1400 hrs.

Caster Creek Survey
Subsegment 081501

Crew: Brignac, Cooley, Stone
7/26/00
Weather: Clear, sunny, and hot

Site 1: Castor Creek at Hwy. 4
Above confluence with the lake
Fathometer X-section done at 0745
Field Parameters- Water Quality taken with Quanta-00132 at 0800
Sample depth was 1 meter

Batt- 3.7 volts	pH- 6.63
Temp- 27.5	DO-2.72
SpC- 95.0	DO%- 35.9%

Dropped dye at 0800, waited 30 min. – dye did not move, no measurable flow

Site 2: Castor Creek at Hwy. 127
Fathometer X-section at 0920
Field Parameters-Water Quality Taken at 0920 with Quanta-00132

Batt. – 4.0 V	pH- 6.64
Temp. 26.10	DO- 0.71
SpC-103.0	DO%- 8.2

Site 3: Castor Creek at Hwy. 506
Discharge, and X-section (wading)
Field Parameters- Water Quality taken at 1030 with Quanta-00131

Batt.- 4.2 v	pH- 6.3
Temp.- 25.12	DO- 3.06
SpC- 89.0	DO%- 36.7

Caster Creek Survey
Subsegment 081501

Crew: Brignac, Cooley, Stone
7/2700
Weather: Clear, sunny, and hot

Site 1: Castor Creek at Hwy. 4
Picked up monitor at 0815
Hydrolab- SN 37759

Site 2: Castor Creek at Hwy. 127
Picked up monitor at 0830
Hydrolab- SN37754

Site 3: Castor Creek at Hwy. 506
Picked up monitor at 0850
Hydrolab- SN 37758

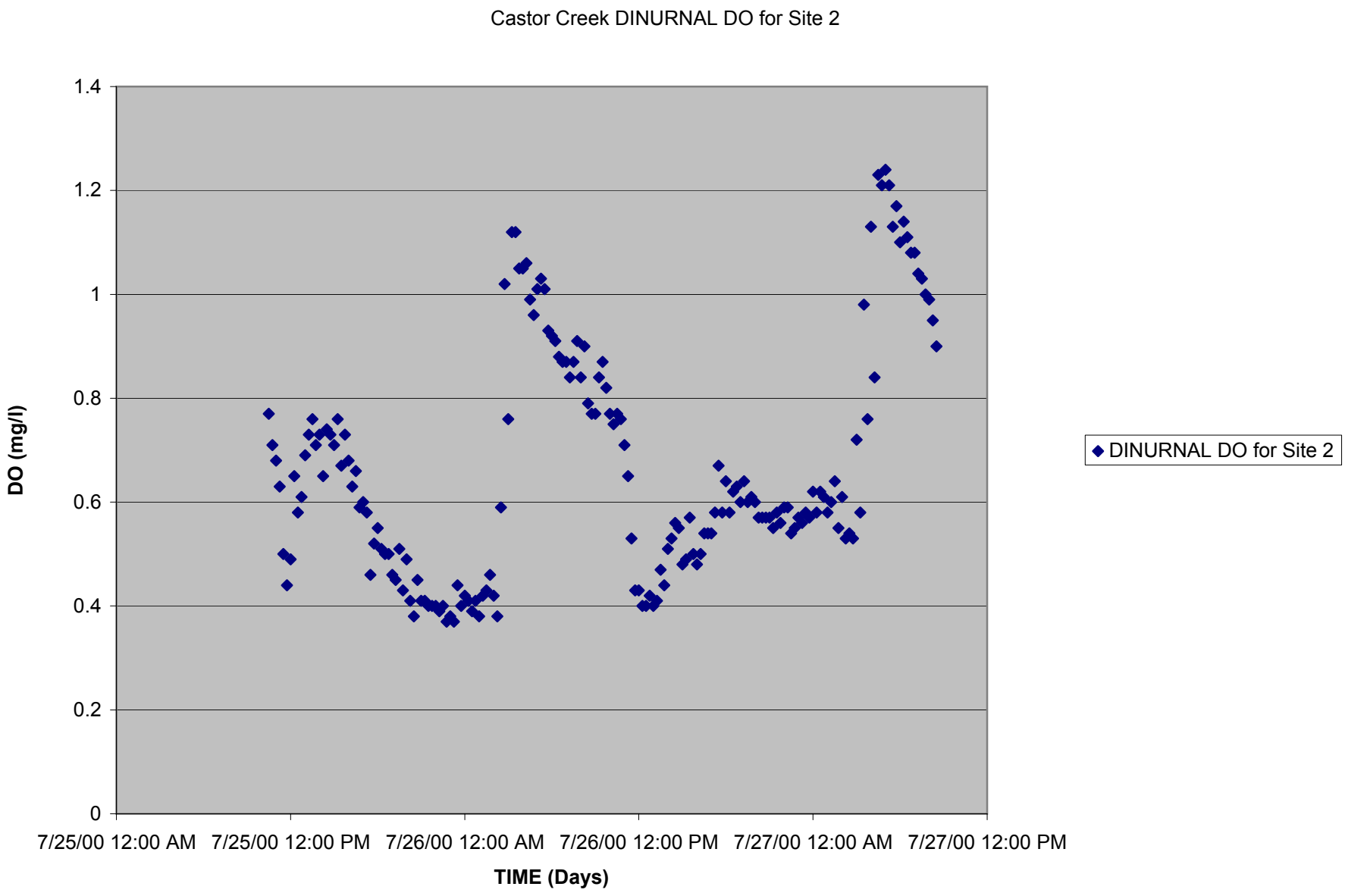
Site 4: Castor Creek at Hwy. 126
GPS'd at 0905

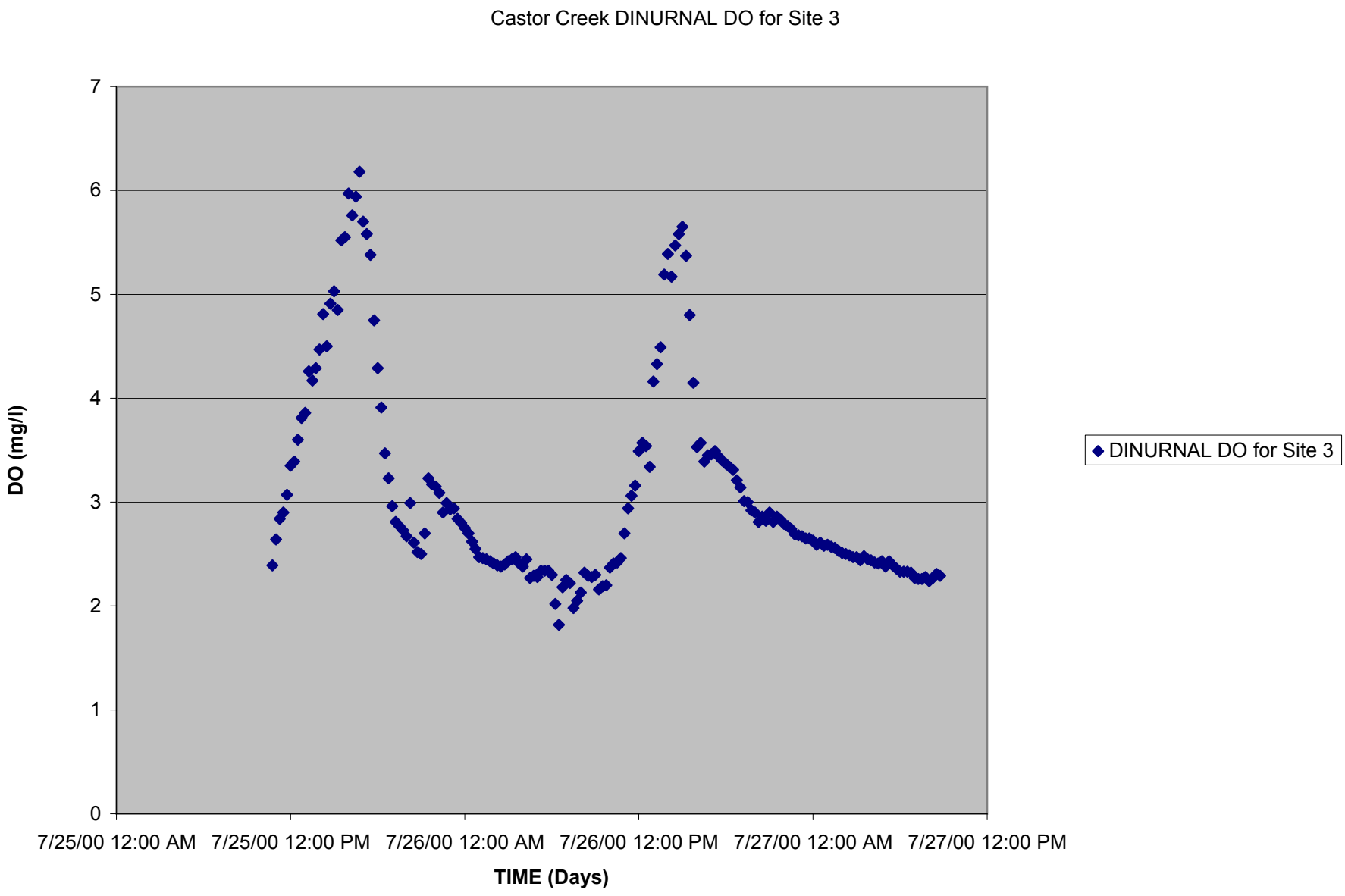
Site 5: Castor Creek at Hwy. 846
GPS'd at 0930

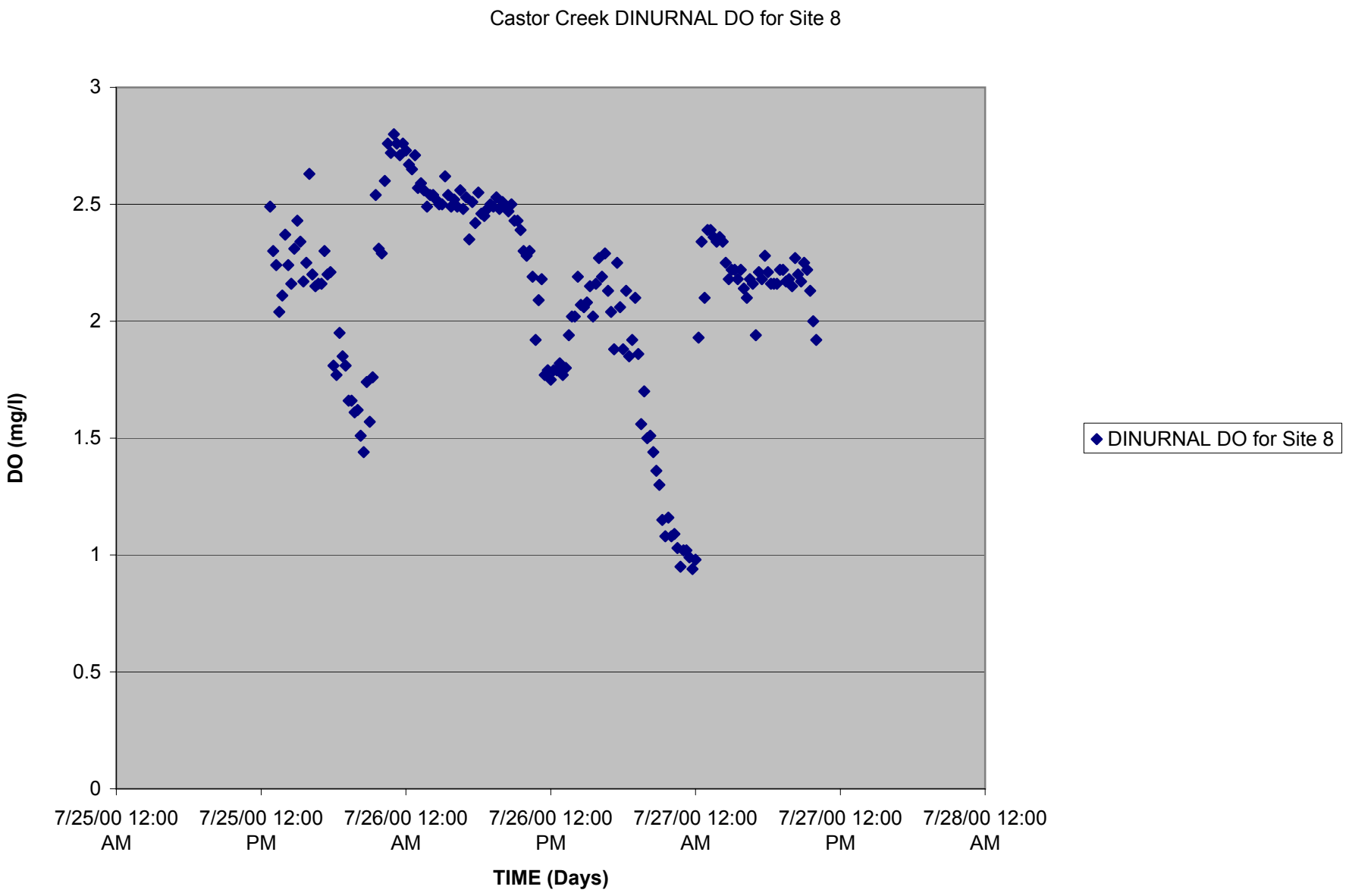
Site 6: Castor Creek at Hwy. 4
GPS'd at 0945

Site 8: Castor Creek at Chatam Cemetery Road
Picked up Hdrolab monitor at 1005 – SN-37756

APPENDIX C4 - Continuous monitor graphs


Castor Creek DINURNAL DO for Site 2
1.4
1.2
1
0.8
0.6
0.4
0.2
0
DO (mg/l)
7/25/00 12:00 AM
7/25/00 12:00 PM
7/26/00 12:00 AM
7/26/00 12:00 PM
7/27/00 12:00 AM
7/27/00 12:00 PM
TIME (Days)
DINURNAL DO for Site 2

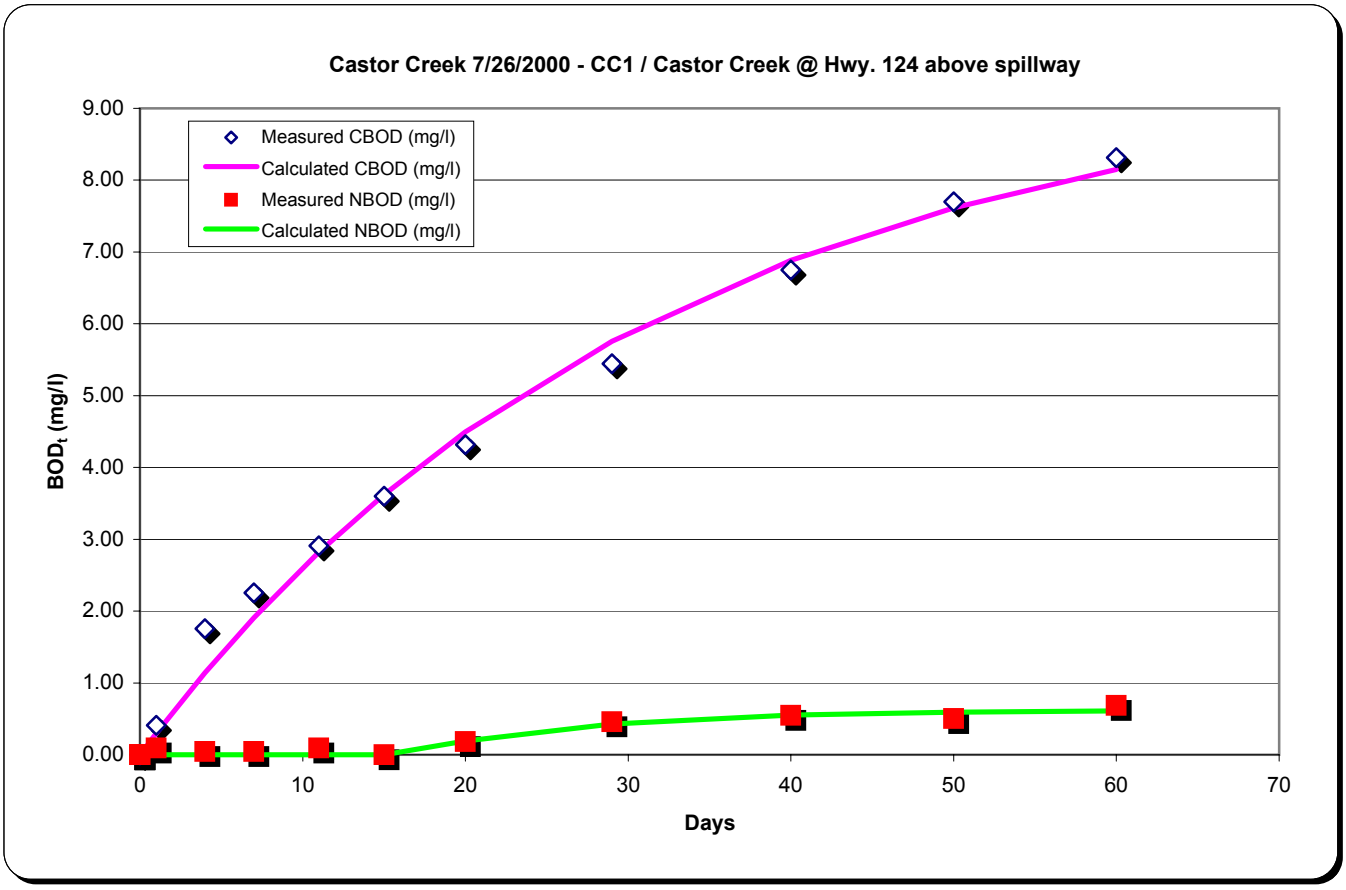

Castor Creek DINURNAL DO for Site 3
DO (mg/l)
7
6
5
4
3
2
1
0
7/25/00 12:00 AM
7/25/00 12:00 PM
7/26/00 12:00 AM
7/26/00 12:00 PM
7/27/00 12:00 AM
7/27/00 12:00 PM
TIME (Days)
DINURNAL DO for Site 3


Castor Creek DINURNAL DO for Site 8
3
2.5
2
1.5
1
0.5
0
DO (mg/l)
7/25/00 12:00 AM
7/25/00 12:00 PM
7/26/00 12:00 AM
7/26/00 12:00 PM
7/27/00 12:00 AM
7/27/00 12:00 PM
7/28/00 12:00 AM
TIME (Days)
DINURNAL DO for Site 8

APPENDIX C5 - BOD calculation worksheets

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC1 / Castor Creek @ Hwy. 124 above spillway**

Measured Data					Calculated Data		
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.03					
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
1	0.5	0.05	0.09	0.41	0.00	0.30	
4	1.8	0.04	0.05	1.75	0.00	1.14	
7	2.3	0.04	0.05	2.25	0.00	1.91	
11	3	0.05	0.09	2.91	0.00	2.82	
15	3.6	0.02	0.00	3.60	0.00	3.62	
20	4.5	0.07	0.18	4.32	0.19	4.50	
29	5.9	0.13	0.46	5.44	0.43	5.76	
40	7.3	0.15	0.55	6.75	0.55	6.88	
50	8.2	0.14	0.50	7.70	0.59	7.62	
60	9	0.18	0.69	8.31	0.61	8.15	
					0.62	9.58	**UBOD (mg/l)**
					0.09	0.03	**k rate (1/day)**
					15.90	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

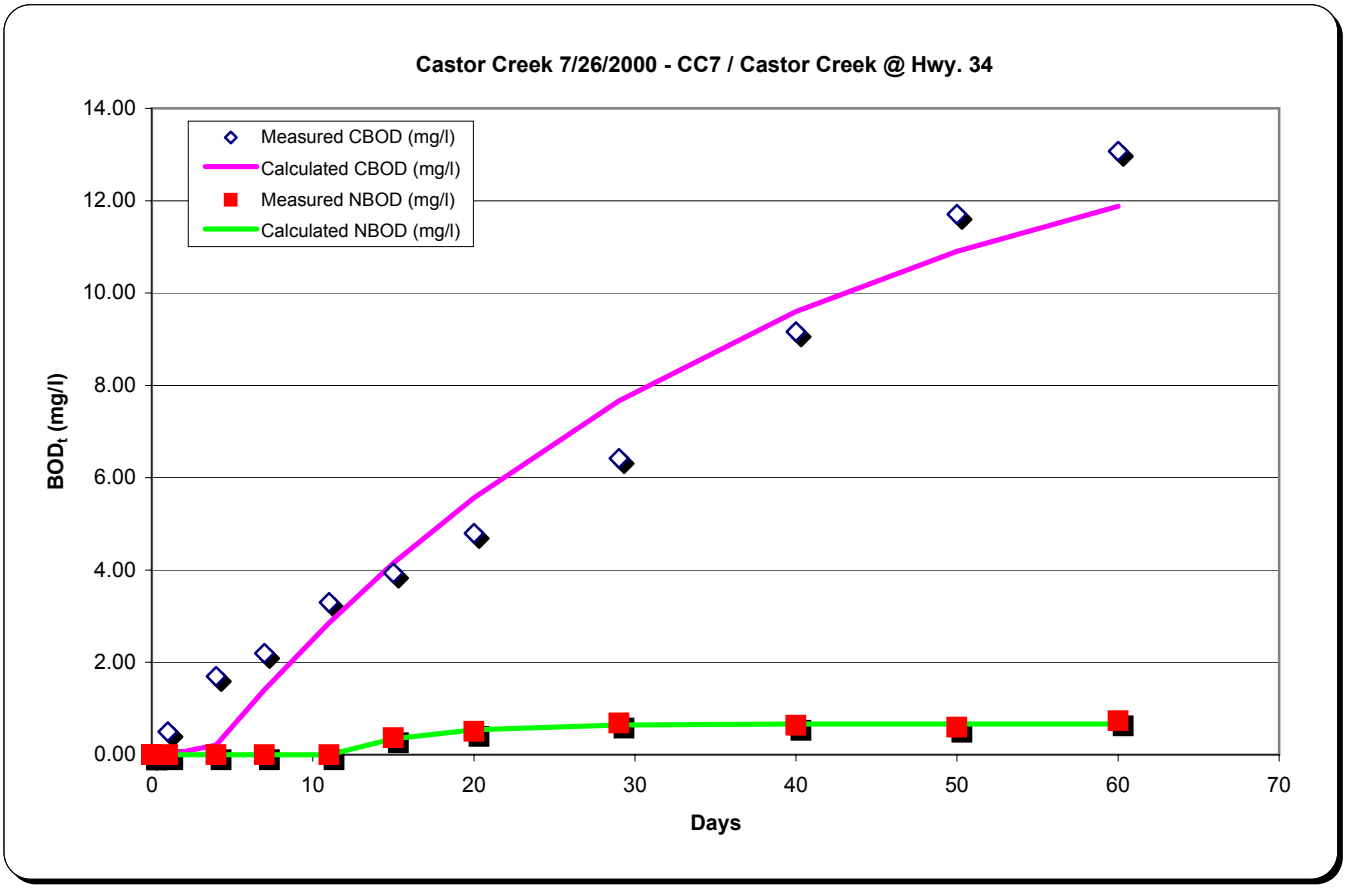
Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC7 / Castor Creek @ Hwy. 34**

Measured Data					Calculated Data		
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.03					
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
1	0.5	0.03	0.00	0.50	0.00	0.00	
4	1.7	0.02	0.00	1.70	0.00	0.21	
7	2.2	0.02	0.00	2.20	0.00	1.41	
11	3.3	0.03	0.00	3.30	0.00	2.86	
15	4.3	0.11	0.37	3.93	0.35	4.15	
20	5.3	0.14	0.50	4.80	0.54	5.57	
29	7.1	0.18	0.69	6.41	0.64	7.67	
40	9.8	0.17	0.64	9.16	0.66	9.60	
50	12.3	0.16	0.59	11.71	0.67	10.90	
60	13.8	0.19	0.73	13.07	0.67	11.88	
					0.67	14.85	**UBOD (mg/l)**
					0.18	0.03	**k rate (1/day)**
					10.99	3.50	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

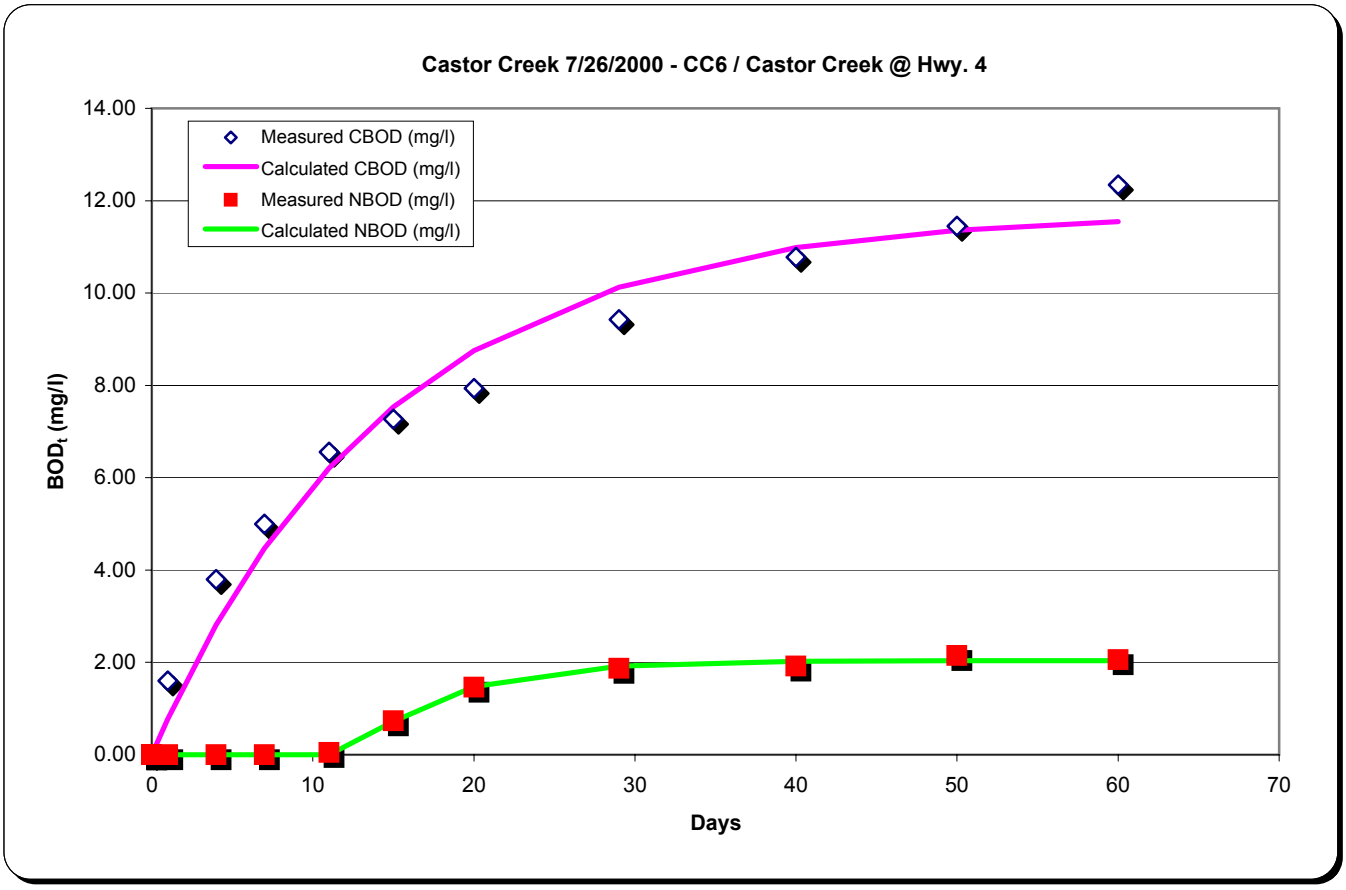
Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC6 / Castor Creek @ Hwy. 4**

Measured Data					Calculated Data		
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.06					
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
1	1.6	0.04	0.00	1.60	0.00	0.78	
4	3.8	0.06	0.00	3.80	0.00	2.81	
7	5	0.04	0.00	5.00	0.00	4.47	
11	6.6	0.07	0.05	6.55	0.00	6.21	
15	8	0.22	0.73	7.27	0.72	7.53	
20	9.4	0.38	1.46	7.94	1.48	8.75	
29	11.3	0.47	1.87	9.43	1.92	10.13	
40	12.7	0.48	1.92	10.78	2.02	10.98	
50	13.6	0.53	2.15	11.45	2.04	11.36	
60	14.4	0.51	2.06	12.34	2.04	11.55	
					2.04	11.74	**UBOD (mg/l)**
					0.17	0.07	**k rate (1/day)**
					12.44	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

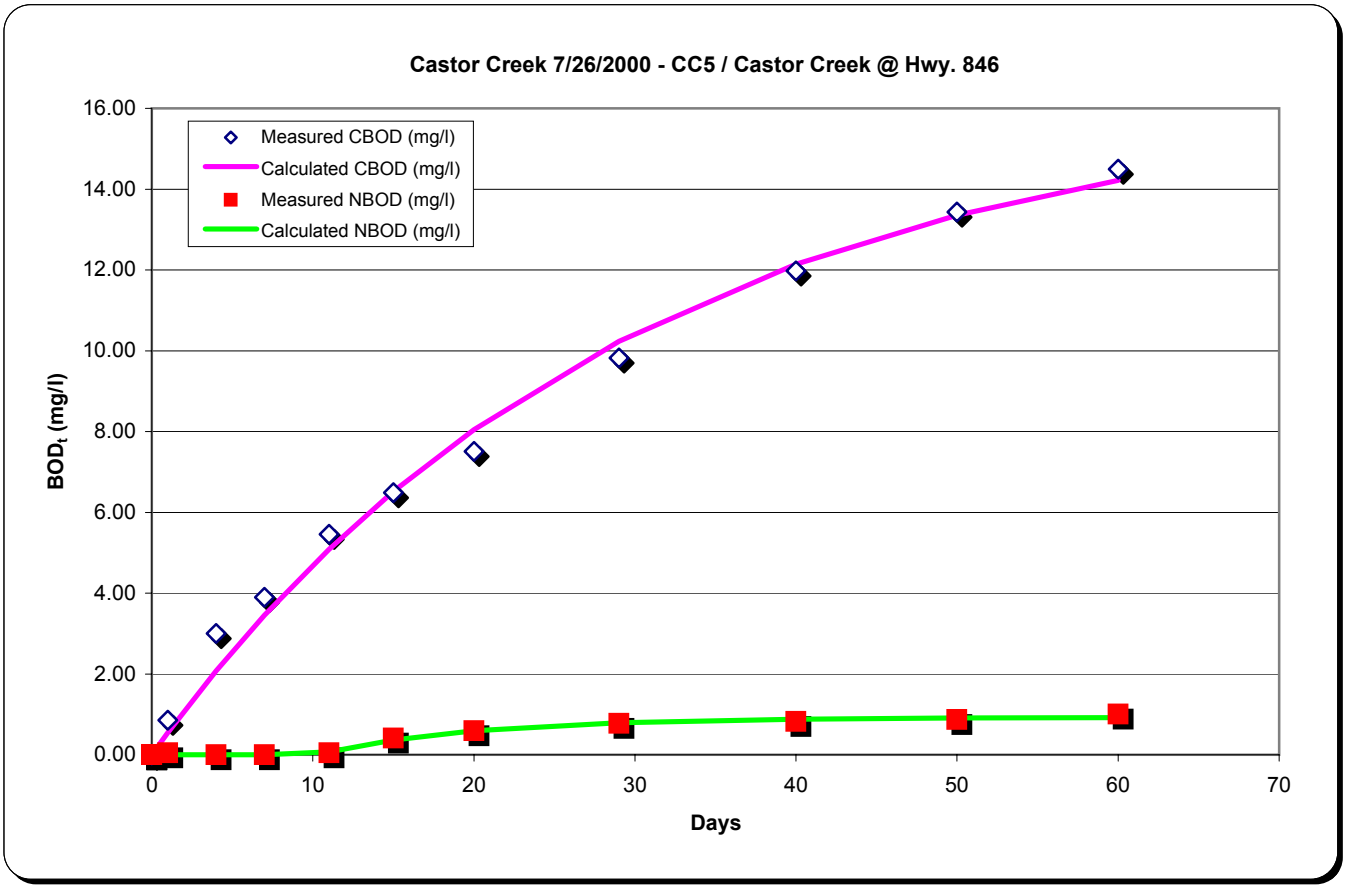
Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC5 / Castor Creek @ Hwy. 846**

Measured Data					Calculated Data		
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.03					
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
1	0.9	0.04	0.05	0.85	0.00	0.54	
4	3	0.02	0.00	3.00	0.00	2.07	
7	3.9	0.02	0.00	3.90	0.00	3.45	
11	5.5	0.04	0.05	5.45	0.07	5.09	
15	6.9	0.12	0.41	6.49	0.36	6.52	
20	8.1	0.16	0.59	7.51	0.59	8.05	
29	10.6	0.2	0.78	9.82	0.79	10.23	
40	12.8	0.21	0.82	11.98	0.88	12.14	
50	14.3	0.22	0.87	13.43	0.91	13.35	
60	15.5	0.25	1.01	14.49	0.92	14.22	
					0.92	16.37	**UBOD (mg/l)**
					0.11	0.03	**k rate (1/day)**
					10.26	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

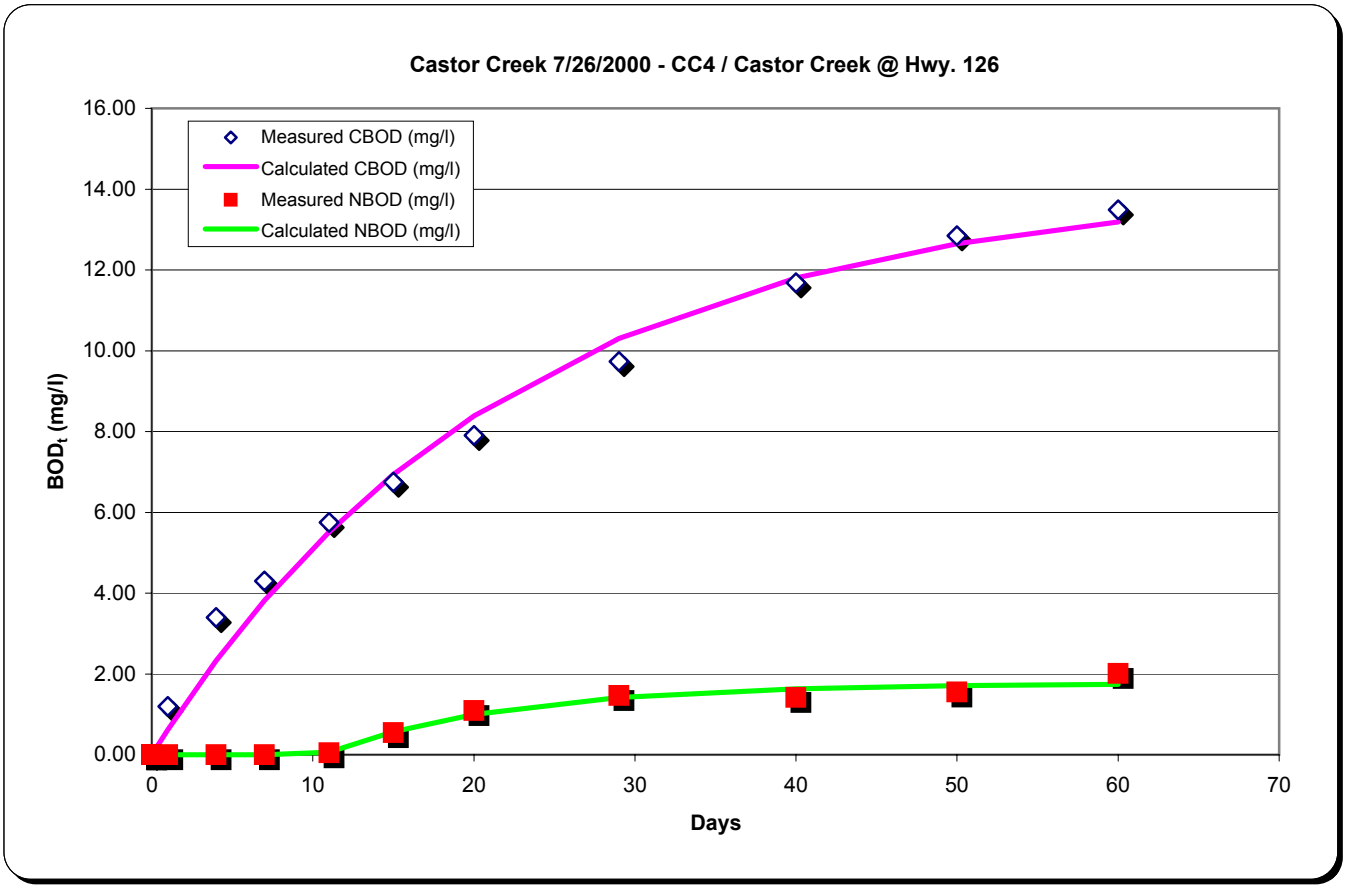
Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC4 / Castor Creek @ Hwy. 126**

Measured Data					Calculated Data		
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.04					
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
1	1.2	0.03	0.00	1.20	0.00	0.62	
4	3.4	0.03	0.00	3.40	0.00	2.33	
7	4.3	0.03	0.00	4.30	0.00	3.82	
11	5.8	0.05	0.05	5.75	0.06	5.52	
15	7.3	0.16	0.55	6.75	0.57	6.93	
20	9	0.28	1.10	7.90	1.00	8.39	
29	11.2	0.36	1.46	9.74	1.42	10.30	
40	13.1	0.35	1.42	11.68	1.63	11.80	
50	14.4	0.38	1.55	12.85	1.71	12.65	
60	15.5	0.48	2.01	13.49	1.74	13.19	
					1.76	14.15	**UBOD (mg/l)**
					0.09	0.04	**k rate (1/day)**
					10.60	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

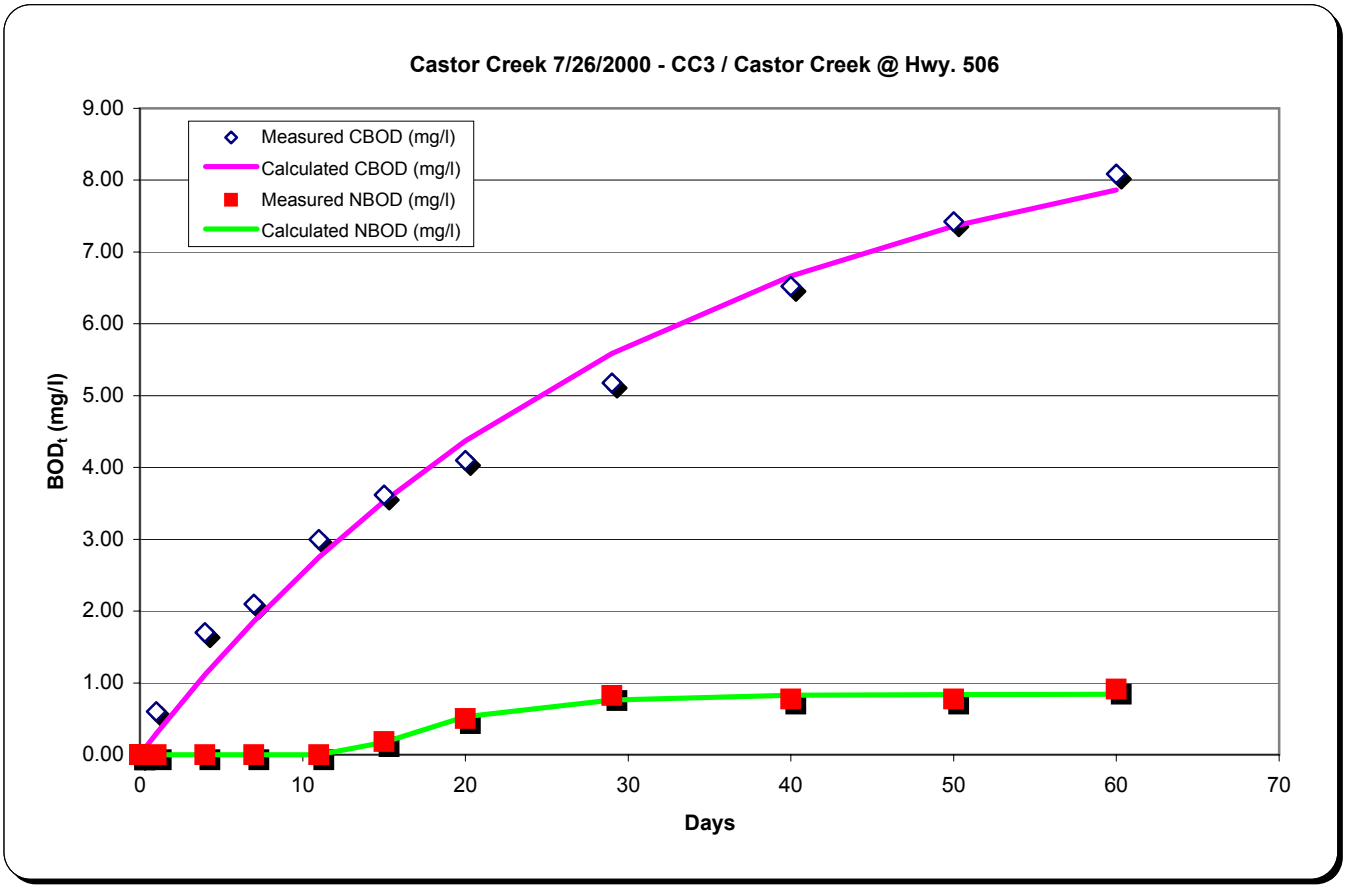
Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC3 / Castor Creek @ Hwy. 506**

Measured Data					Calculated Data	
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7
0		0.07				
0	0.00	0.00			0.00	0.00
0	0.00	0.00			0.00	0.00
0	0.00	0.00			0.00	0.00
0	0.00	0.00			0.00	0.00
1	0.6	0.07	0.00	0.60	0.00	0.29
4	1.7	0.06	0.00	1.70	0.00	1.11
7	2.1	0.06	0.00	2.10	0.00	1.86
11	3	0.06	0.00	3.00	0.00	2.75
15	3.8	0.11	0.18	3.62	0.18	3.53
20	4.6	0.18	0.50	4.10	0.53	4.37
29	6	0.25	0.82	5.18	0.76	5.59
40	7.3	0.24	0.78	6.52	0.83	6.66
50	8.2	0.24	0.78	7.42	0.84	7.36
60	9	0.27	0.91	8.09	0.84	7.86

0.84	9.19	**UBOD (mg/l)**
0.15	0.03	**k rate (1/day)**
13.47	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

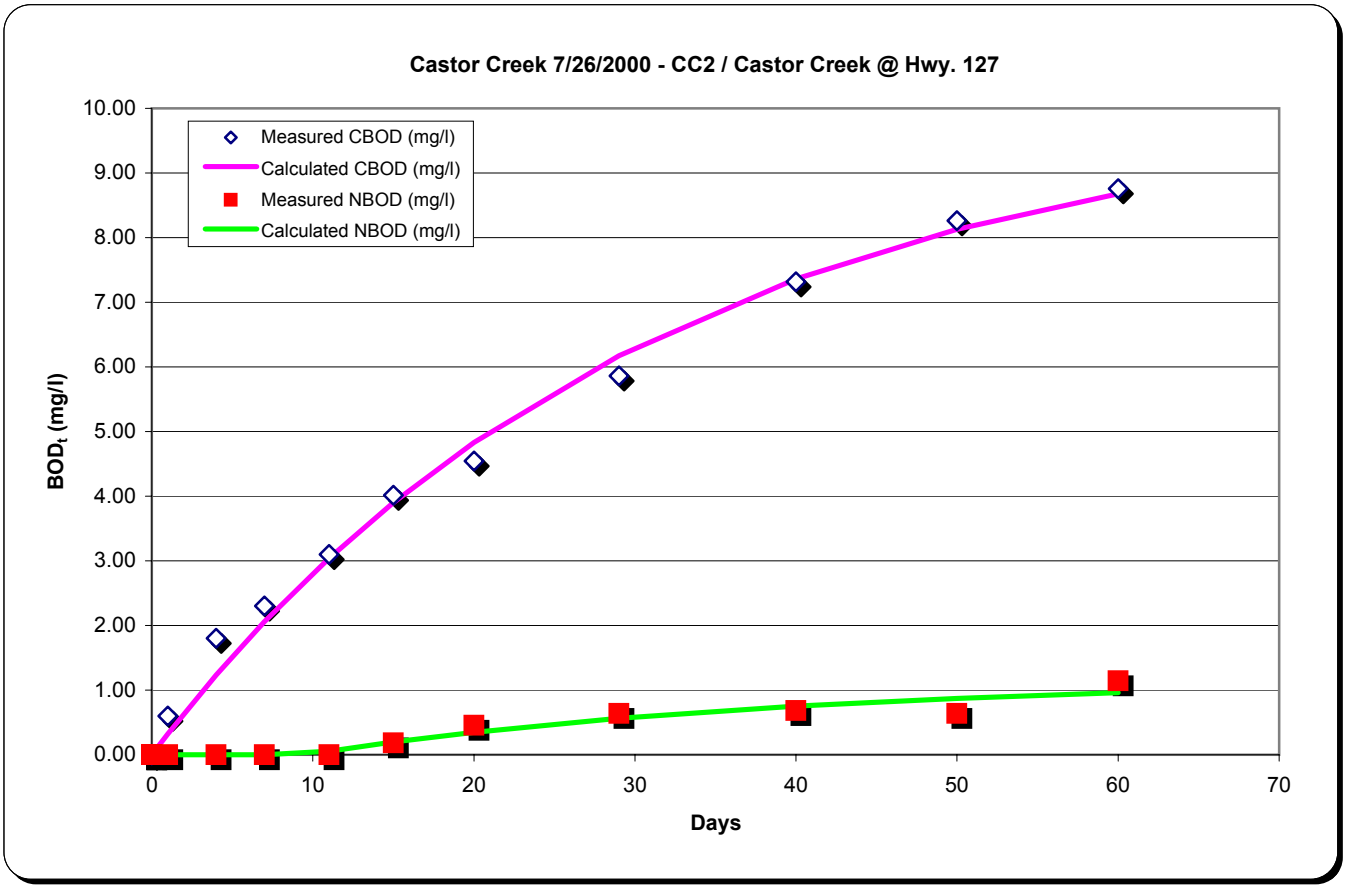
Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC2 / Castor Creek @ Hwy. 127**

Measured Data					Calculated Data	
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7
0		0.03				
0	0.00	0.00			0.00	0.00
0	0.00	0.00			0.00	0.00
0	0.00	0.00			0.00	0.00
0	0.00	0.00			0.00	0.00
1	0.6	0.02	0.00	0.60	0.00	0.32
4	1.8	0.02	0.00	1.80	0.00	1.23
7	2.3	0.02	0.00	2.30	0.00	2.06
11	3.1	0.02	0.00	3.10	0.06	3.04
15	4.2	0.07	0.18	4.02	0.20	3.90
20	5	0.13	0.46	4.54	0.35	4.83
29	6.5	0.17	0.64	5.86	0.56	6.17
40	8	0.18	0.69	7.31	0.75	7.36
50	8.9	0.17	0.64	8.26	0.87	8.13
60	9.9	0.28	1.14	8.76	0.96	8.68
					1.17	10.13	**UBOD (mg/l)**
					0.03	0.03	**k rate (1/day)**
					9.53	0.00	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

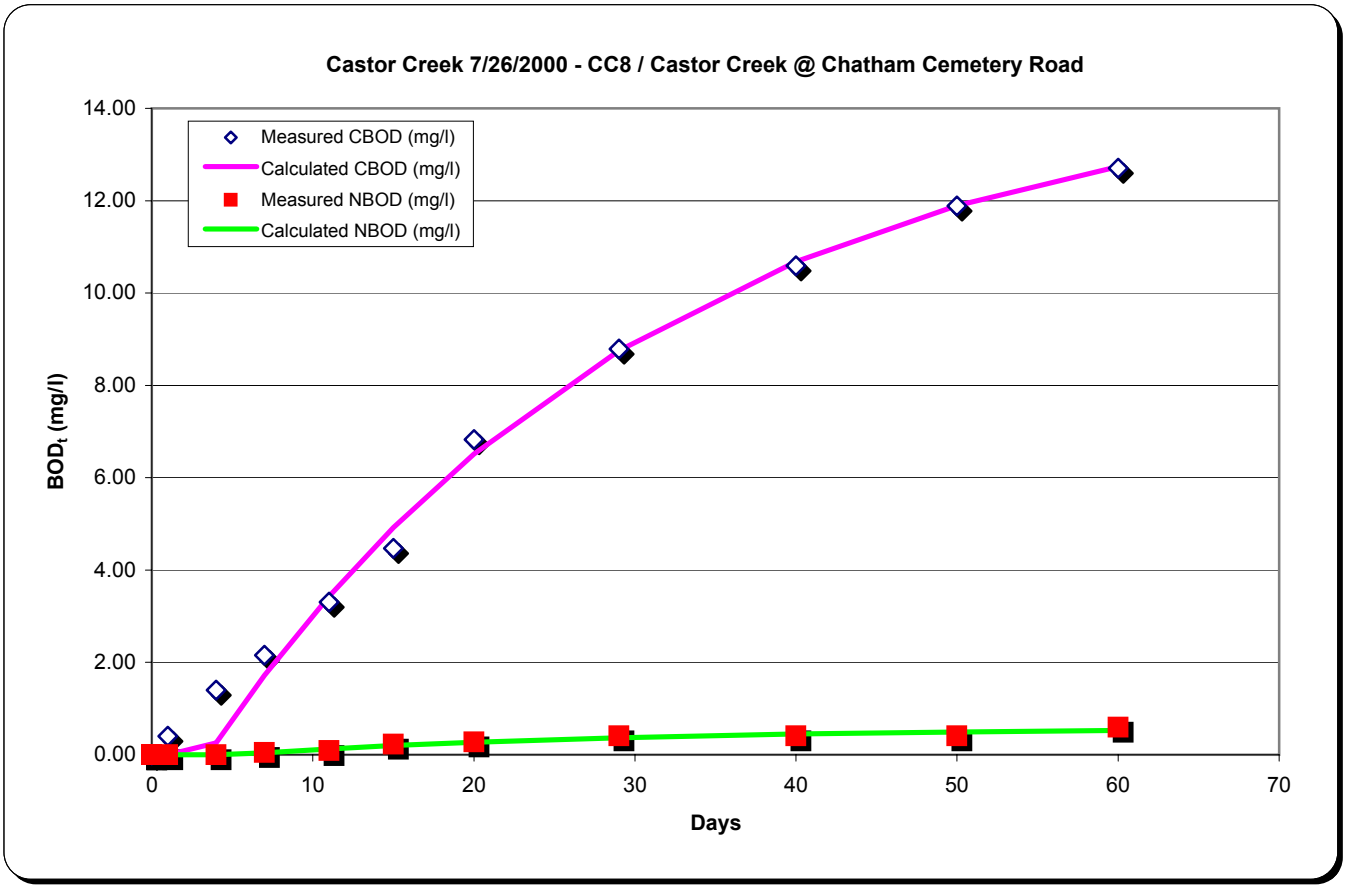
Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

BOD Analysis of the for: **Castor Creek 7/26/2000 - CC8 / Castor Creek @ Chatham Cemetery Road**

Measured Data					Calculated Data		
Days	***Total BOD (mg/l)***	***NOx as N (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	***NBOD (mg/l)***	***CBOD (mg/l)***	
Note 1	Note 2	Note 3	Note 4	Note 5	Note 6	Note 7	
0		0.07					
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
0	0.00	0.00			0.00	0.00	
1	0.4	0.06	0.00	0.40	0.00	0.00	
4	1.4	0.06	0.00	1.40	0.00	0.26	
7	2.2	0.08	0.05	2.15	0.04	1.72	
11	3.4	0.09	0.09	3.31	0.13	3.43	
15	4.7	0.12	0.23	4.47	0.20	4.92	
20	7.1	0.13	0.27	6.83	0.27	6.51	
29	9.2	0.16	0.41	8.79	0.37	8.76	
40	11	0.16	0.41	10.59	0.45	10.68	
50	12.3	0.16	0.41	11.89	0.49	11.89	
60	13.3	0.2	0.59	12.71	0.52	12.74	
					0.58	14.74	**UBOD (mg/l)**
					0.04	0.04	**k rate (1/day)**
					5.25	3.50	**Lag time (days)**



Note 1 - Days from the BOD test start date.

Note 2 - Measured total BOD at time in "Days" column.

Note 3 - Measured (NO_2 + NO_3 as nitrogen) at time in "Days" column.

Note 4 - Calculated by multipling the measured (NO_2 +NO_3 as nitrogen) minus the day zero (NO_2 +NO_3 as nitrogen) by 4.57.

Note 5 - Determined by subtracting the calculated NBOD from the measured total BOD.

Note 6 - Calculated from the formula {NBODt=UNBOD[1-e-(k(t-lag))]} using the listed values of UNBOD, k decay rate and lag time.

Note 7 - Calculated from the formula {CBODt=UCBOD[1-e-(k(t-lag))]} using the listed values of UCBOD, k decay rate and lag time.

APPENDIX D - Historical and Ambient Data

Critical Temperature and DO Sat Determinations for Curre

Site Description:	Castor Creek Ambient Site 0332

Raw Data				
Date			DO	Temperature
Mo	D	Yr	(mg/l)	(C°)
1	9	95	9.1	8.1
3	13	95	7.2	15.7
5	8	95	5.4	20.9
7	10	95	5	25.7
9	11	95	2.4	23.4
11	13	95	4.1	12.1
1	8	96	11.8	3.7
3	11	96	9.9	8.4
5	13	96	2.1	21.9
7	8	96	1.7	27.4
9	9	96	2.6	25.8
11	18	96	3.3	15.6
1	6	97	5.9	16
3	10	97	6.5	17.2
5	12	97	5.6	19
7	14	97	4.4	27.4
9	8	97	1.1	24.2
11	17	97	9.2	7.3
1	12	98	8.8	11.7
3	9	98	8.6	11.6
5	11	98	5.5	21.8

Input values into shaded area

Summer Chlorinity	**0**
Winter Chlorinity	**0**
Summer Season 90th Percentile, Temperature(°C):	**27.4**
Winter Season 90th Percentile, Temperature(°C):	**16.0**
Summer Season 90 percent DO Sat	**7.1**
Winter Season 90 percent DO Sat	**8.9**

Summer Season
5
6
7
8
9
10

Winter Season
11
12
1
2
3
4

Critical Temperature and DO Sat Determinations for Propo

Site Description:	Castor Creek Ambient Site 0332

Raw Data				
Date			DO	Temperature
Mo	D	Yr	(mg/l)	(C°)
1	9	95	9.1	8.1
3	13	95	7.2	15.7
5	8	95	5.4	20.9
7	10	95	5	25.7
9	11	95	2.4	23.4
11	13	95	4.1	12.1
1	8	96	11.8	3.7
3	11	96	9.9	8.4
5	13	96	2.1	21.9
7	8	96	1.7	27.4
9	9	96	2.6	25.8
11	18	96	3.3	15.6
1	6	97	5.9	16
3	10	97	6.5	17.2
5	12	97	5.6	19
7	14	97	4.4	27.4
9	8	97	1.1	24.2
11	17	97	9.2	7.3
1	12	98	8.8	11.7
3	9	98	8.6	11.6
5	11	98	5.5	21.8

Input values into shaded area

Summer Chlorinity	**0**
Winter Chlorinity	**0**
Summer Season 90th Percentile, Temperature(°C):	**27.4**
Winter Season 90th Percentile, Temperature(°C):	**21.4**
Summer Season 90 percent DO Sat	**7.1**
Winter Season 90 percent DO Sat	**8.0**

Summer Season
6
7
8
9
10

Winter Season
11
12
1
2
3
4
5

APPENDIX D1 - Ambient data
APPENDIX D2 - USGS discharge data and 7Q10 results

7Q10 Calculations for Bayou Castor near Tullos

After looking at long-term stations in the general region of Bayou Castor near Tullos, it looks like Dugdemona River near Winnfield will be the best bet to use. The drainage area is not that much different than Tullos (654 sq miles, and 923 sq miles).

For November 1 - May 31 the 7Q10 for Winnfield is 3.4 cfs.
For June 1 - October 31 the 7Q10 for Winnfield is 0.29 cfs
For May 1 - October 31 the 7Q10 for Winnfield is 0.29 cfs
For November 1 - April 30 the 7Q10 for Winnfield is 3.2 cfs.

Convert for Tullos by using a drainage area ratio:

November 1 - May 31--(923/654)*3.4 = **4.8 cfs**
June 1 - October 31--(923/654)*0.29 = **0.41 cfs**
May 1 - October 31--(923/654)*0.29 = **0.41 cfs**
November 1 - April 30--(923/654)*3.2 = **4.51 cfs**

APPENDIX D3 - Subsegment 030601 and 030602 Land use data

Land Type	Acres	Percent Land Use
Agricultural	17,230	4.21
Forest Land	235,045	57.46
Rangeland	86,592	21.17
Wetland	58,358	14.27
Urban	2,332	0.57
Water	9,496	2.32

APPENDIX E - Recommended TMDL

APPENDIX E1 - TMDL for current standards

Summer TMDL Summary:

Castor Creek - Current Standards Loading

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Headwater / Tributatary loads		1	0
Benthic loads		2,216	554
Incremental Loads		5	1
SUB-TOTAL	**0**	**2,222**	**555**
TMDL = WLA + LA + MOS		**2,777 kg/day**	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day) (1)	LA (lbs/day) (1)	MOS Load (lbs/day) (1)
Point Source loads	0		0
Headwater / Tributatary loads		2	0
Benthic loads		4,886	1,222
Incremental Loads		11	2
SUB-TOTAL	**0**	**4,899**	**1,224**
TMDL = WLA + LA + MOS		**6,123 lbs/day**	

Notes:

(1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Natural Nonpoint Loads		0	
Manmade Nonpoint Loads		2,222	555
SUB-TOTAL	**0**	**2,222**	**555**
TMDL = WLA + LA + MOS		**2,777 lbs/day**	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day)	LA (lbs/day)	MOS Load (lbs/day)
Point Source loads	0		0
Natural Nonpoint Loads		0	
Manmade Nonpoint Loads		4,899	1,224
SUB-TOTAL	**0**	**4,899**	**1,224**
TMDL = WLA + LA + MOS		**6,123 lbs/day**	

Winter TMDL Summary:

Castor Creek - Current Standards Loading

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Headwater / Tributatary loads		13	3
Benthic loads		1,158	289
Incremental Loads		5	1
SUB-TOTAL	**0**	**1,176**	**293**
TMDL = WLA + LA + MOS		***1,469 kg/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day) (1)	LA (lbs/day) (1)	MOS Load (lbs/day) (1)
Point Source loads	0		0
Headwater / Tributatary loads		29	7
Benthic loads		2,553	637
Incremental Loads		11	2
SUB-TOTAL	**0**	**2,593**	**646**
TMDL = WLA + LA + MOS		***3,239 lbs/day***	

Notes:

(1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Natural Nonpoint Loads		0	
Manmade Nonpoint Loads		1,177	293
SUB-TOTAL	**0**	**1,177**	**293**
TMDL = WLA + LA + MOS		***1,470 lbs/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day)	LA (lbs/day)	MOS Load (lbs/day)
Point Source loads	0		0
Natural Nonpoint Loads		0	
Manmade Nonpoint Loads		2,595	646
SUB-TOTAL	**0**	**2,595**	**646**
TMDL = WLA + LA + MOS		***3,241 lbs/day***	

APPENDIX E2 - TMDL for proposed 3.0 DO 030602 criteria change

Summer TMDL Summary:

Castor Creek - Proposed Standards Loading

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Headwater / Tributatary loads		3	0
Benthic loads		3,545	886
Incremental Loads		15	1
SUB-TOTAL	**0**	**3,563**	**887**
TMDL = WLA + LA + MOS		***4,450 kg/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day) (1)	LA (lbs/day) (1)	MOS Load (lbs/day) (1)
Point Source loads	0		0
Headwater / Tributatary loads		7	0
Benthic loads		7,817	1,954
Incremental Loads		33	2
SUB-TOTAL	**0**	**7,857**	**1,956**
TMDL = WLA + LA + MOS		***9,813 lbs/day***	

Notes:

(1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Natural Nonpoint Loads		14	
Manmade Nonpoint Loads		3,550	887
SUB-TOTAL	**0**	**3,564**	**887**
TMDL = WLA + LA + MOS		***4,451 lbs/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day)	LA (lbs/day)	MOS Load (lbs/day)
Point Source loads	0		0
Natural Nonpoint Loads		31	
Manmade Nonpoint Loads		7,827	1,956
SUB-TOTAL	**0**	**7,858**	**1,956**
TMDL = WLA + LA + MOS		***9,814 lbs/day***	

Winter TMDL Summary:

Castor Creek - Proposed Standards Loading

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Headwater / Tributatary loads		10	2
Benthic loads		1,852	463
Incremental Loads		8	2
SUB-TOTAL	**0**	**1,870**	**467**
TMDL = WLA + LA + MOS		***2,337 kg/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day) (1)	LA (lbs/day) (1)	MOS Load (lbs/day) (1)
Point Source loads	0		0
Headwater / Tributatary loads		22	4
Benthic loads		4,084	1,021
Incremental Loads		18	4
SUB-TOTAL	**0**	**4,124**	**1,029**
TMDL = WLA + LA + MOS		***5,153 lbs/day***	

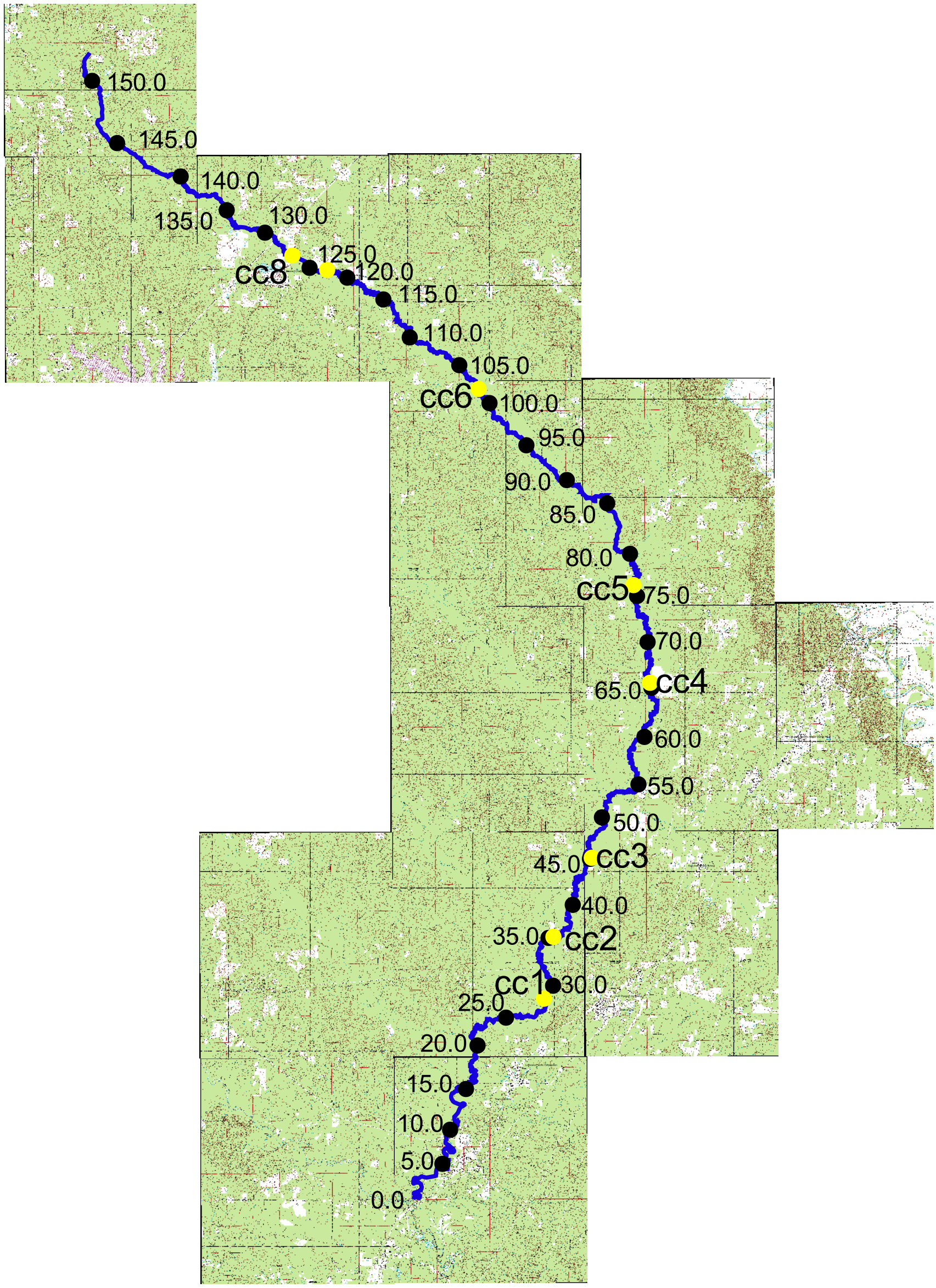
Notes:

(1) - Load(lbs/day) = Load(kg/day) x 2.205

Calculation of the TMDL - Kilograms per day			
Load description	WLA (kg/day)	LA (kg/day)	MOS Load (kg/day)
Point Source loads	0		0
Natural Nonpoint Loads		0	
Manmade Nonpoint Loads		1,871	467
SUB-TOTAL	**0**	**1,871**	**467**
TMDL = WLA + LA + MOS		***2,338 lbs/day***	

Calculation of the TMDL - Pounds per day			
Load description	WLA (lbs/day)	LA (lbs/day)	MOS Load (lbs/day)
Point Source loads	0		0
Natural Nonpoint Loads		0	
Manmade Nonpoint Loads		4,125	1,030
SUB-TOTAL	**0**	**4,125**	**1,030**
TMDL = WLA + LA + MOS		***5,155 lbs/day***	

APPENDIX F - Maps

APPENDIX F1 - Overview map of 030601 and 030602

Castor Creek Survey Sites