TOTAL MAXIMUM DAILY LOAD (TMDL) ANALYSIS

FOR

NANTICOKE RIVER AND BROAD CREEK
DELAWARE

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Preface

The Clean Water Act requires States to list all waters that do not meet water quality standards even after pollution controls required by law are in place. For these waters, the State must establish Total Maximum Daily Loads (TMDLs) for the pollutants of concern. A TMDL sets a limit on the amount of a pollutant that can be put in the water without violating the standard, and then distribute that amount to all sources. Delaware Department of Natural Resources and Environmental Control (DNREC) has listed the Nanticoke River and Broad Creek as waters that do not meet water quality standard for designated uses even though all the pollution controls required by law are already in place. Nutrients of phosphorus and nitrogen and Carbonaceous Biochemical Oxygen Demand (BOD, a primary factor for in-stream dissolved oxygen content) were identified as pollutants for these listed waters and therefore, TMDLs for these pollutants must be developed.

DNREC, in cooperation with other parties, has led the development of the TMDLs for the Nanticoke River and Broad Creek. This document provides background information for the TMDL development, and serves as a technical basis for the TMDLs regulation.

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EXECUTIVE SUMMARY

Section 303(d) of the Clean Water Act (CWA) as amended by the Water Quality Act of 1987, requires States to identify those waters within their boundaries which are water quality limited, to prioritize them, and to develop Total Maximum Daily Loads (TMDLs) for pollutants of concern. A water quality limited water is a waterbody in which water quality does not meet applicable water quality standards, and/or is not expected to meet applicable standards, even after application of technology-based effluent limitations for Publicly Owned Treatment Works (POTW) and other point sources.

The Nanticoke River and Broad Creek in Delaware have been identified as water quality limited waters, are included in the State's 1996 and 1998 303(d) list, and are targeted for development of TMDLs. The major environmental problems in the sub-basin are nutrient overenrichment and low dissolved oxygen levels caused by point source discharges and nonpoint sources. Therefore, TMDLs developed in this report focuses on chemical constituents of total nitrogen, total phosphorus, and dissolved oxygen. The targeted concentrations for these three constituents are 3.0 mg/l, 0.1 mg/l and 5.5 mg/l, respectively.

To develop the total maximum daily loads for Nanticoke River and Broad Creek, an intensive water quality monitoring was conducted from 1991 through 1994. During this period, water quality and quantity data were collected for the Nanticoke River and its major tributaries. The result of this monitoring activity was used to develop and calibrate a hydrodynamic and water quality model of the Nanticoke River and Broad Creek. The U.S. EPA's Water Analysis Simulation Program (WASP) modeling framework was used for this purpose. The Nanticoke River Model was calibrated to water quality and hydrodynamic conditions of the year 1992 (as a base-line).

Using the calibrated model of the Nanticoke River, several point and nonpoint source loading scenarios were considered for the sub-basin. The results of these analyses showed that to

improve water quality condition of the Nanticoke River, pollutants loads to the river should be reduced significantly. Based on the results of these scenario runs, Delaware DNREC has established total maximum daily loads for the mainstem of Nanticoke River and Broad Creek which call for implementation of the following action plans:

1. Biological Nutrient Removal (BNR), or equivalent, processes shall be employed in three large municipal wastewater treatment plants in the Nanticoke River and Broad Creek Sub-basin. These three facilities include Seaford Sewage Treatment Plant, Bridgeville Sewage Treatment Plant, and Laurel Sewage Treatment Plant. This shall result in reducing nitrogen load from these three facilities from the current permitted load of 199 kilograms per day (439 pounds per day) to 100 kilograms per day (221 pounds per day). Reduction of phosphorous loads from these three facilities will be from the current permitted load of 33 kilograms per day (73 pounds per day) to 25 kilograms per day (55 pounds per day).

2. For the remaining wastewater treatment plants in the watershed, discharge of nitrogen and phosphorous loads shall be capped at their current permitted loads. These loads are 568 kilograms per day (1252 pounds per day) of nitrogen and 1.0 kilograms per day (2.2 pounds per day) of phosphorous.

3. The nonpoint source nitrogen load to the Nanticoke River and Broad Creek shall be reduced by 30 percent (from year 1992 base-line). This shall result in reduction of all nitrogen loads during a normal rainfall year from 2274 kilograms per day (5013 pounds per day) to 1723 kilograms per day (3799 pounds per day).

4. The nonpoint source phosphorus load to the Nanticoke River and Broad Creek shall be reduced by 50 percent (from year 1992 base-line). This shall result in reduction of all phosphorous loads during a normal rainfall year from 54 kilograms per day (119 pounds per day) to 36 kilograms per day (79 pounds per day).

Based upon hydrodynamic and water quality model runs and assuming implementation of reductions identified by actions 1 through 4, DNREC has determined that, with an adequate margin of safety, water quality standards will be met in the Nanticoke River and Broad Creek.

Implementation of this TMDL Regulation shall be achieved through development and implementation of a Pollution Control Strategy. The Strategy will be developed by DNREC in concert with the Department's ongoing Whole Basin Management Program and the affected public.

1. Introduction

1.1. Background

Water quality monitoring data has shown that the Nanticoke River and Broad Creek are highly enriched with nutrients phosphorus and nitrogen. Although nutrients are essential elements for both plants and animals, their presence in excessive amounts cause undesirable conditions, such as frequent phytoplankton blooms and large daily swings in dissolved oxygen levels. Moreover, in terms of daily average, mainstem of the Nanticoke River has experienced frequent low levels of dissolved oxygen (DO) concentration. These conditions have resulted in violation of State water quality standards. As a result, the designated uses for these waters as defined in the standards are not supported.

Section 303(d) of the Clean Water Act (CWA) as amended by the Water Quality Act of 1987, requires States to list all water quality-limited waters and to develop Total Maximum Daily Loads (TMDLs) for pollutants of concern. Water quality-limited waters are waterbodies in which water quality do not meet standards even after pollution controls required by law are in place. A TMDL sets a limit on the amount of a pollutant that can be put into a waterbody without violating the water quality standard, and then distribute the amount to all sources.

Nanticoke River and Broad Creek have been identified as water quality limited waters and were placed on the State's 1996 and 1998 303(d) Lists. 1996's List (6) identified nutrients as pollutant of concern for both streams. 1998's List (7) added DO to the pollutant column for the Nanticoke River. Therefore, TMDLs for nutrients and DO related pollutants must be established for these two streams.

1.2. Development of TMDLs for Nanticoke River and Broad Creek

Delaware Department of Natural Resources and Environmental Control (DNREC) took the lead on developing TMDLs for the Nanticoke River and Broad Creek. It conducted intensive basin monitoring to collect water quality and quantity data for developing water quality models. Following that, DNREC initiated development and calibration of a comprehensive hydrodynamic and water quality models of the Nanticoke River, by using the service of a consulting firm, Tetra Tech, Inc.. The calibrated model has been used to run a variety of load reduction scenarios and to establish the TMDL. On September 9, 1998, DNREC held a public hearing regarding the Nanticoke River and Broad Creek TMDL. Comments received during the hearing are incorporated in finalizing this report.

1.3. Purpose and Approach of the Analysis

The purpose of this study was to project instream water quality conditions under different pollution reduction scenarios, evaluate them, and then establish the TMDLs for Nanticoke River and Broad Creek.

This was accomplished by first setting the TMDL target concentrations. Then, considering hydrologic condition and pollutant loading situation, data sets were prepared, and model scenarios were assembled and simulated. The simulation results were evaluated and were compared to the TMDL targets to see if they comply. Based on that, a load reduction scenario was selected to calculate the TMDLs and estimate the distributions of the pollutant loads among various sources. In addition, a margin of safety (MOS) is considered when setting the TMDL limit.

This process involved using mathematical models to project stream conditions under different loading scenarios. The U.S. EPA's Water Quality Analysis Simulation Program, version 5 (WASP5) has been used for this purpose. The model has been calibrated to 1992's hydrologic and loading conditions and is believed that it can be used as a predictive tool. So far, many loading scenarios have been simulated, some of which will be reported in this document.

1.4. TMDL Targets

As identified in the 303(d) List, nutrients and DO related substances are the pollutants which are the subject of this TMDL analysis. The following instream concentrations of total nitrogen (TN), total phosphorus (TP), and dissolved oxygen (DO) are used to establish the TMDL:

3.0 mg/l for TN
0.10 mg/l for TP
5.5 mg/l for DO (as daily average) (1)
4.0 mg/l for DO (as minimum at any time) (1).

Although State of Delaware water quality standard does not have specific numerical criteria for nutrients, it does have narrative criteria which require to minimize nutrient input to surface waters from point and human induced nonpoint sources. Based on literature values and professional judgement, the above concentrations have been considered to evaluate Delaware Waters for 305(b) Report and 303(d) List as required by the Clean Water Act. Therefore, it is reasonable to use the same values as the TMDL targets. In applying these nutrient target concentrations for establishing TMDLs, DNREC has applied a 20% confidence limit, and believes that projected water quality concentrations within the limit will meet water quality standards and support the designated uses.

Regarding DO, Section 11 of the State Surface Water Quality Standard (1) establishes above values as the instream standard.

1.5. Water Quality Standards

The Surface Water Quality Standard (1) is state regulation and the basis for State's 305(b) Reports, 303(d) Lists, and the TMDL Regulations. The water quality standard has two components. One is "designated use", such as fish and aquatic life use. Another one is "criterion", the in-stream condition necessary to protect the designated use. The criterion can be a numeric value (chemical or physical measures) or a narrative statement.

The standard specifies the following designated uses for the Nanticoke River and Broad Creek:

- Primary contact recreation,
- Secondary contact recreation,
- Fish, aquatic life, and wildlife,
- Industrial water supply,
- Agricultural water supply (for freshwater segments), and
- Waters of Exceptional Recreational and Ecological Significance (ERES).

The State of Delaware Surface Water Quality Standard provides specific numeric criteria to support the designated uses in the following sections:

- Section 9: Toxic Substances
- Section 11.1: General Criteria for Fresh Waters
- Section 11.5: Criteria for Waters of Exceptional Recreation and Ecological Significance (ERES Water)
- Section 11.6: Criteria Governing Primary Contact Recreation Waters.

Also, Section 7 provides a narrative statement of the criteria concerning nutrients over enrichment, and Section 3 provides the department's antidegradation policies.

1.6. Characteristics of Nanticoke River Sub-basin

The total maximum daily loads as discussed in this document are set for the mainstem of Nanticoke River and tidal portion of Broad Creek. The Nanticoke River segment is from headwaters above Bridgeville to MD-DE State line. The Broad Creek segment is from Record Pond to its confluence with Nanticoke River.

Due to the nature of the pollutant sources, the study area includes all watersheds within the Nanticoke River Sub-basin (see Figure 1-1). This sub-basin is located in southwestern part of the State and has a drainage area of 397 square miles (253,906 acres). Major land use activity in this sub-basin is agriculture which takes 51 percent of the total land in the sub-basin. Figure 1-2 shows the land use information. Table 1-1 and the pie chart in Figure 1-3 summarize the information using land use categories. As it can be seen, after the agriculture, wooded area with 39%, brushland with 5%, and urban areas with 2.4% are other land uses in the sub-basin.

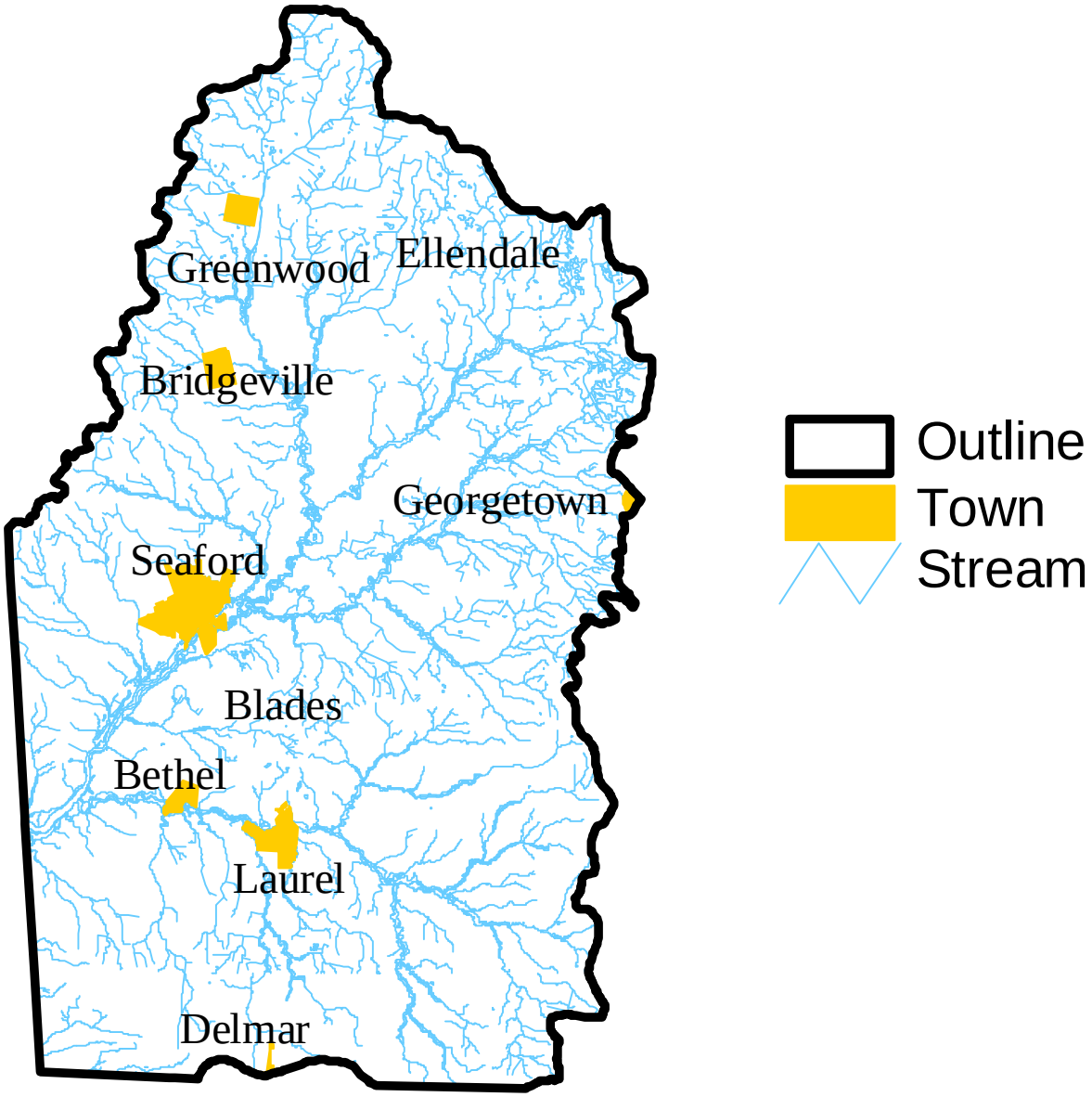


Figure 1-1. Study Area - Nanticoke River Sub-basin

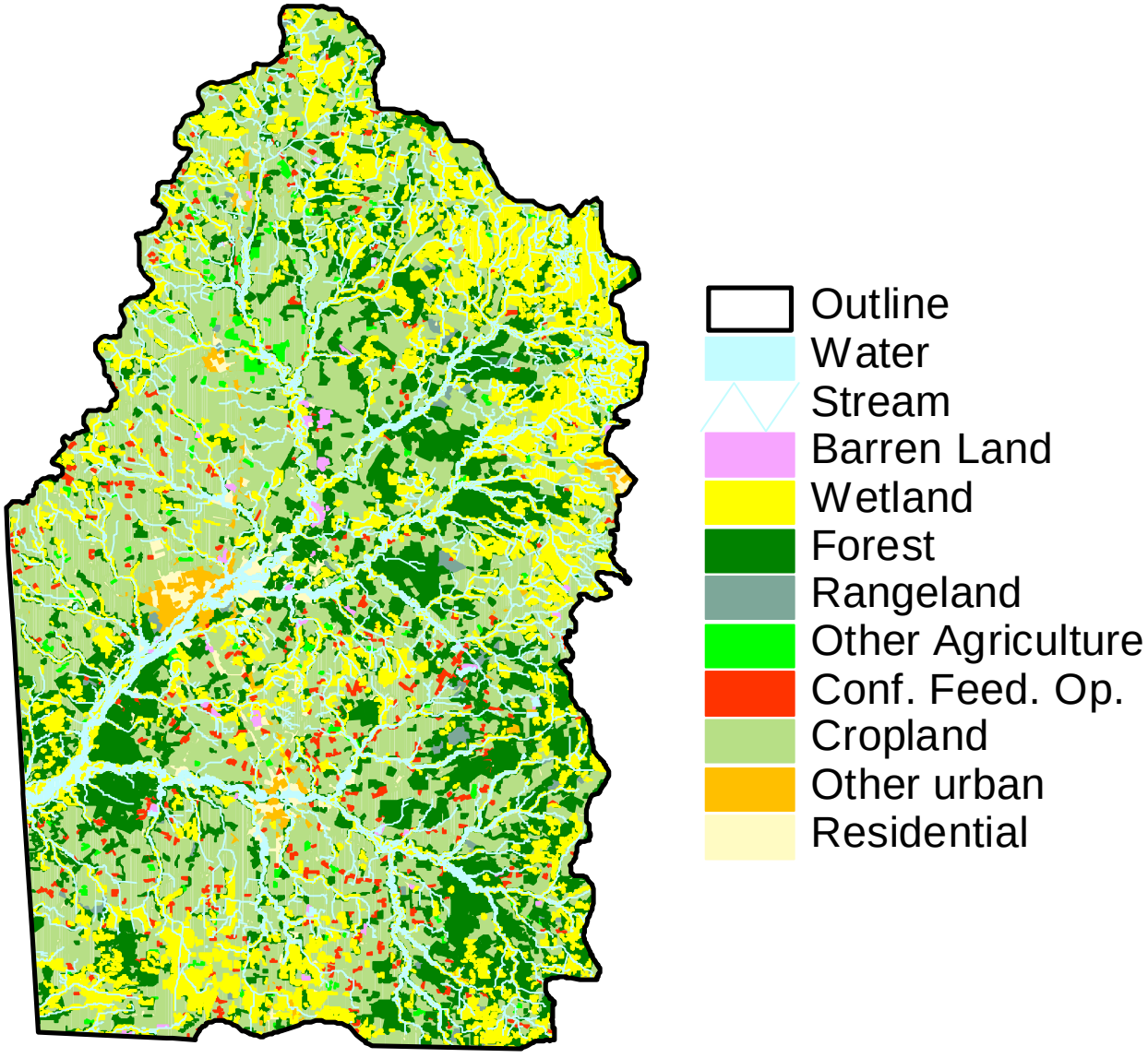


Figure 1-2. Nanticoke River Sub-basin Land Use/Land Cover

Table 1-1. Land Use Activities in the Nanticoke River Sub-basin

Watershed	Land Use (acres)							
	Urban/ Built up	Agriculture	Brushland	Forest	Wetland	Water	Others	Total
Main Stem Nanticoke River	3903	53731	1807	26225	478	543	1531	**88218**
Broad Creek	1014	40886	3839	29038	310	381	1106	**76574**
Deep Creek	749	17119	3985	19310	278	57	19	**41517**
Gravely branch	317	9101	2448	15030	393	0	7	**27296**
Gum Branch	91	9925	515	9586	45	0	139	**20301**
Total	**6638**	**130762**	**12609**	**126156**	**1771**	**981**	**4921**	**253906**

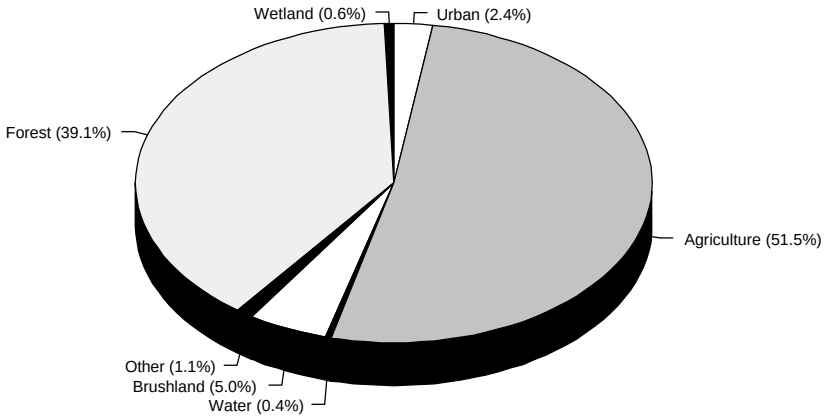


Figure 1-3. Land Use/Land Cover in the Nanticoke River Sub-basin

Geologically, the sub-basin lies within the Atlantic Coastal Plain which consists of a seaward dipping wedge of unconsolidated and semi-consolidated sediments (2). There is no bedrock near the surface or the soil in this Sub-basin. Also, there are no mineral extraction or oil and gas drilling sites in the area.

The topography of the Nanticoke River Sub-basin is characterized by extremely flat lands with slight localized relief, most of which is along the middle sections of the Sub-basin and next to the River. The Sub-basin's upper most reaches are about 60 feet above sea level, while the area close to Maryland border is only 10 ft above sea level (2).

The soils are generally sandy and porous and consist of the following major associations: *Tidal Marsh, Fresh, Association; Sassafras-Fallsington association; Evesboro-Rumford association*; *Fallsington- Sassafras-Woodstown association*; and *Fallsington-Pocomoke-Woodstown association.* The *Fallsington-Sassafras-Woodstown* and *Fallsington-Pocomoke-Woodstown* occur in the upper most reaches of the Nanticoke River and cover about one-third of the Sub-basin (2).

1.7. Water Quality Condition

Water quality of the Nanticoke River Sub-basin has been monitored for more than 25 years. Location of monitoring stations in the sub-basin is shown in Figure 1-4. To support this TMDL study, an intensive water quality and quantity monitoring was conducted during 1991-94. A quarterly monitoring has been continued in the sub-basin since.

Elevated levels of algae (as measured by chlorophyll-a) are regularly observed in tidal portions of the Nanticoke River. During 1991-94, data showed that average concentrations of Chlorophyll-a were above 50 ug/l in the tidal portion. This condition has been attributed to high nutrient content in the water. Along with favorable environmental conditions, like temperature and light, high concentration of nutrients promotes excessive growth of phytoplankton (a condition generally referred to as algal bloom). High levels of phytoplankton biomass causes wide diurnal variation of dissolved oxygen (DO) in the water. This variation of DO is harmful to aquatic life.

A comprehensive water quality assessment of the Nanticoke River (3) and the 1996 and 1998 305(b) Reports (4) (5) have shown that nutrient over enrichment, low DO concentration, high bacteria, and high water temperature stress the Nanticoke River and Broad Creek. 305(b) Reports have identified following designated uses as not being supported:

- fish and aquatic life use
- Exceptional Recreational and Ecological Significance use, and
- primary contact recreation use.

Major sources of pollution, which causes the above water quality problems, include point source discharges from municipal and industrial wastewater treatment plants, and nonpoint sources like

surface runoffs from agricultural, urban, and other land use activities in the sub-basin. Details of point source discharges are presented in Chapter 2, and nonpoint source information is discussed in Chapter 3.

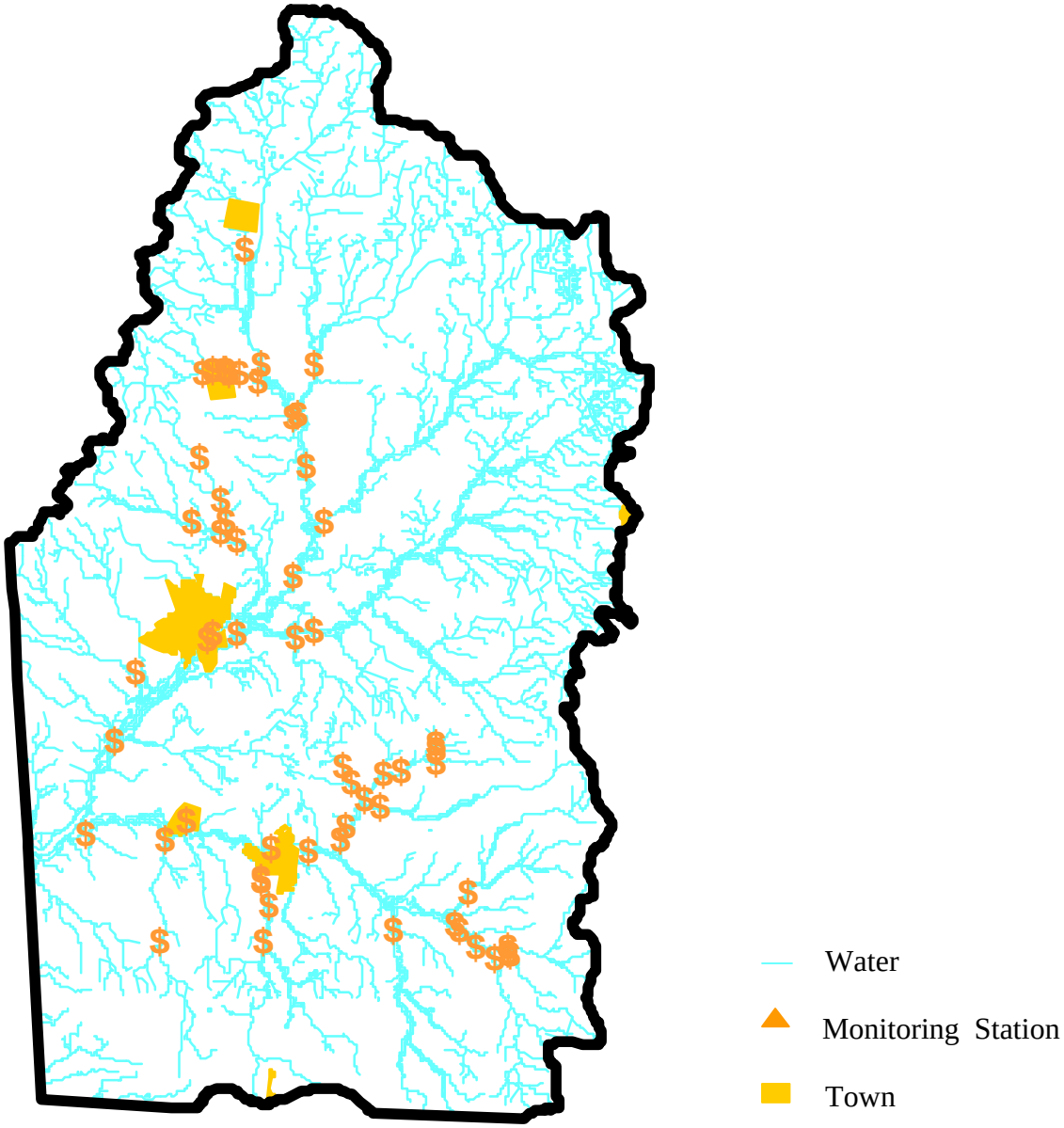


Figure 1-4. Water Quality Monitoring Station in the Nanticoke River Sub-basin

2. Development and Calibration of the Nanticoke River/Broad Creek Model

Hydrodynamic and Water Quality Model for the Nanticoke River and Broad Creek was developed through a cooperative effort between Delaware DNREC and U.S. EPA Region III, using the U.S. EPA's Water Analysis Simulation Program (WASP5) modeling framework. The general purpose WASP modeling framework is developed by the U.S. EPA and has been widely used for application to many rivers and estuaries world wide.

WASP5 Model of the Nanticoke River consists of two submodels: hydrodynamic model, DYNHYD5, and water quality model, EUTRO5 (Figure 2-1). In what follows, the main components of the Nanticoke River Model will be reviewed briefly. A detailed discussion of the Model and its application to the Nanticoke River can be found in references 8 and 9.

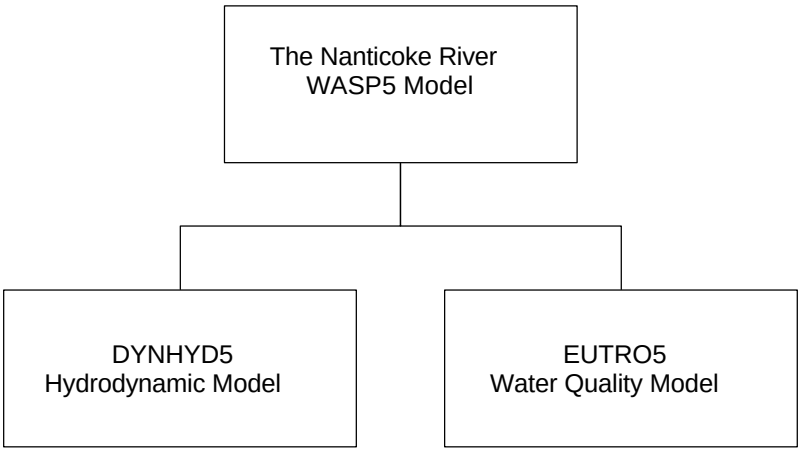


Figure 2-1. Components of the Nanticoke River WASP5 Model

2.1. Hydrodynamic Model

The EPA's DYNHYD5 Hydrodynamic Model was applied to Delaware portions of the Nanticoke River and Broad Creek. The DYNHYD5 hydrodynamic model solves one dimensional equations describing the propagation of a long wave through a shallow water system by conserving both momentum and volume. The equation of motion, based on the conservation of momentum, predicts time variable flows and velocities in a river and is written as (9):

$$\frac{\partial U}{\partial t} = -U\frac{\partial U}{\partial t} + a_{g,ë} + a_f + a_{w,ë}$$

where:

$\frac{\partial U}{\partial t}$ = the rate of velocity change with respect to time, m/sec^2

$U\frac{\partial U}{\partial x}$ = the Bernoulli acceleration, or the rate of change of momentum, m/sec^2

$a_{g,ë}$ = gravitational acceleration, m/sec^2

a_f = frictional acceleration, m/sec^2

$a_{w,ë}$ = wind stress acceleration along channel axis, m/sec^2

x = distance along channel axis, m

t = time, sec

U = velocity along the channel axis, m/sec

ë = longitudinal axis

The equation of continuity is given by (9):

$$\frac{\partial A}{\partial t} = -\frac{\partial Q}{\partial x}$$

where:

A = cross-sectional area, m^2

Q = flow, m^3/sec

Simultaneous solution of the equations of momentum and continuity, at each time step and for each segment of the river, provides time variable velocity and elevation information for the entire system. These velocities and elevations information are saved in an output file to be used as an input to the water quality model.

The DYNHYD5 Model of the Nanticoke River consists of 40 segments (see Figure 2-2). Twenty-eight (28) segments are along the main stem of the Nanticoke River from White Marsh Branch (river mile 58) to Sharptown, Maryland (river mile 29), covering a total of 29 miles. There are 12 segments along the Broad Creek from Records Pond (river mile 42) to the confluence with Nanticoke River (river mile 34), having a total of 8 miles.

The principal input data for the DYNHYD5 include physical characteristics of the receiving stream, fresh water flows from tributaries, and tidal oscillations at downstream boundary. In what follows, first, hydrodynamic characteristics of the Nanticoke River will be reviewed briefly. Then, the results of the DYNHYD5 Model for the Nanticoke River will be presented.

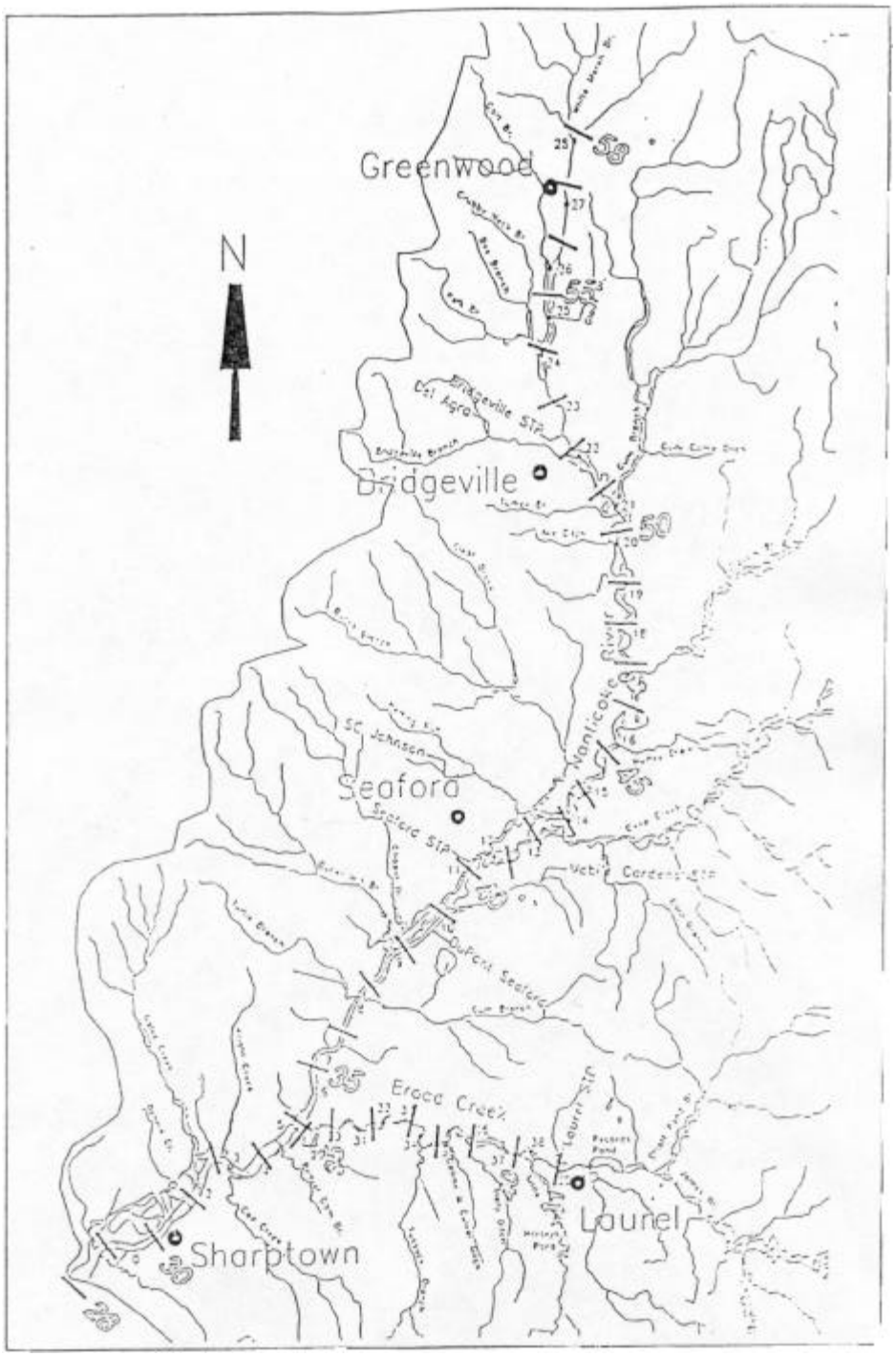


Figure 2-2. Model Segmentation for Nanticoke River and Broad Creek

2.1.1. Hydrodynamic characteristics of the Nanticoke River

Tidal elevation

The Nanticoke River, from its mouth at the Chesapeake Bay up to Rd. 545 Bridge north of Seaford, Delaware, is tidal. Similarly, the mainstem of the Broad Creek from Records Pond to its confluence with the Nanticoke River is tidal. In order to characterize tidal oscillations of the Nanticoke River, two tide gages were installed on the river: one at Sharptown, Maryland, and another at Rt. 13 Bridge, Seaford, Delaware. These two tide gages were in operation from 1991 through 1994 and recorded tidal elevations at these two sites. Figure 2-3 shows tidal elevations at Rt. 13 Bridge, Seaford, from July 1, 1992 through July 5, 1992 for every fifteen minutes interval.

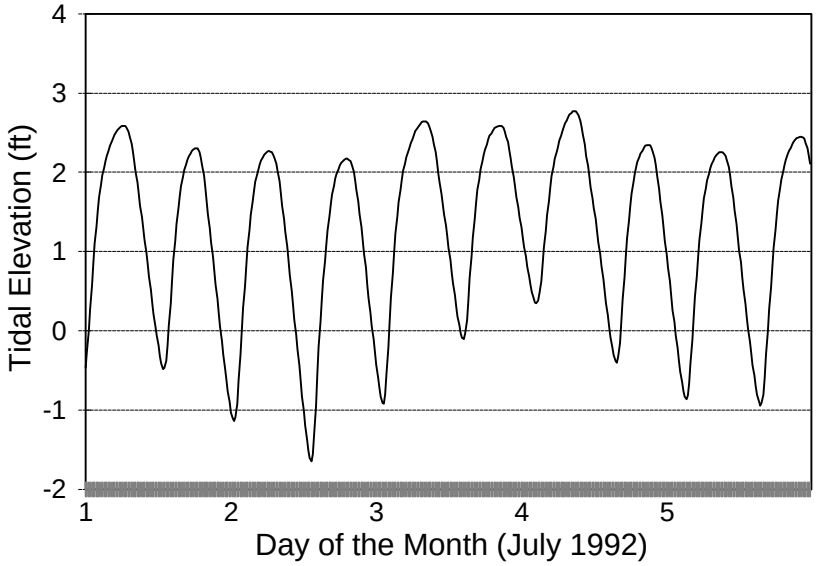
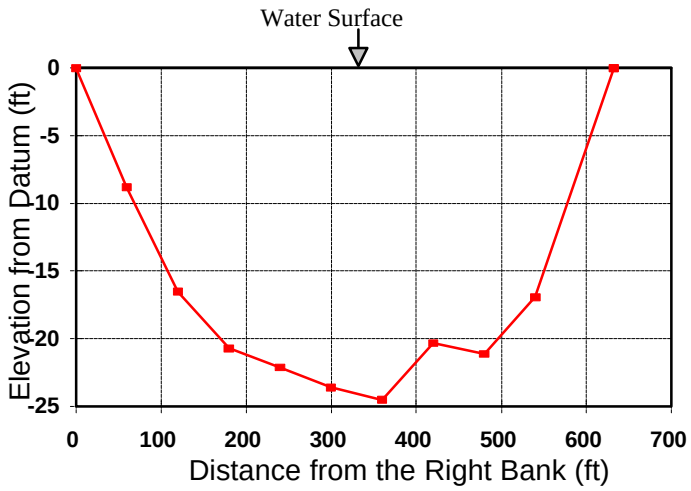


Figure 2-3. Tidal Elevation at Rt. 13 Bridge, Seaford (July 1, '92 - July 5, '92)

Bathymetry

To collect bathymetry information for the Nanticoke River, and through a cooperative agreement with the United States Geological Survey (USGS), a survey was conducted during the summer of 1991. During this survey, cross sectional profiles of the Nanticoke River at Sharptown, Maryland, and at Seaford, Delaware were determined (see Figure 2-4).

Sharptown



Seaford

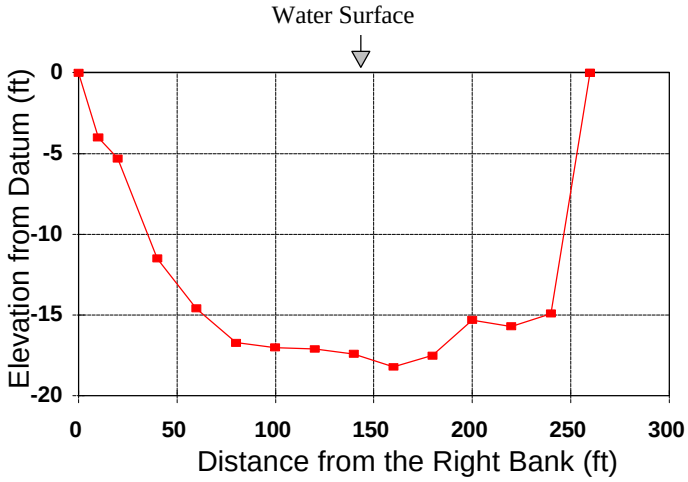


Figure 2-4. Cross Sectional Profile of the Nanticoke River at Sharptown and at Seaford

Stream flow

The USGS stream flow gaging station 01487000 on the Nanticoke River is the only active gaging station in the sub-basin. It locates 800 ft downstream from Gum Branch, 2.5 mile southeast of Bridgeville, and 50.5 mile upstream from mouth (10). This station has a drainage area of 75.4 square miles and has been in operation since 1943.

Figure 2-5 below shows daily flows during the year 1922, annual average flow during 1992 (65.25 cfs), long term average flow (90 cfs), and the 7Q10 flow (14.92 cfs) for this station. Based on the data above, year 1992 can be considered a dry year.

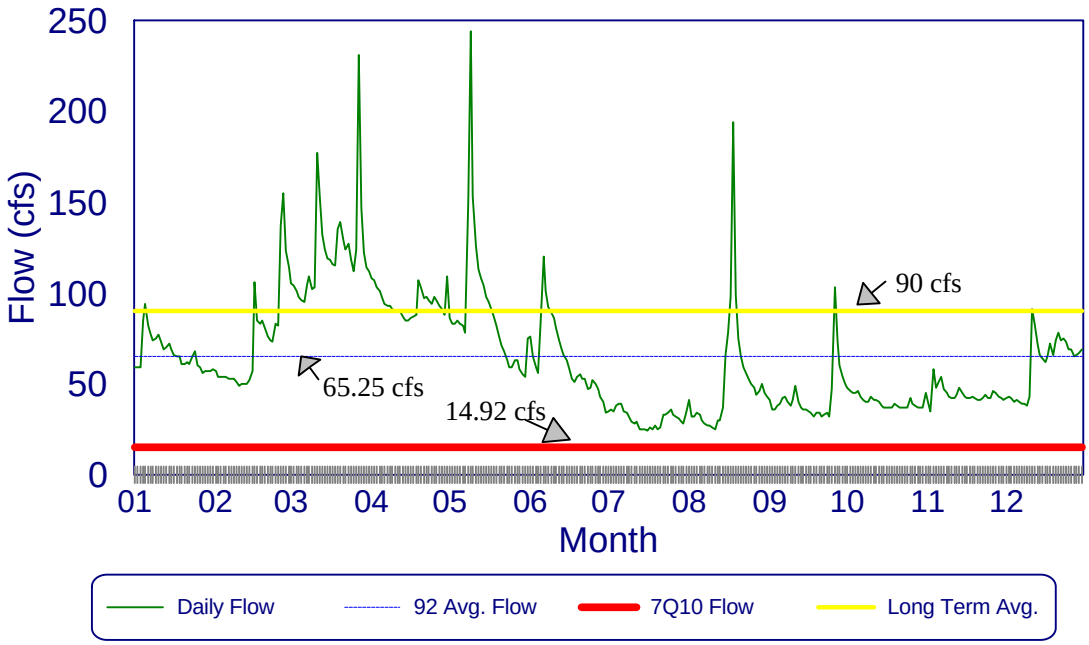


Figure 2-5. Stream Flow at USGS Gaging Station 01487000, Nanticoke River

2.1.2. Results of the Calibrated DYNHYD5 Model

As stated earlier, the DYNHYD5 Model for the Nanticoke River was developed and was calibrated using hydrologic and hydrodynamic data for the year 1992. After a successful calibration of the hydrodynamic model, the model output was saved and was used as an input to the water quality model. Figures 2-6 and 2-7 present some of calibrated model's results for several segments of the Nanticoke River and Broad Creek (8).

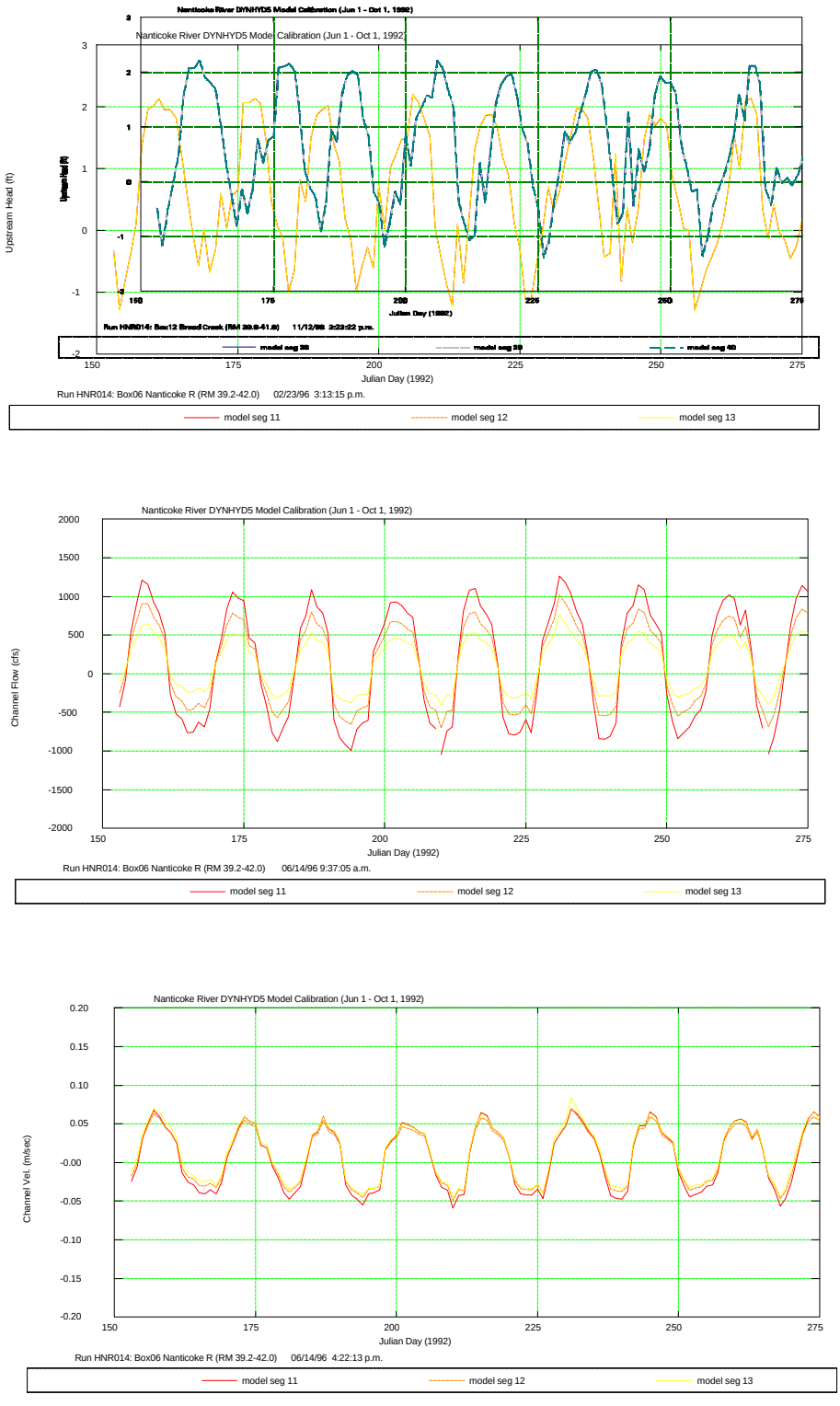
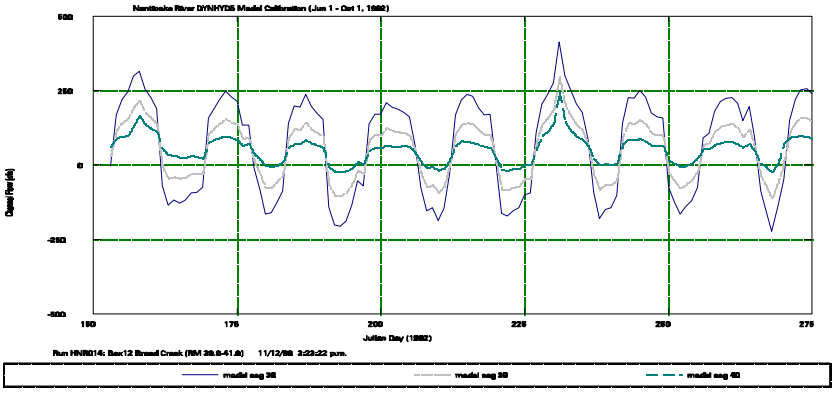
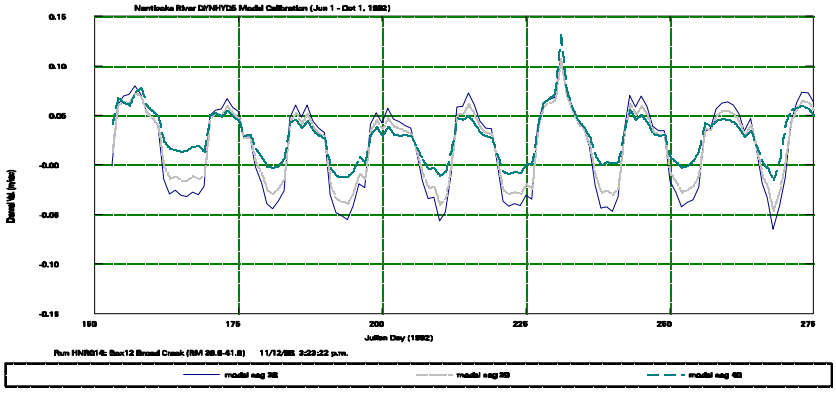


Figure 2-6. Hydrodynamic Model Calibration Results for Nanticoke River (Segments 11, 12, and 13)





Figur e 2-7.

Hydrodynamic Model Calibration Results for Broad Creek (Segments 38, 39, and 40)

2.2. Water Quality Model

The WASP5 water quality model and its eutrophication submodel, EUTRO5, were applied to Delaware's portion of the Nanticoke River and Broad Creek. WASP5 is a dynamic compartment model that can be used to analyze a variety of water quality problems in such diverse water bodies as ponds, streams, lakes, reservoirs, rivers, estuaries, and coastal waters. The Model applies principles of conservation of mass, which requires that the mass of each water quality constituent be accounted for in one way or another. WASP5 traces each water quality constituent from the point of entry to the system until its final point of export, conserving mass in space and time (9).

The general one dimensional mass balance equation solved by the WASP5 Model is (9):

$$\frac{\partial C}{\partial t} = -\frac{\partial}{\partial t}(U_x C) + \frac{\partial}{\partial x}\left(E_x \frac{\partial C}{\partial x}\right) + S_L + S_B + S_k$$

where:

- C = concentration of the water quality constituent, mg/l
- t = time, day
- U_x = longitudinal advective velocity, m/day
- E_x = longitudinal diffusion coefficient, m^2/d
- S_L = direct (point and nonpoint source) loading rate, g/m^3-day
- S_B = boundary loading (including upstream, downstream, benthic, and atmospheric) rate, g/m^3-day
- S_K = total kinetic transformation rate; positive is source, negative is sink, g/m^3-day

The enhanced version of EUTRO5 submodel applied to the Nanticoke River and Broad Creek can simulate the following eleven constituents:

(1) ammonia-N
(2) nitrite+nitrate-N
(3) inorganic phosphorous-P
(4) single functional group of algae (as chlorophyll-a)
(5) total organic carbon (as ultimate CBOD)
(6) dissolved oxygen
(7) total organic nitrogen-N
(8) total organic phosphorous-P
(9) salinity
(10) total suspended solids
(11) total coliform bacteria

The time step to run the Nanticoke River/Broad Creek Water Quality Model was 60 seconds. The required input data for the model include: initial and boundary concentrations; pollutant loads from point and nonpoint sources; kinetic parameters, constants, and time functions; advective and dispersive transport; and the hydrodynamic model output. In what follows, first, point and nonpoint sources of pollutants in the sub- basin will be discussed briefly. Then, some of the results of the calibrated water quality model will be presented.

2.2.1 Pollution Loads

Point source loads

Discharge of pollutants to the waters of the State is regulated through DNREC's administration of the National Pollution Discharge Elimination System (NPDES) Permits Program. Section 402 of the Water Quality Act of 1987, as amended, requires all dischargers to waters of the State to apply and obtain an NPDES Discharge Permit prior to initiation of discharge. An NPDES Permit is issued for a five-year period and regulates the quality and quantity of pollutants that can be discharged to the surface waters of the State.

Seven municipal and industrial wastewater treatment plants are currently in operation in the Nanticoke River Sub-basin. Figure 2-8 shows the location of these facilities. Table 2-1 lists the identification of these facilities and Table 2-2 lists permitted flows and loads for three pollutants (total nitrogen, total phosphorus, and carbonaceous biochemical oxygen demand) from these seven facilities.

As a requirement of the NPDES Discharge Permit, all facilities discharging to the waters of the State monitor their effluent for flow and concentrations of pollutants and report them to the Department regularly. The results of these monitoring for wastewater treatment plants in the Nanticoke River Sub-basin during the calendar year 1992 are summarized in Table 2-3.

Table 2-1. NPDES Facilities in the Nanticoke River Sub-basin

Facility Name	NPDES No.	Size	Type	Receiving Stream
DuPont Seaford	DE0000035	Major	Industrial	DuPont Gut
Seaford STP	DE0020265	Major	Municipal	Nanticoke River
S.C. Johnson	DE0050971	Minor	Industrial	Nanticoke River
Bridgeville STP	DE0020249	Major	Municipal	Nanticoke River
DelAgra Corp.	DE0050938	Minor	Industrial	Bridgeville Branch
Laurel STP	DE0020125	Major	Municipal	Broad Creek
Mobile Garden Trailer Park	DE0050725	Minor	Municipal	Tributary of Nanticoke River

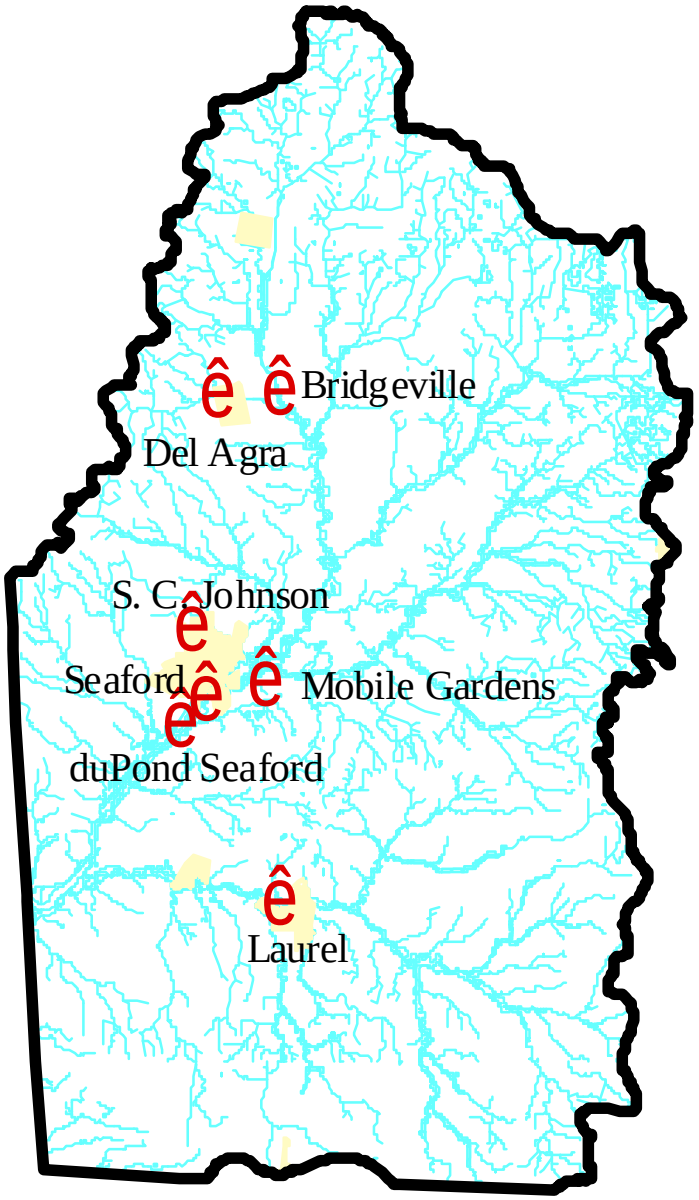


Figure 2-8. Locations of NPDES Facilities in the Nanticoke River Sub-basin

TABLE 2-2. NPDES Permitted Flows and Loads

FACILITY NAME	Flow (mgd)	Daily Load (kg/d)		
		BOD5	Total P	Total N
DuPont Seaford	64.65	187 **	0.0 **	535 **
Seaford STP	2.0	91	15.2	61
S.C. Johnson	0.8	8	0.2 *	20 *
Bridgeville	0.8	91	12.7 *	116 *
DelAgra Corp.	0.715	14	0.3 *	20 *
Laurel STP	0.5	57	5.4 *	22 *
Mobile Garden Trailer	0.028	2	0.4 *	3 *
Total	69.093	455	34.2	767

* Loads are not a permit limit, but are based on monitoring results.
** Net load from DuPont Plant (after considering load in the intake)

TABLE 2-3. Monitoring Results for the NPDES Facilities During 1992

FACILITY NAME	Flow (mgd)	Concentration (mg/l)			Daily Load (Kg/d)		
		BOD5	Phosp.	Nitrogen	BOD5	Phosp.	Nitrogen
DuPont Seaford	37.8	2.7	0.12	6.8	102 *	0.0 *	291*
Seaford STP	0.95	11.3	3.0	22.2	41	10.8	80
S.C. Johnson	0.23	2.5	0.1	6.5	2	0.1	6
Bridgeville STP	0.17	12	4.2	38.2	8	2.7	25
DelAgra Corp.	0.12	2.0	0.1	7.53	1	0.0	3
Laurel STP	0.19	10.7	2.85	11.5	8	2.1	8
Mobile Garden Trailer Park	0.028	15.0	4.0	30.0	2	0.4	3
Total	**39.488**	--	--	--	**164**	**16.1**	**416**

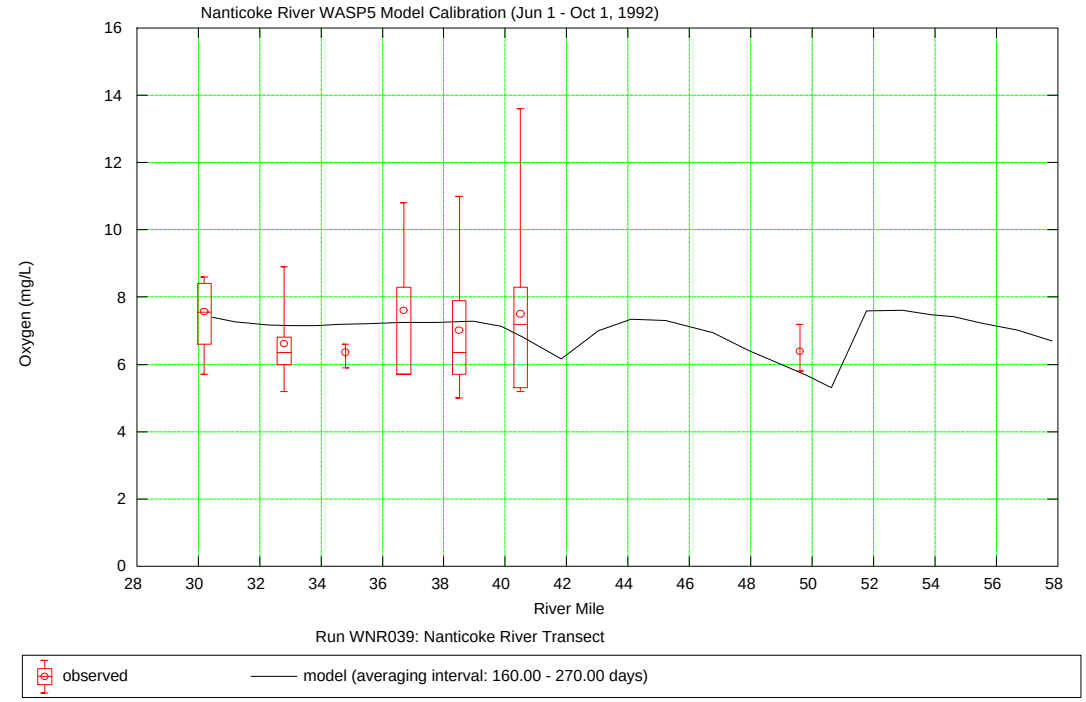
* Net load from DuPont Seaford Plant (after considering credit for intake)

Nonpoint source loads

Surface runoffs from agricultural fields and urban areas are major sources of bacteria, organic matters, and nutrients to the waters of the Nanticoke River and Broad Creek. The magnitude of nonpoint source loads in the Nanticoke River Sub-basin has been studied by several investigators including Ritter and Scarborough (11), Davis and Greene (12), and Tetra Tech, Inc. (8). The results of these three investigations will be reviewed in Chapter 3 of this report.

2.2.2. Results of the Calibrated WASP Model

As stated earlier, the WASP5 Water Quality Model of the Nanticoke River and Broad Creek was developed for the hydrodynamic and loading conditions of the year 1992. The Model was, then, successfully calibrated using the observed field data at monitoring stations (in Figure 1-4) in the sub-basin. Figures 2-9 through 2-14 show the average concentrations of various constituents in the transect of the Nanticoke River and the Broad Creek, as projected by the Model. These values are average concentrations during summer season, which is considered here to be from June through September.



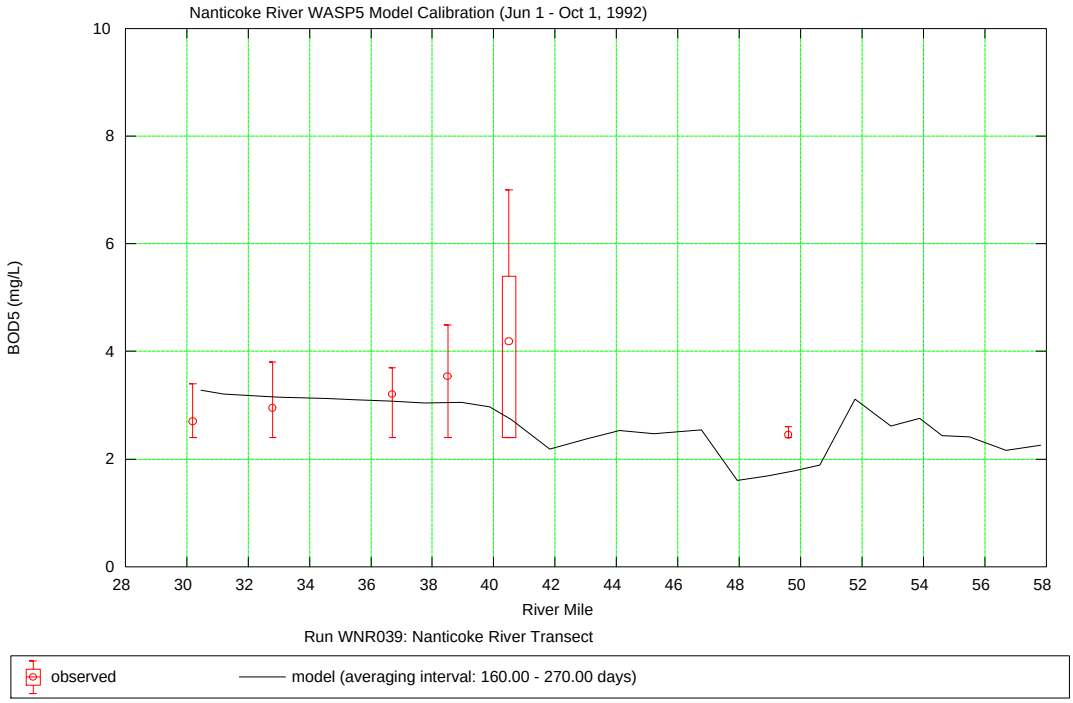
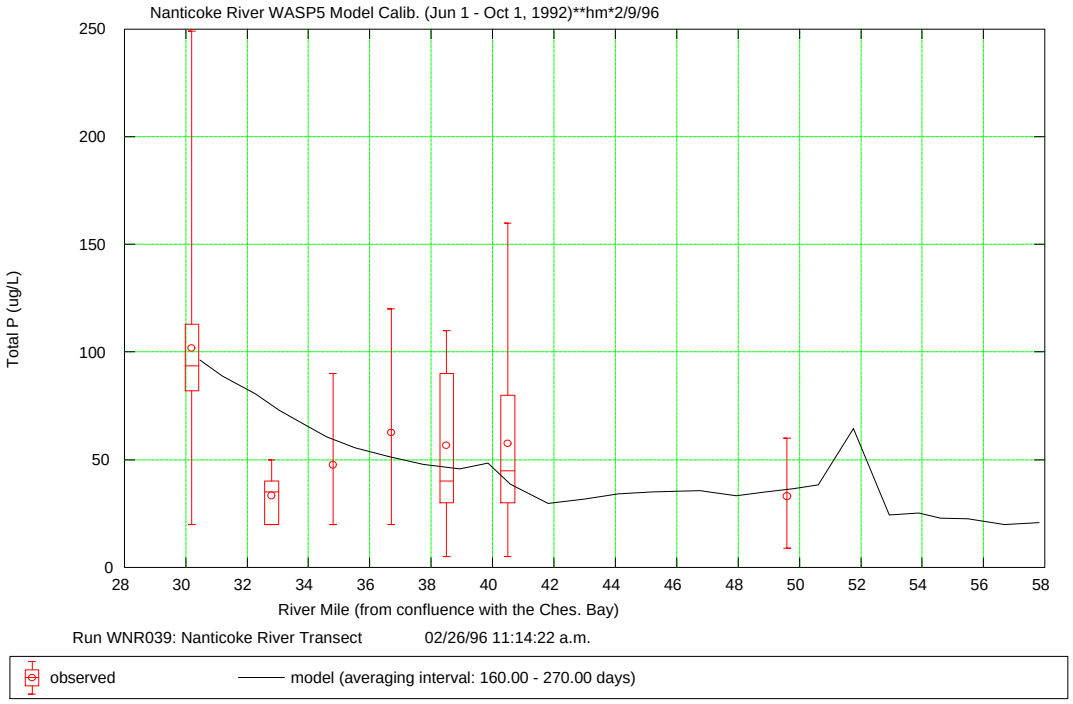


Figure 2-9. Calibration of Dissolved Oxygen and BOD5 for the Nanticoke River



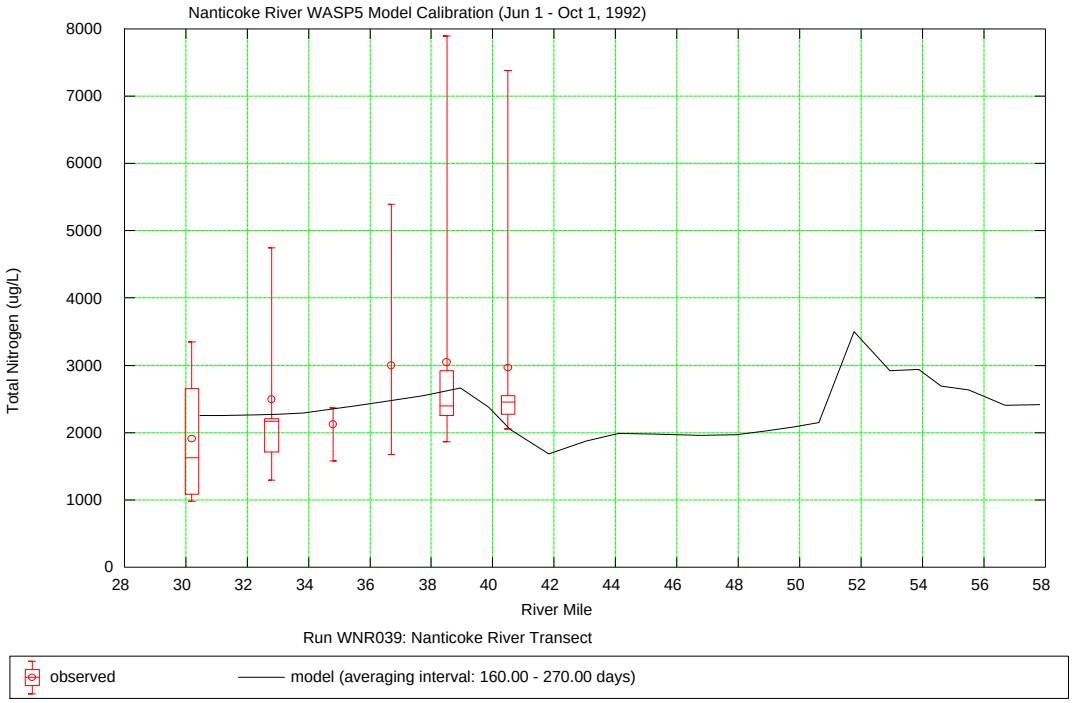
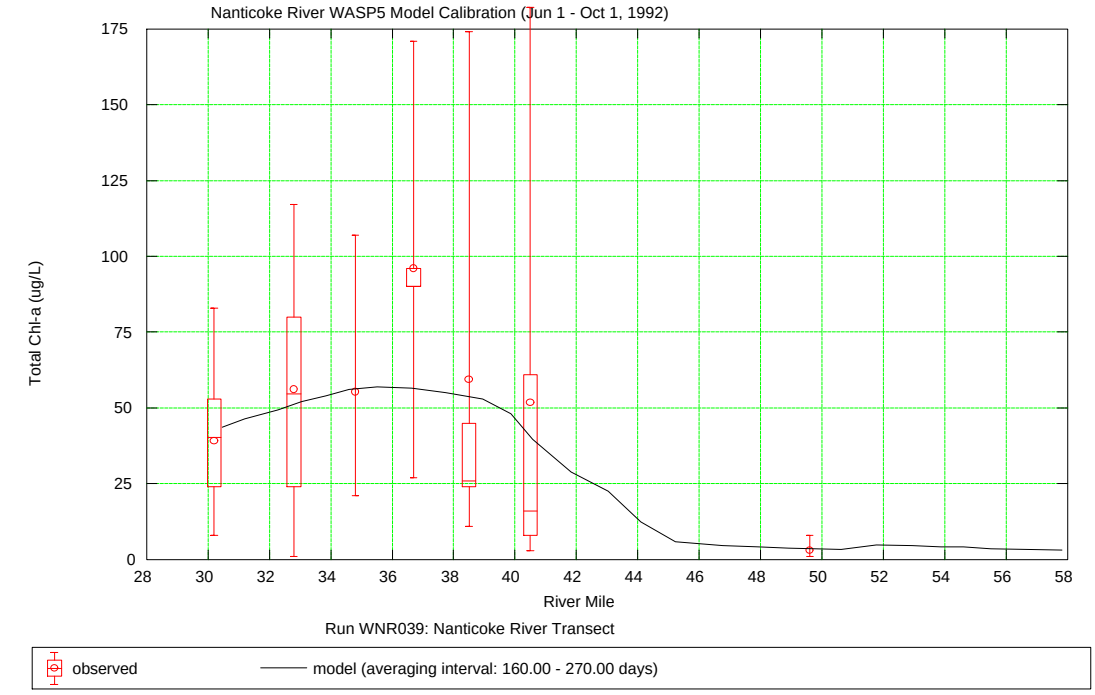


Figure 2-10. Calibration of Total Phosphorus and Total Nitrogen for the Nanticoke River



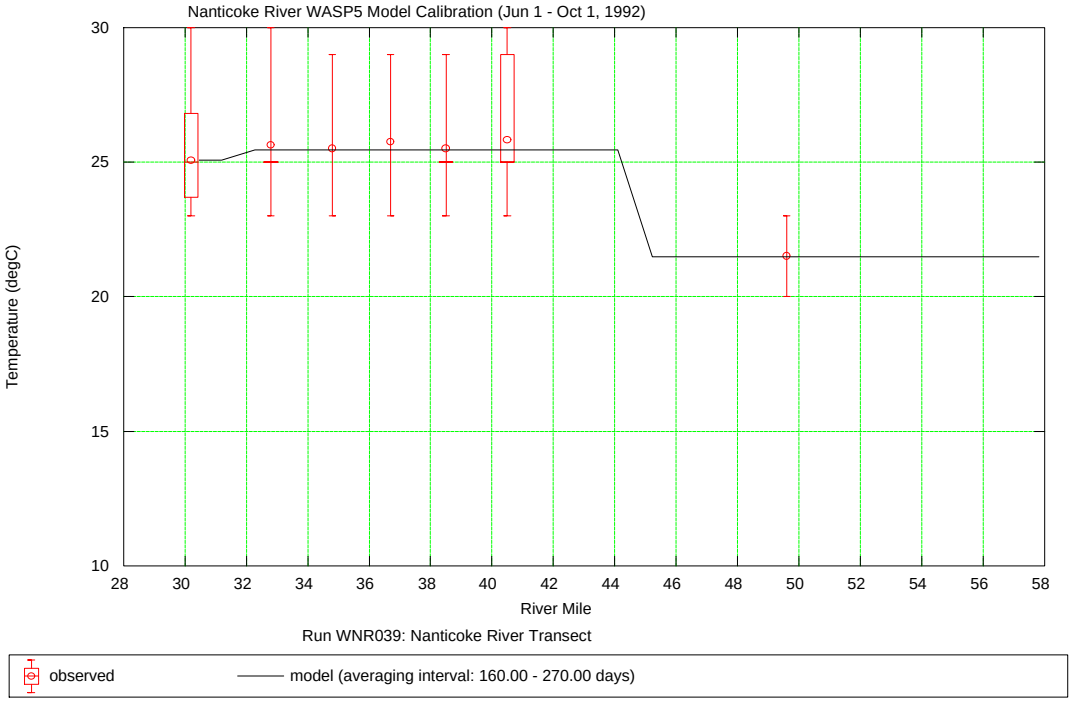
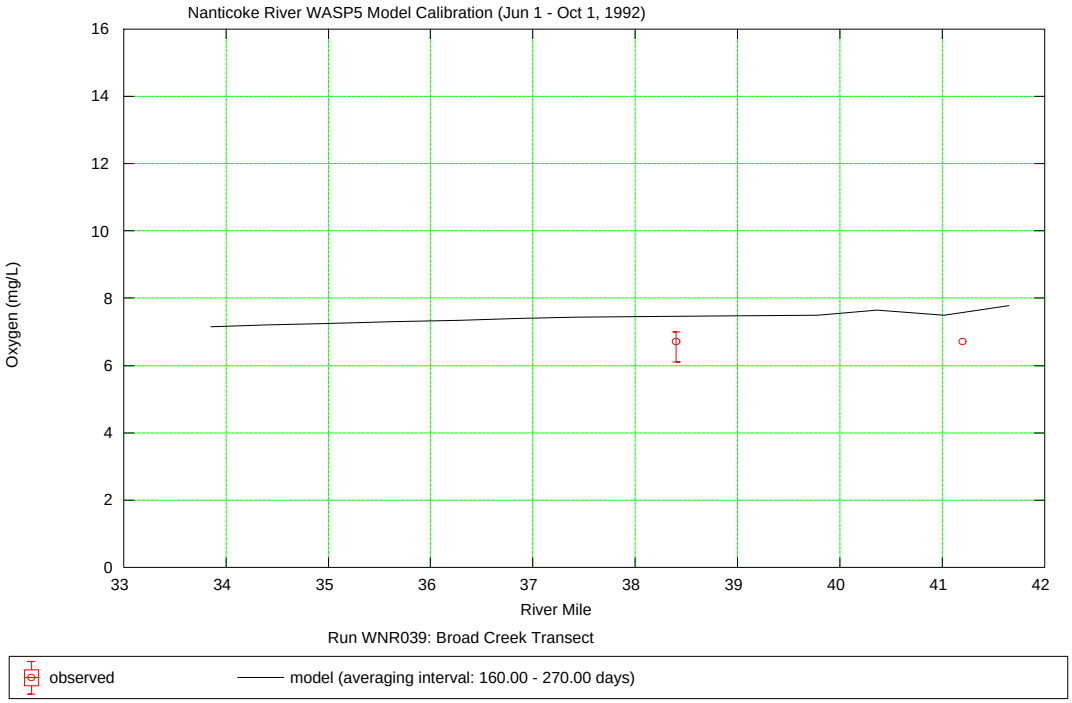


Figure 2-11. Calibration of Phytoplankton (Chl-a) and Temperature for Nanticoke River



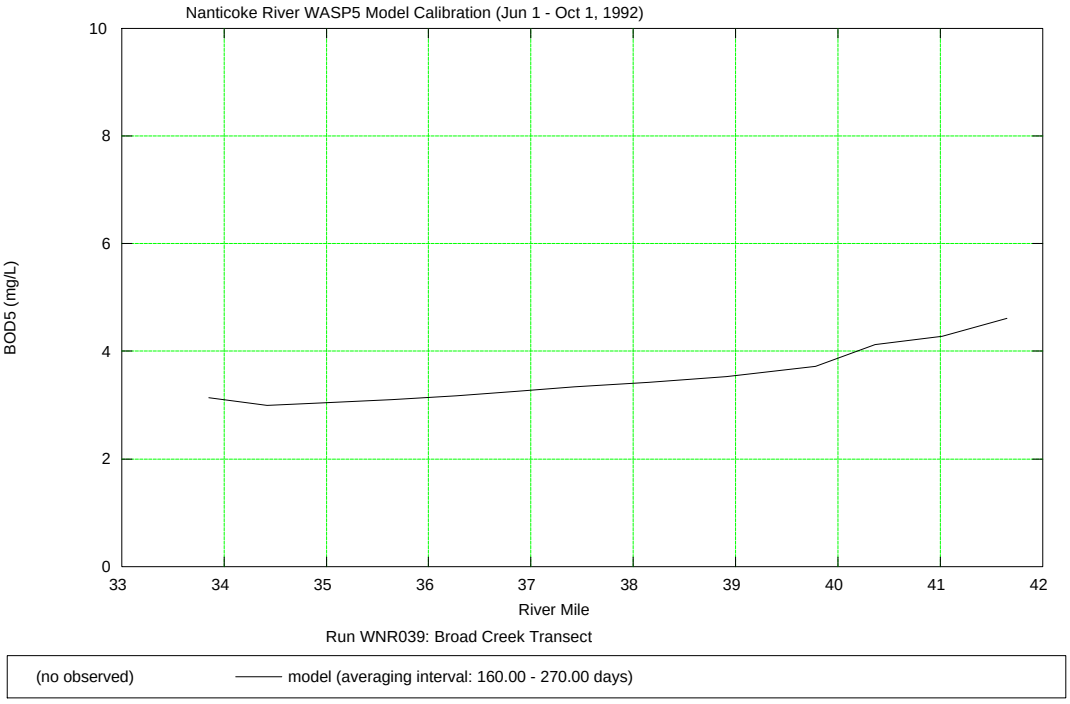
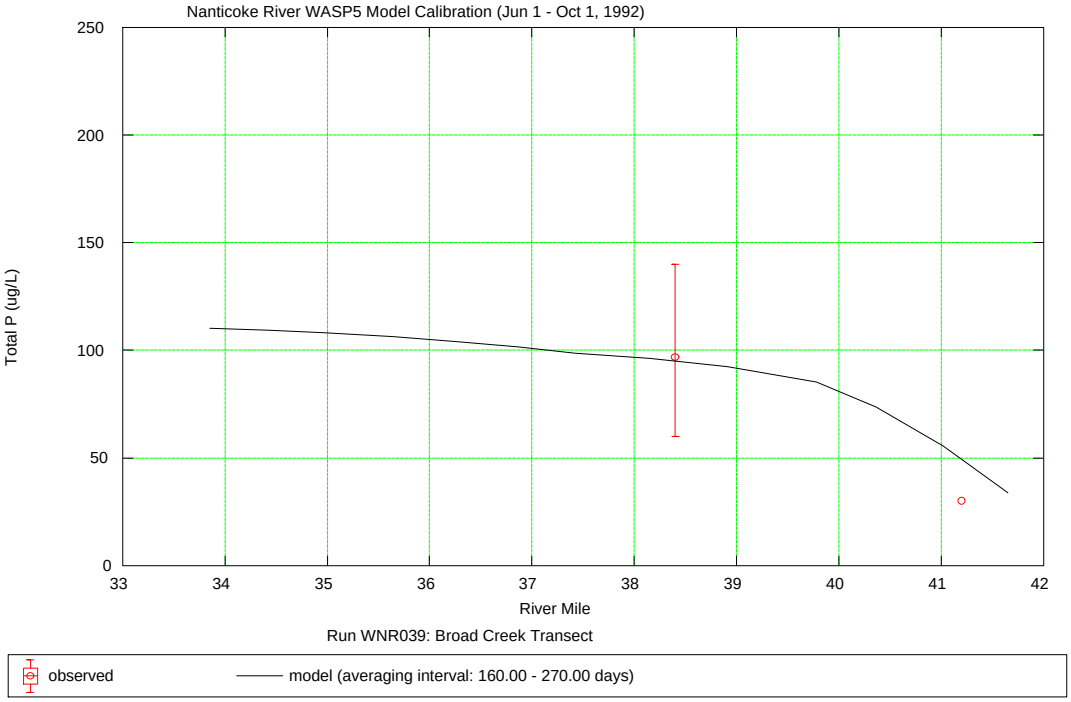


Figure 2-12. Calibration of Dissolved Oxygen and BOD5 for the Broad Creek



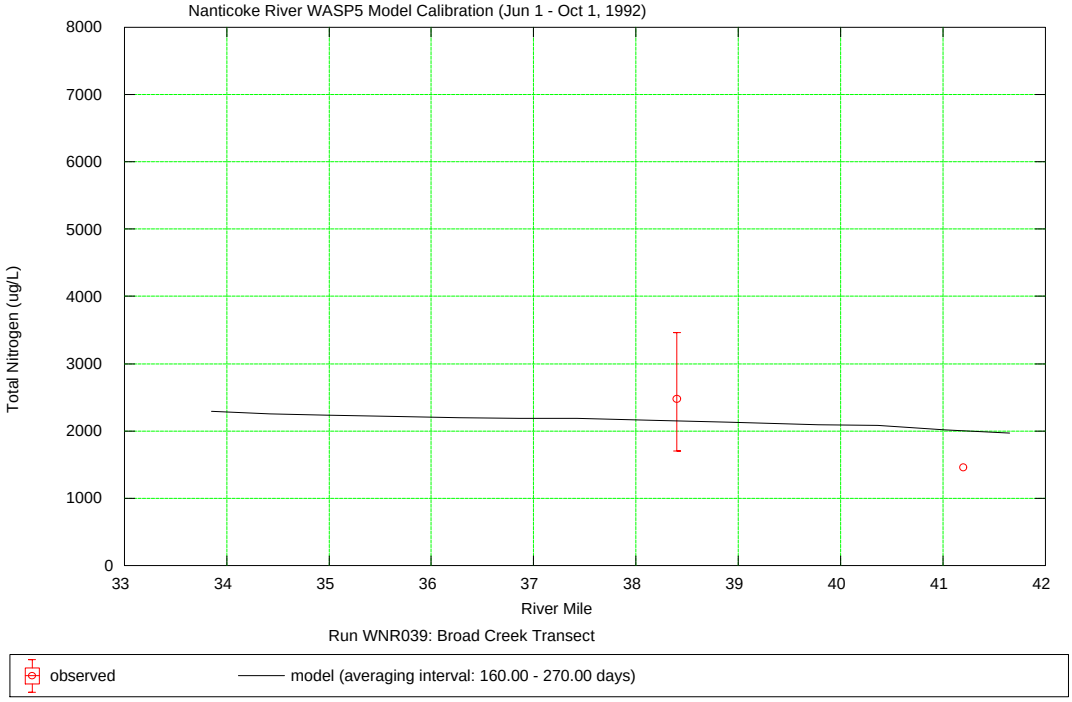
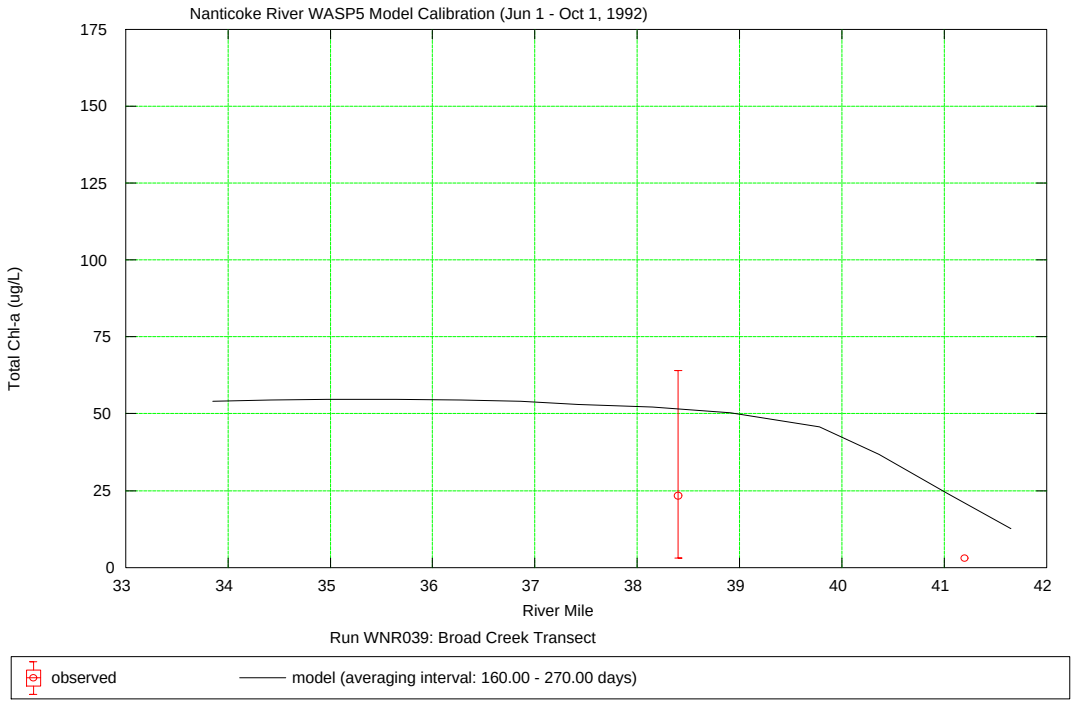


Figure 2-13. Calibration of Total Phosphorus and Total Nitrogen for the Broad Creek



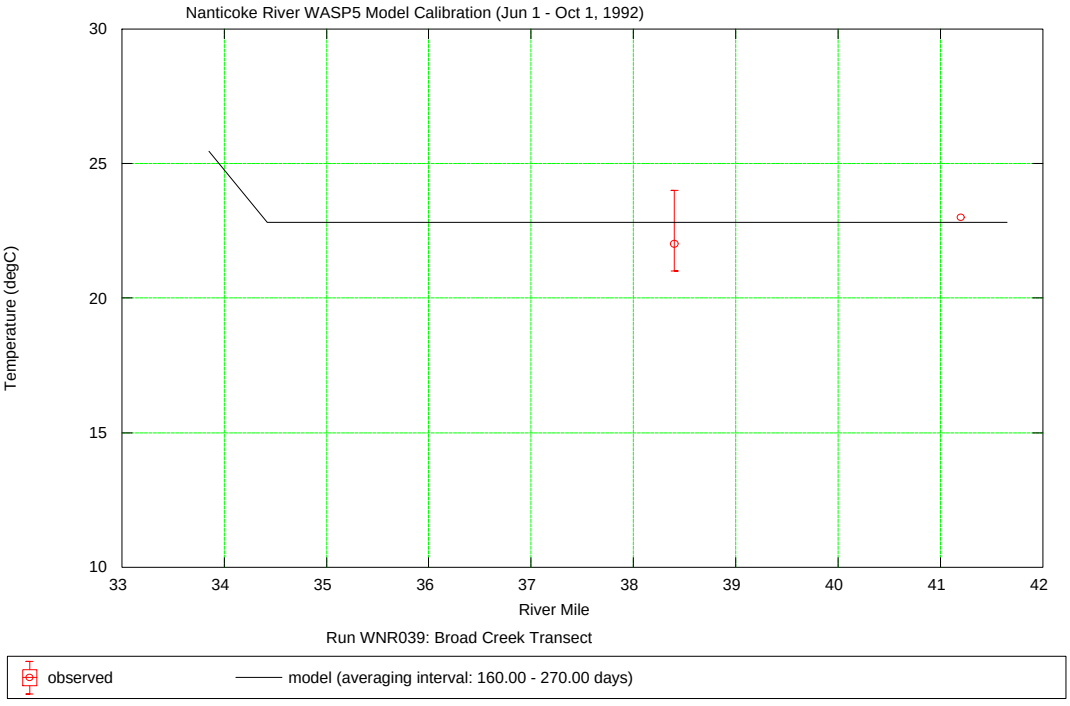


Figure 2-14. Calibration of Phytoplankton (Chl-a) and Temperature for the Broad Creek

3. Evaluation of Various Loading Scenarios

To investigate the effectiveness of various load reduction scenarios in improving water quality of the Nanticoke River and Broad Creek, seventeen loading scenarios were considered (Table 3-1). Using the calibrated Hydrodynamic and Water Quality Model of the Nanticoke River and Broad Creek, water quality conditions of the receiving streams under each scenario were projected. In what follows, a brief description of each scenario and the projected water quality conditions of the Nanticoke River and Broad Creek for the scenario will be presented.

Table 3-1. Loading Scenarios

Scenario	Input File(s)	Description
Base Run	HNR014.INP/ WNR039.IN	Tetra Tech's final run - 1992 hydrologic and loading condition. This is considered as the base run.
One	HNR014.INP/ WNR050.INP	Same as the Base Run except when nonpoint sources loads are reduced to zero.
Two	HNR014.INP/ WNR051.INP	Same as scenario One except when SCALE factor for point sources are changed to zero. This scenario represents a condition when both point and nonpoint source loads are zero.
Three	HNR014.INP/ WNR030.INP	Same as the Base Run scenario except when it is assumed that nonpoint source loads estimated by Ritter and Scarborough (11).
Four	HNR014.INP/ WNR040.INP	Same as base run (1992 condition) except when it is assumed that nonpoint source loads estimated by Davis and Greene (12).
Five	HNR015.INP/ WNR054.INP	Same as the base run loading condition except for 7Q10 flow conditions.
Six	HNR015.INP/ WNR055.INP	Same as scenario Five (7Q10 flow condition) except when it is assumed that point source loads are zero (SCALE=0 for PS LOAD).
Seven	HNR015.INP/ WNR056.INP	Same as scenario Six except when it is assumed that scale factor for seaward boundary condition is 0.5 (instead of 1.0) for BOD5, P, N, and Chl-a
Eight	HNR015.INP/ WNR057.INP	Same as scenario Five (7Q10 flow condition) except when it is assumed that point source load from Seaford STP is twice as much as it was during 1992.
Nine	HNR015.INP/ WNR058.INP	Same as scenario Five (7Q10 flow condition) except when it is assumed that point sources are discharging according to their permitted flows and loads.
Ten	HNR015.INP/ WNR059.INP	Same as scenario Nine (7Q10 flow + permitted flow and loads from point sources) except considering Biological Nutrient Removal (BNR) for Seaford, Bridgeville, and Laurel STPs.

Scenario	Input File(s)	Description
Eleven	HNR015.INP/ WNR060.INP/	Same as scenario Ten (7Q10 flow + permitted flow and loads for point sources + BNR for three facilities) except when it is assumed that Best Management Practices (BMPs) are implemented for control of nonpoint source loads. Furthermore, it is assumed that BMPs would result in 30% reduction of total N and 50% reduction of total P loads.
Twelve	HNR015.INP/ WNR061.INP	Same as scenario Eleven (7Q10 flow + permitted flow and loads from point sources + BNR for three facilities + BMPs for nonpoint sources) except when it is assumed that pollutant loads from Seaford and Bridgeville STPs are reduced by half.
Thirteen	HNR014.INP/ WNR062.INP	Same as scenario Twelve (7Q10 flow + permitted flow and load from point sources + BNR for three facilities + BMPs for point sources + ½ of BNR loads from Seaford and Bridgeville) except for the 1992 flow condition.
Fourteen	HNR014.INP/ WNR063.INP	The 1992 flow and nonpoint source load condition + permitted flow and load from point sources + BNR for three facilities + ½ of BNR loads from Seaford and Bridgeville + BMPs for nonpoint sources.
Fifteen	HNR014.INP/ WNR064.INP	Same as the Base Run except with permitted flows and loads from point sources.
Sixteen	HNR015.INP/ WNR065.INP	Same as scenario Twelve (7Q10 flow + permitted flows and loads from point sources + BNR for three facilities + BMPs for nonpoint source + ½ of BNR loads from Seaford and Bridgeville) except when it is assumed that BNR load from Laurel STP is also reduced by ½.
Seventeen	HNR015.INP/ WNR066.INP	Natural Condition (Hypothetical) - 7Q10 flow + no point source load + using 0.5 (instead of 1.0) as scale factor for seaward boundary condition for BOD5, total P, total N, and Chl-a + BMPs for nonpoint sources

3.1. Sensitivity Test - Scenarios One and Two

These two scenarios were considered in order to test the sensitivity of the Nanticoke River Model to changes in point and nonpoint source loads. Both scenarios consider 1992 flow condition. The results of the Model runs showed that the Model responds reasonably well to changes in pollutant loads from point and nonpoint sources.

3.2. Estimation of NPS Load - Scenarios Three and Four

These two scenarios were considered in order to determine a reasonable estimate of nonpoint source (NPS) pollutant loads during 1992. As it was stated earlier, three different methods were used to estimate the nonpoint source pollutant loads for the Nanticoke River Sub-basin (11, 12, 8). The magnitude of the pollutant loads estimated by different methods are significantly different. Since NPS load is a major input to the model, selection of a reasonable estimate of

nonpoint source load for developing TMDL is greatly needed.

Ritter and Scarborough (11) used land use information to estimate nonpoint source loads. They assigned nutrient loading rates for different land use/land coverages to estimate nutrient budget for the entire Nanticoke River Sub-basin. Their estimates of total nitrogen and total phosphorous loads during a dry, normal, and wet year are shown in Table 3-2.

Davis and Greene (12) used regression analysis to estimate daily flows at 12 tributaries in the Nanticoke River sub-basin during 1992. Then, using the results of monitoring data at selected stations in those tributaries, they estimated daily phosphorous and nitrogen loads for each tributary during the year 1992. Their estimates of nonpoint source nutrient loads are shown in Table 3-3.

Finally, Tetra Tech (8) used the ratio of tributaries drainage areas to the drainage area at the Nanticoke River USGS Gaging Station 01487000 to estimate daily flows for the tributaries during 1992. Totally, 22 tributaries were considered in the sub-basin. Then, using representative concentrations (from long term monitoring results) of these tributaries, Tetra Tech estimated the nitrogen and phosphorous loads for the year of 1992 (see Table 3-4).

A comparison of these three estimates of nonpoint source nutrient loads during 1992 is shown in Figure 3-1. A total load for the sub-basin was used for each estimate. To construct Figure 3-1, Ritter-Scarborough's estimates for nitrogen and phosphorous loads during the year 1992 were considered to be 72.5% of their estimates for a normal year, since annual average flow during 1992 was 65.25 cfs, which is 72.5% of long term average flow of 90 cfs. The loads estimated by first two methods are higher than Tetra Tech's by more than 2.5 times.

Scenario Three uses Ritter and Scarborough's load estimates, and Scenario Four uses Davis and Greene's load estimates. While Tetra Tech's estimation are used in base run. The results of total nitrogen (TN) and total phosphorus (TP) concentrations for Scenarios Three and Four are presented in Figures 3-2 and 3-3, respectively. Comparing the model results to 1992 observed data, TN and TP concentrations projected by these two scenarios are high above the observations, while base run's TN and TP concentrations (Figure 2-10) fit better to the observed data. This indicates that considering loads higher than what are estimated by Tetra Tech would result in unrealistically elevated concentrations of pollutants in the receiving streams. Therefore, Tetra Tech's estimation of nonpoint source load is considered reasonable and is used in this TMDL analysis.

Table 3-2. Ritter and Scarborough's Estimate of Nonpoint Source Load (11)

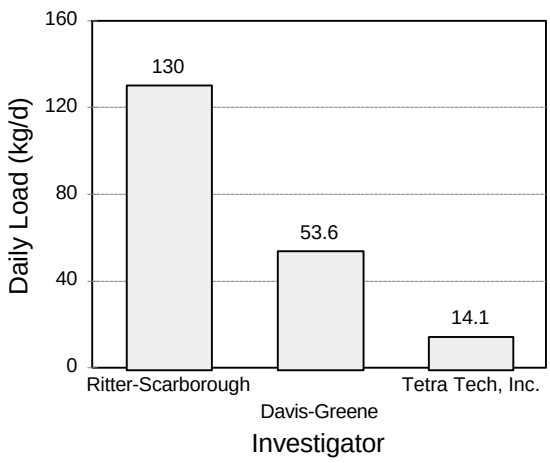
Watershed	Total P (kg/d)			Total N (kg/d)		
	Moisture Regime			Moisture Regime		
	Dry	Normal	Wet	Dry	Normal	Wet
Main Stem Nanticoke River	35	67	100	919	1706	2507
Broad Creek	28	60	81	944	1807	2436
Deep Creek	14	25	38	324	604	890
Gravely branch	8	15	23	193	359	528
Gum Branch	7	13	20	115	265	296
Total	**92**	**180**	**262**	**2495**	**4741**	**6657**

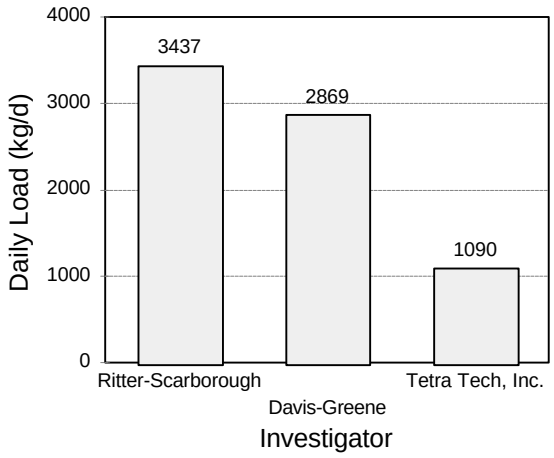
Table 3-3. Davis and Greene's Estimate of Nonpoint Source Nutrient Load (yr 1992)(12)

Tributary	Total Phosphorous (kg/d)	Total Nitrogen (kg/d)
Butler Mill Branch	0.8	70
Chapel Mill Branch	0.3	40
Concord Pond	6.8	286
Cool Branch	10.3	63
Gravely Branch	2.7	145
Gum Branch	0.5	34
Hearns Pond	6.9	116
Horsey Pond	2.1	101
Portsville Pond	1.0	107
Main stem Nanticoke River at Rt. 545	9.4	631
Record Pond	12.0	789
Williams Pond	0.8	487
Total	**53.6**	**2869**

Table 3-4. Tetra Tech, Inc.'s Estimate of Nonpoint Source Nutrient Load (for the Year 1992)

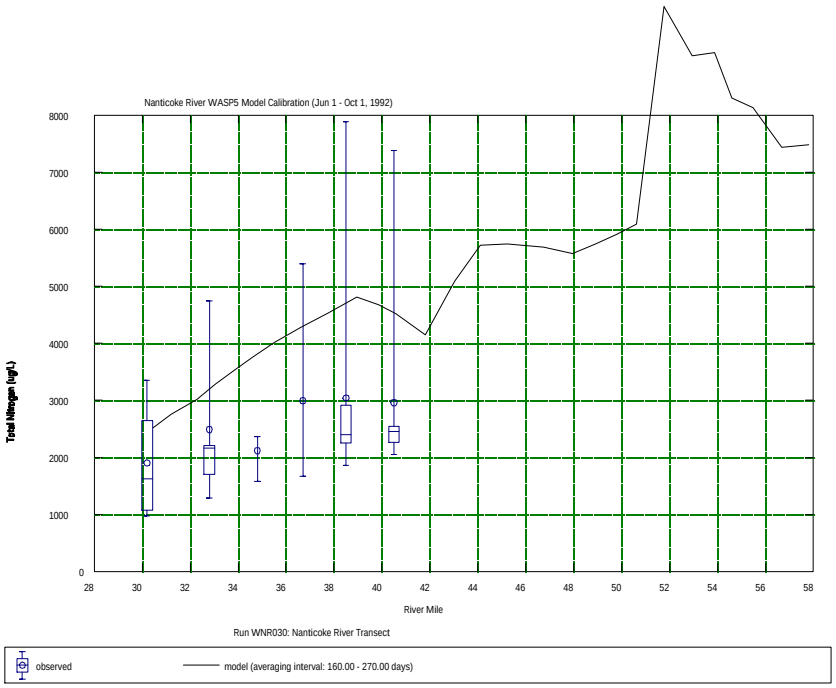
Tributary	Total Phosphorous (kg/d)	Total Nitrogen (kg/d)
Dennis Creek	0.1	8
Gales Creek	0.9	62
Cod Creek	0.3	24
Wright Creek	0.2	15
Turtle Branch	0.7	64
Butler Branch	0.3	46
Chapel Branch	0.3	24
Clear Brook	2.1	89
Deep Creek	0.4	23
Gravely Branch	2.5	114
Gum Branch	0.1	13
Bridgeville Branch	0.5	46
Bee Branch	0.4	45
Glade Branch	0.1	9
Cart Branch	0.2	25
White Marsh Branch	0.9	93
Tussocky Branch	0.4	64
Collins & Culver Ditch	0.2	12
Holly Ditch	0.3	22
Little Creek	1.2	57
Records Pond	2.0	235
TOTAL	**14.1**	**1090**





Total P **Total N**

Figure 3-1. Three Estimates of Nonpoint Source Nutrient Loads for Nanticoke River Sub-basin (year 1992)



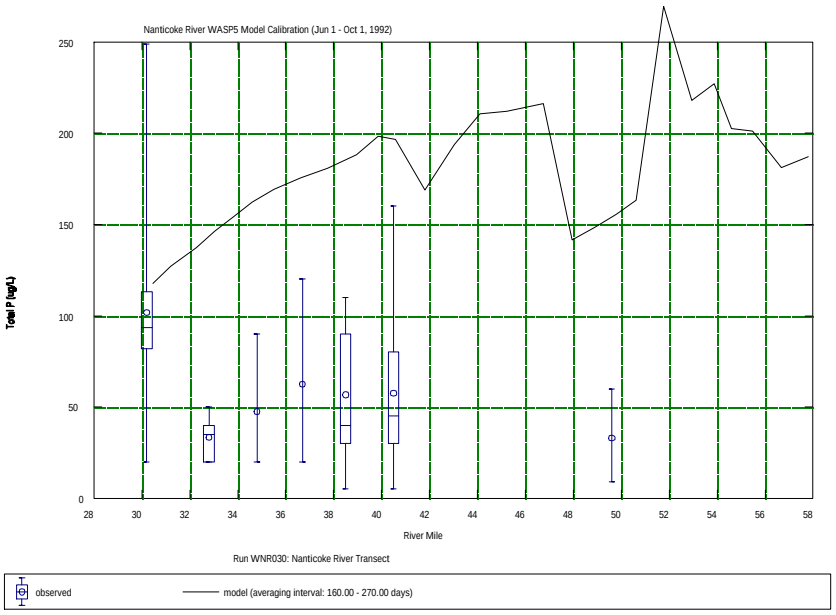
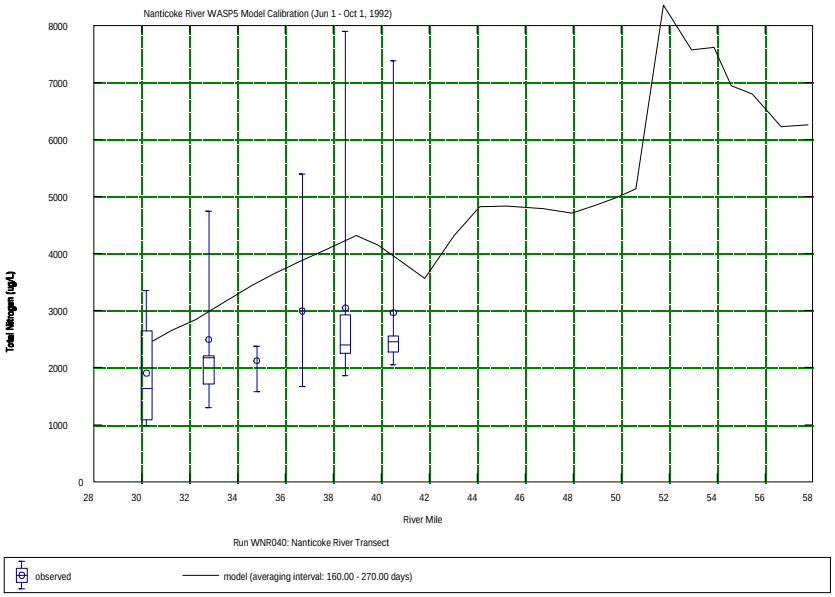


Figure 3-2. Concentrations of TN and TP of Nanticoke River - Scenario Three



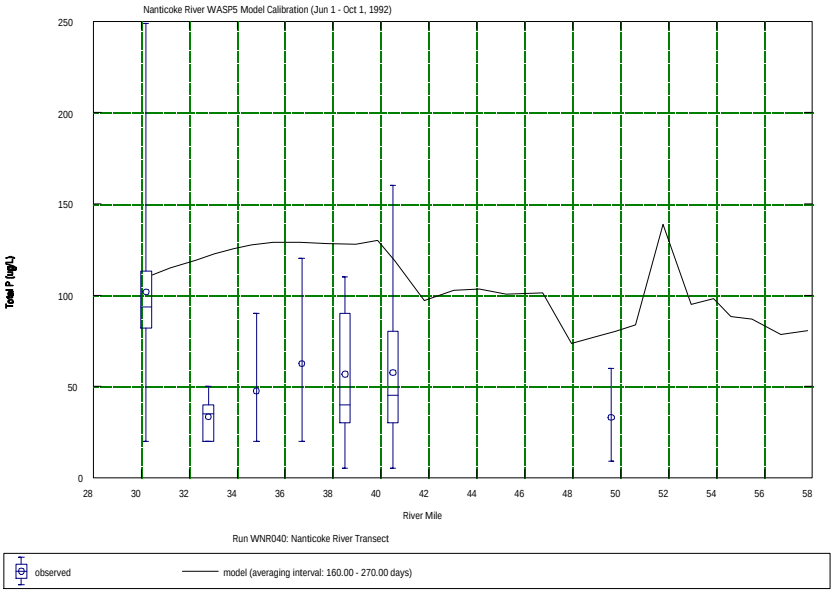


Figure 3-3. Concentrations of TN and TP of Nanticoke River - Scenario Four

3.3. Water Quality During 7Q10 Flow Condition - Scenario Five

This scenario was considered in order to project water quality condition of Nanticoke River and Broad Creek during a critical (design) flow condition. Section 8 of the Standard (1) requires that all water quality standards and criteria, except those for toxic substances, apply at flows higher than 7Q10 condition. 7Q10 flow is defined as the 7-day, consecutive low flow with a recurrence interval of 10 years. As this TMDL deals with nutrients and DO problems, it is appropriate to run loading scenarios under this extreme condition.

In this scenario, the Hydrodynamic Model was run using estimated 7Q10 flows for the mainstem of Nanticoke River and Broad Creek as well as tributaries in the sub-basin (Table 3-5). And the Water Quality Model was run using 1992 measured pollutant loads from point sources and nonpoint sources. The results of model runs for this scenario are shown in Figures 3-4 through 3-6, which shows that during critical flow conditions, pollutant concentrations in the stream would be higher than what was observed during the year 1992.

3.4. Sensitivity Analysis During 7Q10 Flow Condition - Scenarios Six, Seven, and Eight

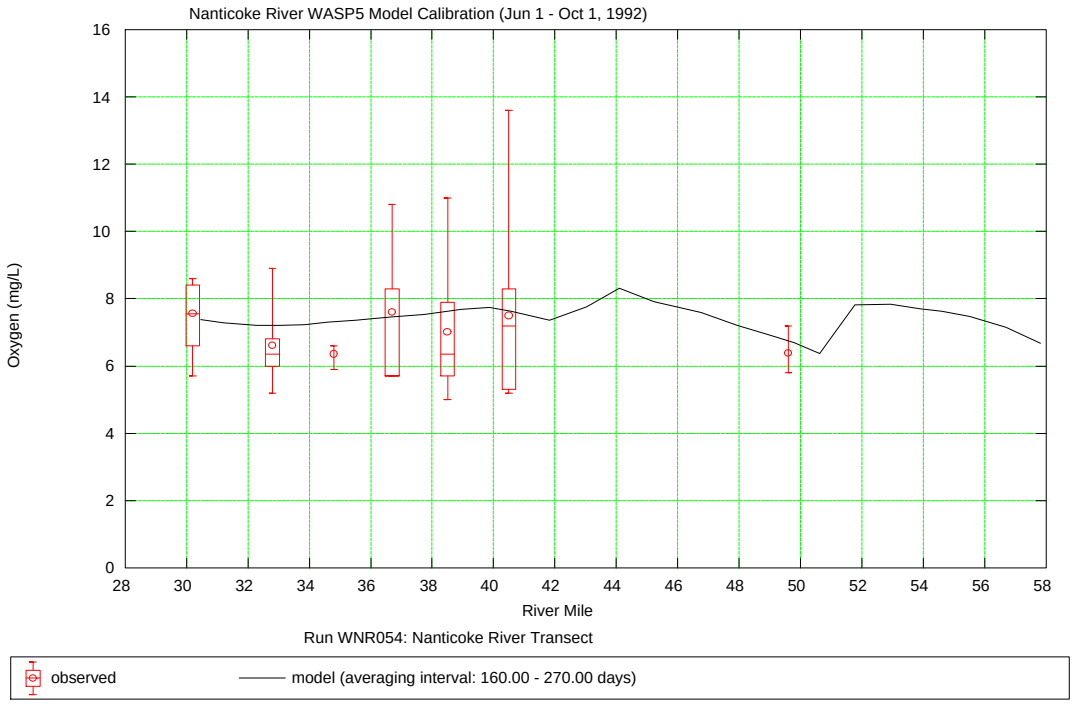
These three scenarios were considered in order to test the model's sensitivity to changes in pollutant loads and boundary condition during 7Q10 flows. The model results showed reasonable responses to changes in pollutant loads and boundary conditions.

3.5. Permitted Loads Under 7Q10 Flow Condition - Scenario Nine

Scenario Nine projects water quality of the Nanticoke River and Broad Creek when all point sources are discharging at their permitted loads while streams have 7Q10 flows. Table 2-2 in Chapter 2 listed permitted loads for point source dischargers. The results of model runs for this scenario are shown in Figures 3-7 through 3-9 which show elevated concentrations of pollutants, especially nitrogen and phosphorous, in the Nanticoke River and Broad Creek.

TABLE 3-5. Tributary Flows Under 7Q10 Condition

Tributary	Drainage Area (mile ^{2})	Model Segment No.	Estimated 7Q10 Flow	
			(f^3/s)	(m^3/s)
Dennis Creek	1.35	1	0.28	0.01
Gales Creek	10.36	2	2.11	0.00
Cod Creek	6.52	3	1.33	0.04
Wright Creek	3.9	3	0.80	0.02
Beaver Dam Branch	2.51	4	0.51	0.01
Turtle Branch	3.95	8	0.81	0.02
Gum Branch (south)	9.01	8	1.84	0.05
Butler Branch	10.3	9	2.10	0.06
Chapel Branch	5.82	9	5.82	0.03
DuPont Gut	4.06	10	0.83	0.02
Clear Brook (Williams Pond)	22.93	12	4.67	0.13
Concord Pond (Deep Creek)	61.15	13	12.47	0.35
Cool Branch (Deep Creek)	4.09	13	0.83	0.02
Gravely Branch	38.77	17	7.90	0.22
Gum Branch (North)	30.38	21	6.19	0.18
No Name Branch	2.06	21	0.42	0.01
Bridgeville Branch	7.25	22	1.48	0.04
Bee Branch	7.04	24	1.44	0.04
Glade Branch	1.41	25	0.29	0.01
Cart Branch	3.85	26	0.78	0.02
Above White Marsh Branch	14.5	28	2.96	0.08
Tussocky Branch	9.81	34	2.00	0.06
Collins & Culver Ditch	2.04	35	0.42	0.01
Holly Ditch	3.69	36	0.75	0.02
Little Creek	16.26	38	3.31	0.09
Records Pond (Laurel)	80.98	40	16.51	0.47
TOTAL	**362.64**	**N/A**	**81.85**	**2.01**



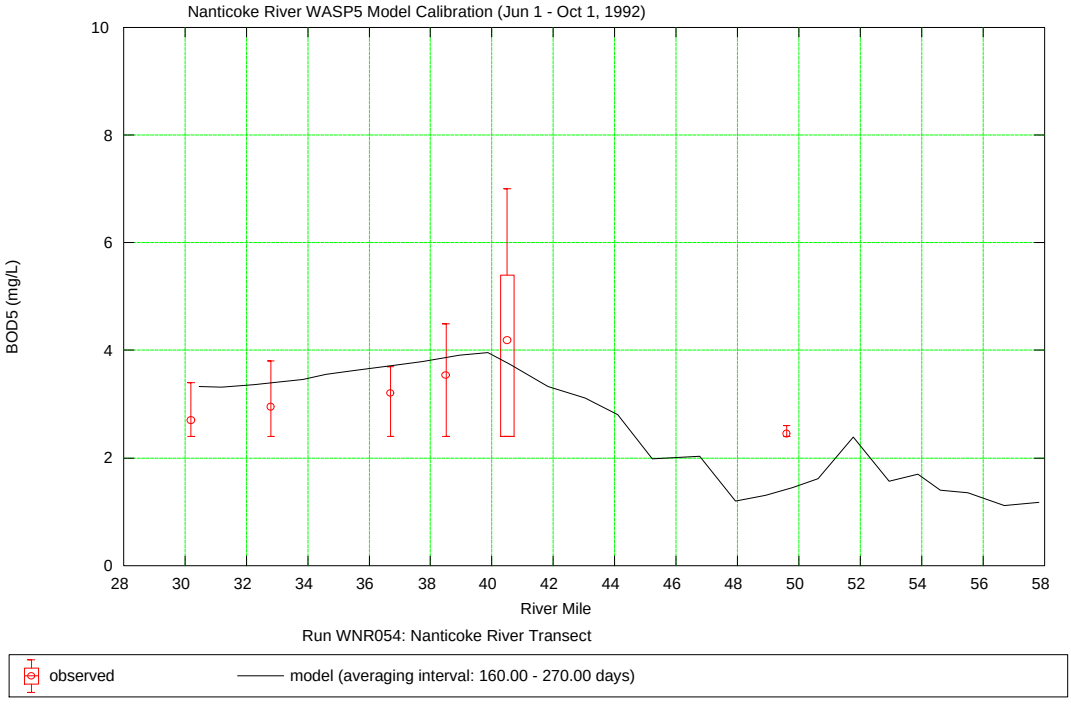
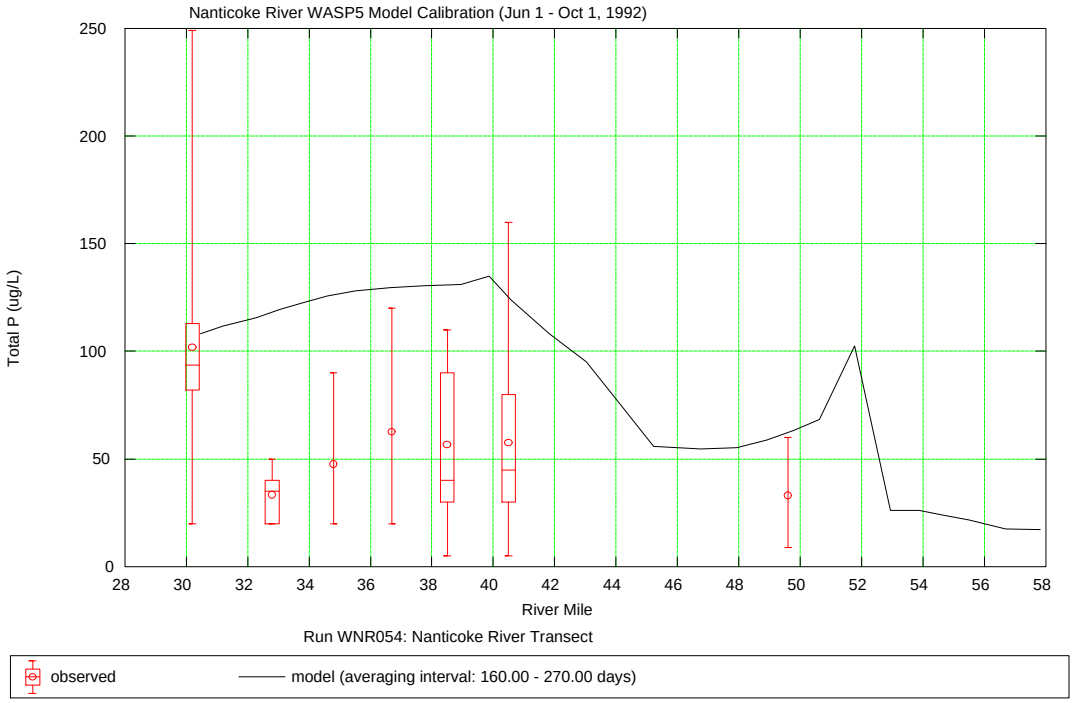


Figure 3-4. Concentrations of DO and BOD5 along Nanticoke River - Scenario Five



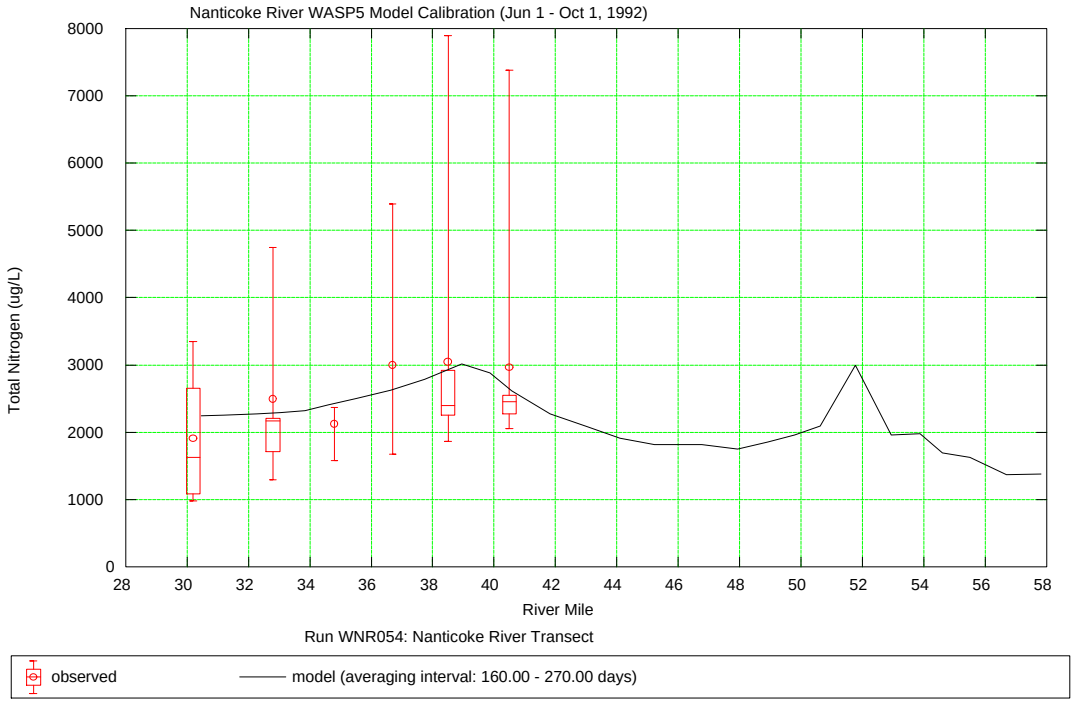
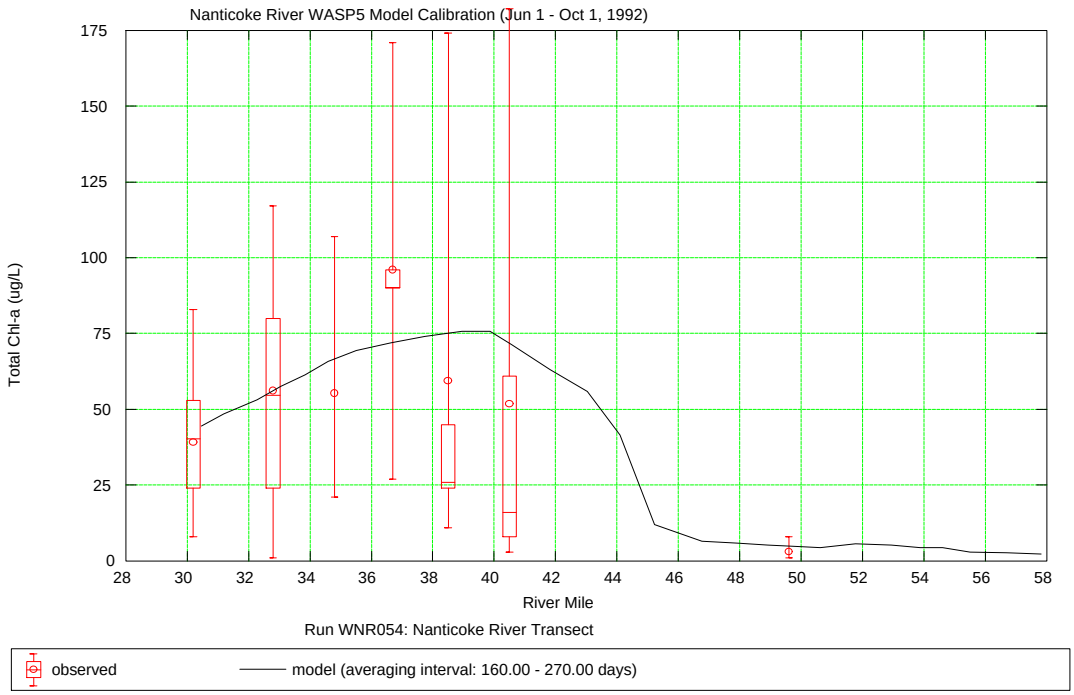


Figure 3-5. Concentrations of TP and TN along Nanticoke River - Scenario Five



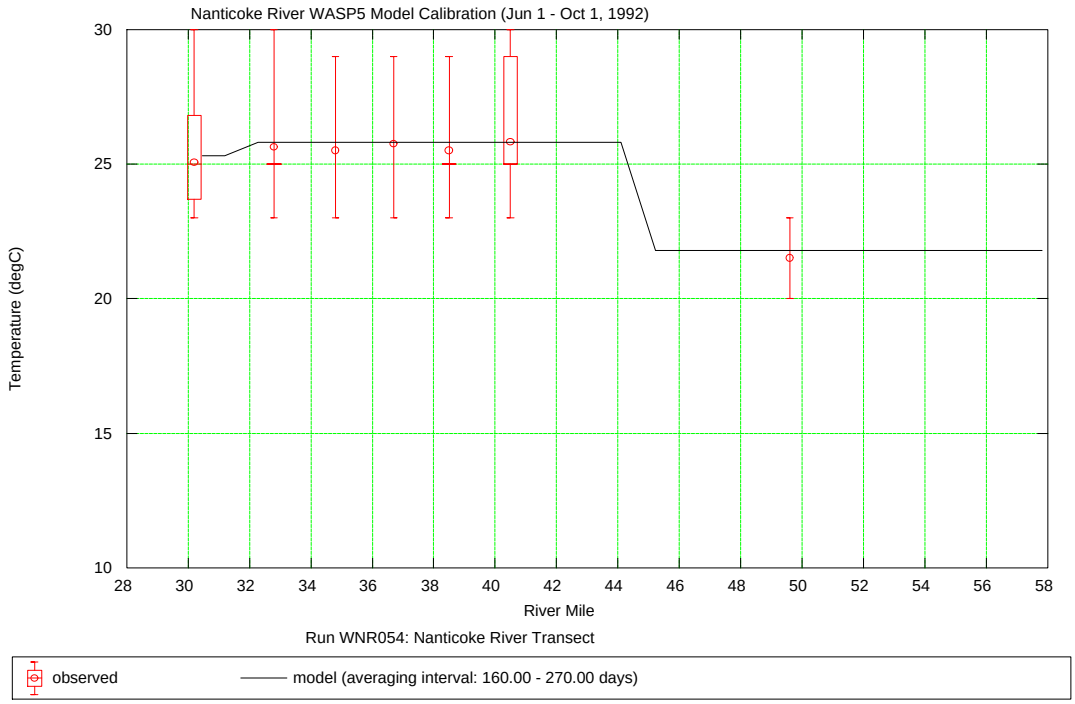
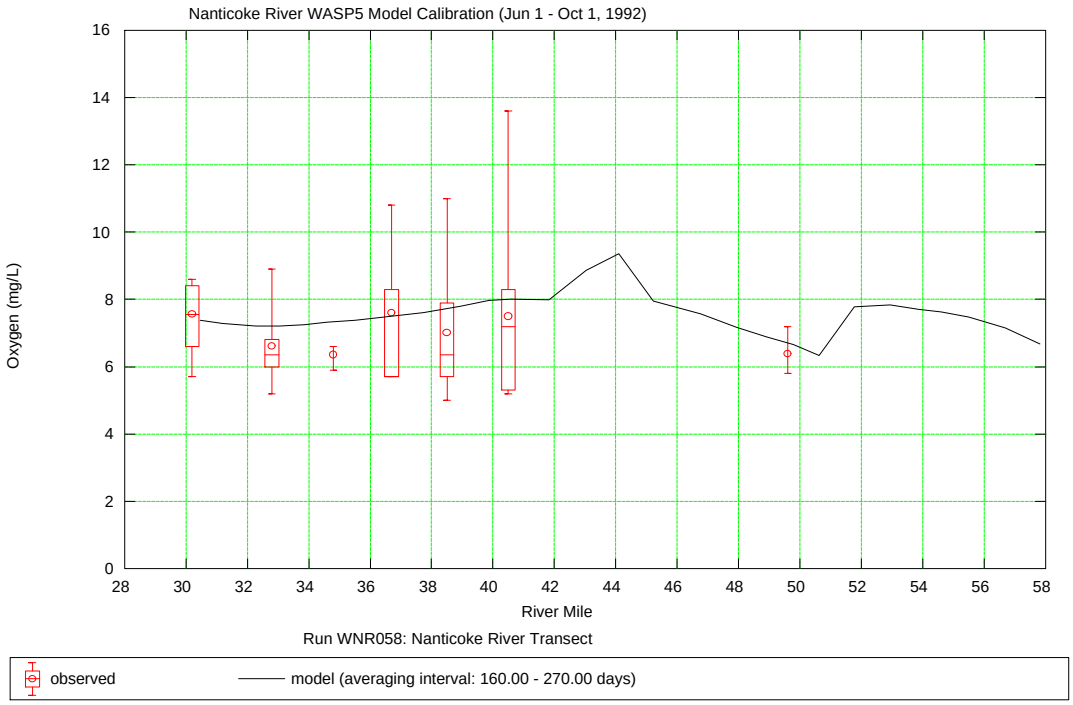


Figure 3-6. Concentrations of Total Chl-a and Temperature along Nanticoke River - Scenario Five



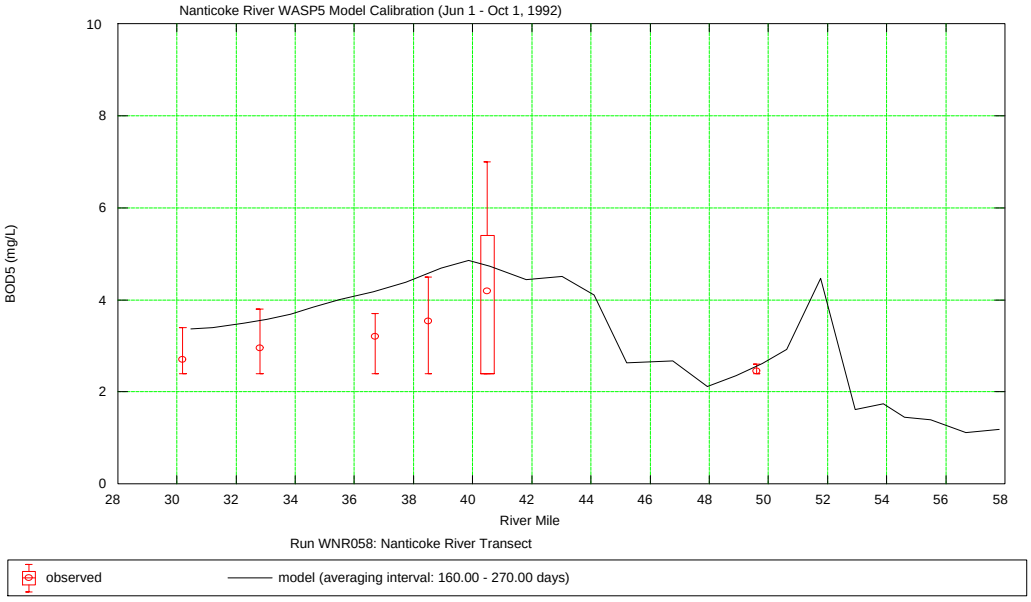
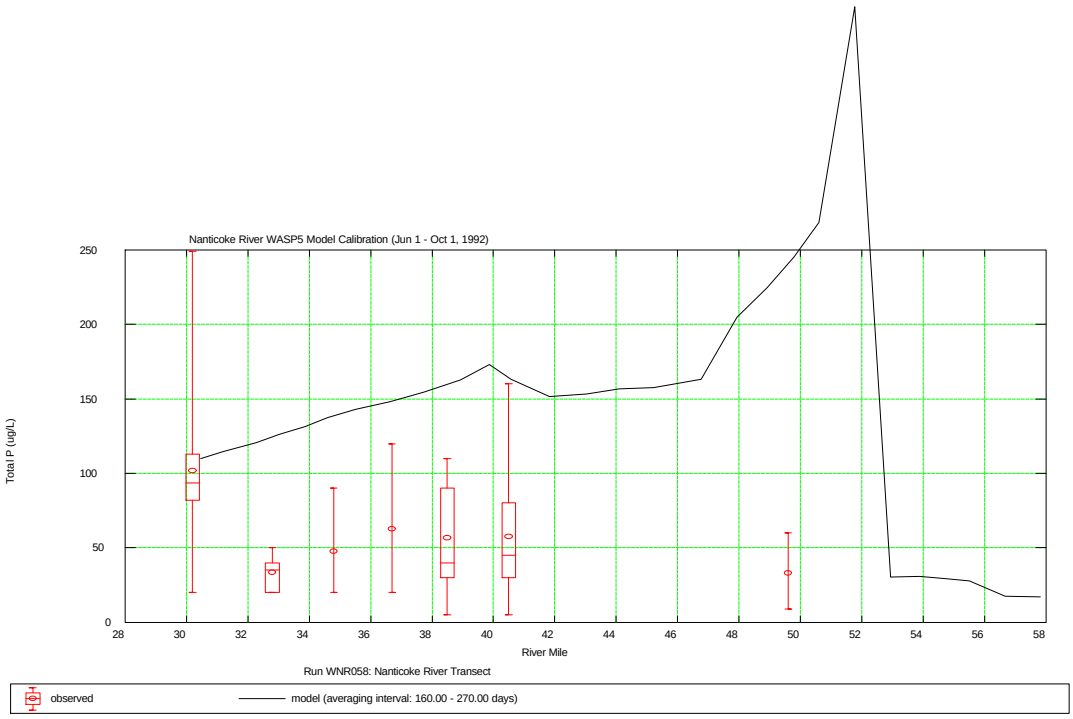


Figure 3-7. Concentrations of DO and BOD5 along Nanticoke River - Scenario Nine



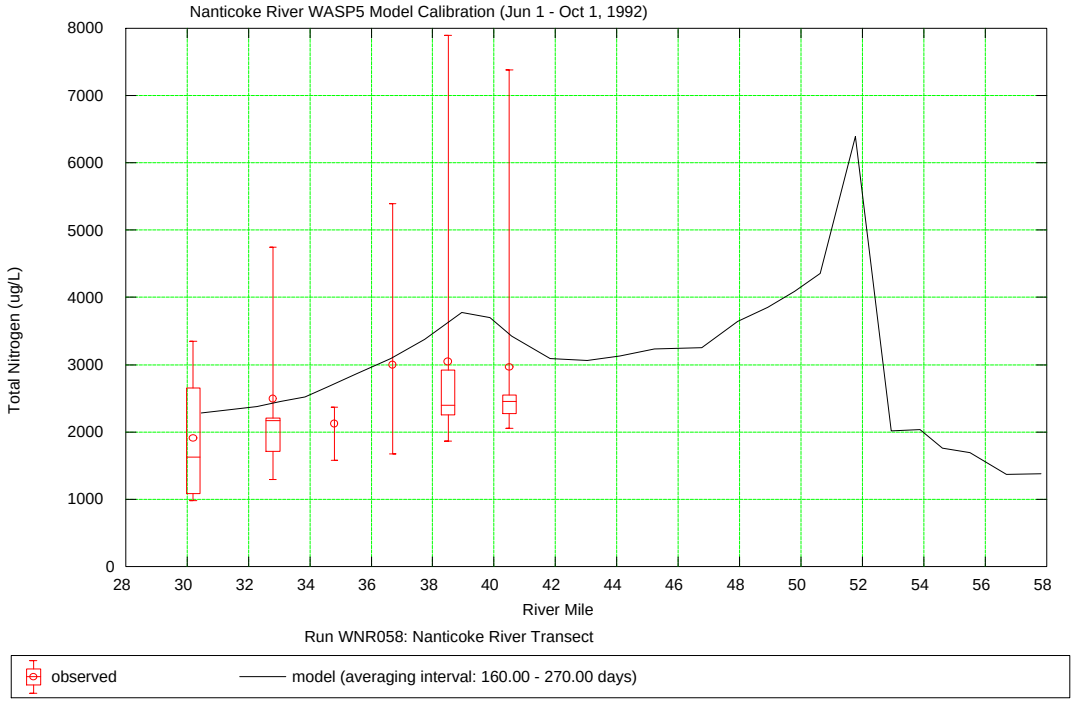
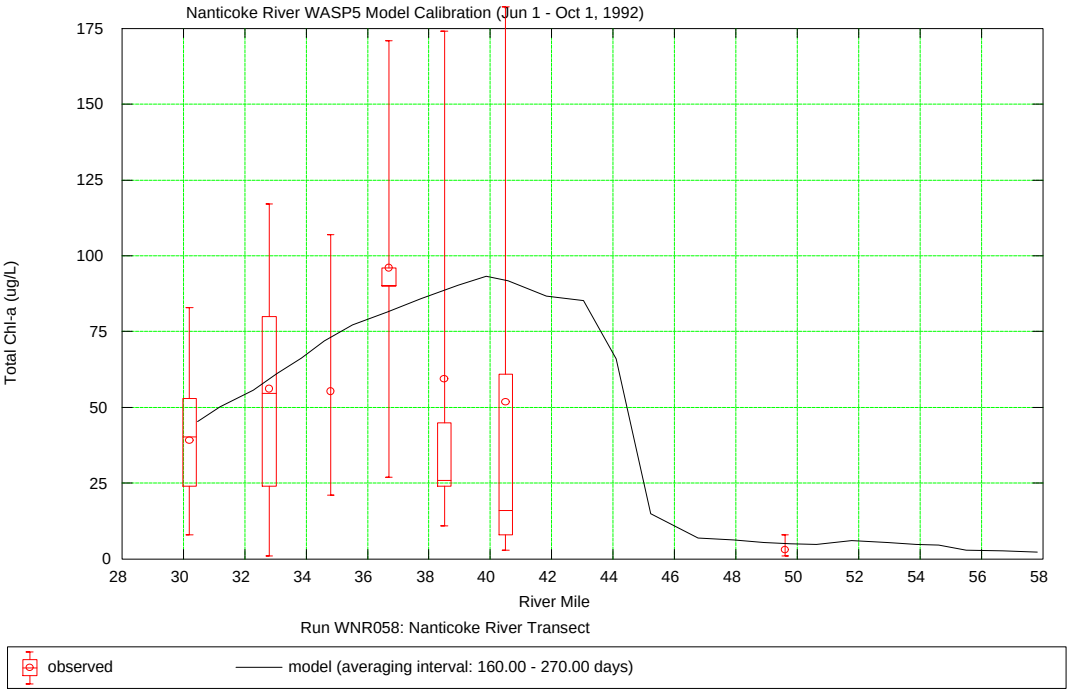


Figure 3-8. Concentrations of TP and TN along Nanticoke River - Scenario Nine



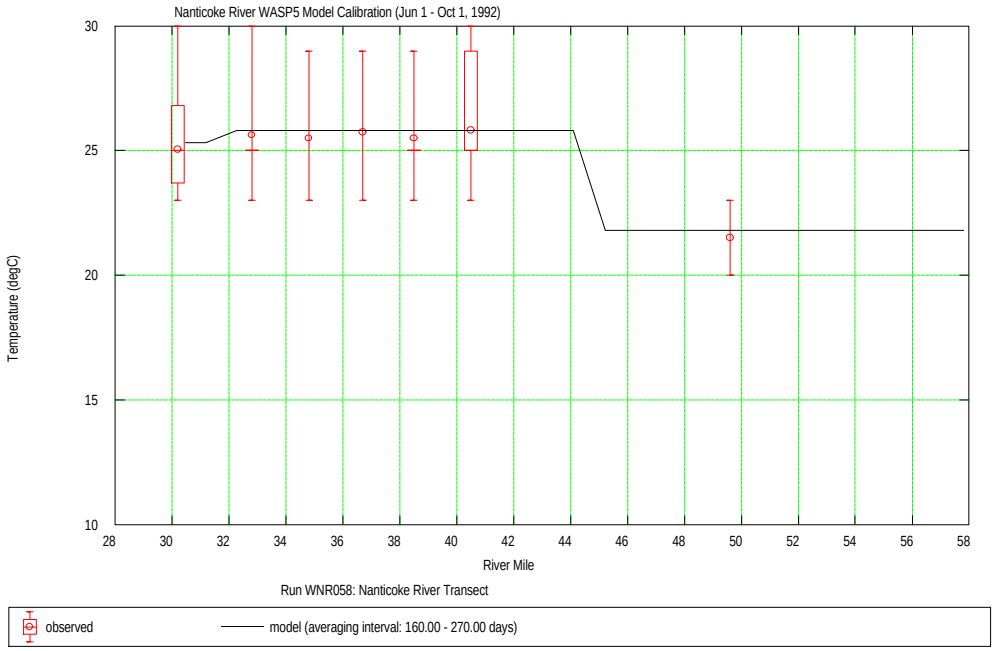


Figure 3-9. Concentrations of Total Chl-a and Temperature along Nanticoke River - Scenario Nine

3.6. Point Source Load Reduction Under 7Q10 Flow Condition - Scenario Ten

Scenario Ten projects the water quality under reduced point source loads from three sewage treatment plants (STP). It intends to investigate water quality improvements that can be achieved from implementing Biological Nutrient Removal (BNR) technology in large municipal treatment plants in the sub-basin. This scenario uses 7Q10 flow for the tributaries and receiving streams. The point source loads are based on permitted values. In addition, it considers that BNR technology is employed in three STPs in the subbasin. These three plants are Seaford STP, Bridgeville STP, and Laurel STP.

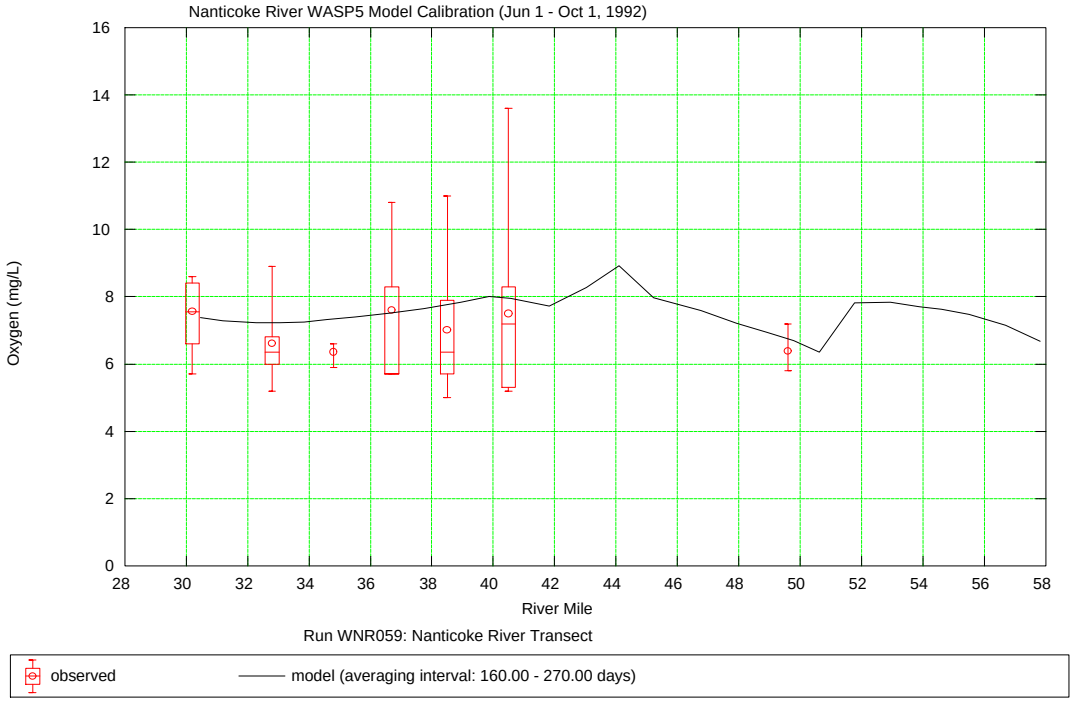
The degree of nutrient load reductions in each facility as the result of BNR implementation is related to the treatment processes currently in use in the facility, as well as additional processes and capital investments considered for the plant. Previous studies conducted for several facilities in the State (13, 14, 15) indicated that average concentrations of 0.7 - 2.0 mg/l of total phosphorous and 6.0 - 10.0 mg/l of total nitrogen is achievable in most municipal facilities that use BNR technology. In addition, some neighboring States have adopted a permit limit of 2.0 mg/l of total phosphorous and 8.0 mg/l of total nitrogen (annual average) for BNR facilities.

Considering above expected performance levels, concentrations of 12.0 mg/l for BOD5, 2.0 mg/l for total phosphorus, and 8.0 mg/l for total nitrogen are used to estimate pollutant loads from these three STPs. Table 3-6 lists the point source loads for this scenario. The results of the model run are presented in Figures 3-10, 3-11, and 3-12 which show some water quality improvement.

Table 3-6. Point Source Loads for Scenario Ten Considering BNR at Three STPs

FACILITY NAME	Permitted Flow (mgd)	Concentration (mg/l)			Daily Load (kg/d)		
		BOD5	Total P	Total N	BOD5	Total P	Total N
DuPont Seaford	64.65	6.0	0.12*	6.8*	187 **	0 **	535 **
Seaford STP	2.0	12.0	2.0	8.0	91	15.2	61
S.C. Johnson	0.8	0.0	0.0*	6.5*	0	0.0	20
Bridgeville STP	0.8	12.0	2.0	8.0	36	6.1	24
DelAgra Corp.	0.715	5.0	0.1*	7.53*	14	0.3	20
Laurel STP	0.5	12.0	2.0	8.0	23	3.8	15
Mobile Trailer Park	0.028	15.0	4.0*	30.0*	2	0.4	3
Total	**69.49**	--	--	--	**353**	**26**	**678**

* Concentrations are not a permit limits, but are based on monitoring results.



** Net load from DuPont Plant (after considering load in the intake)

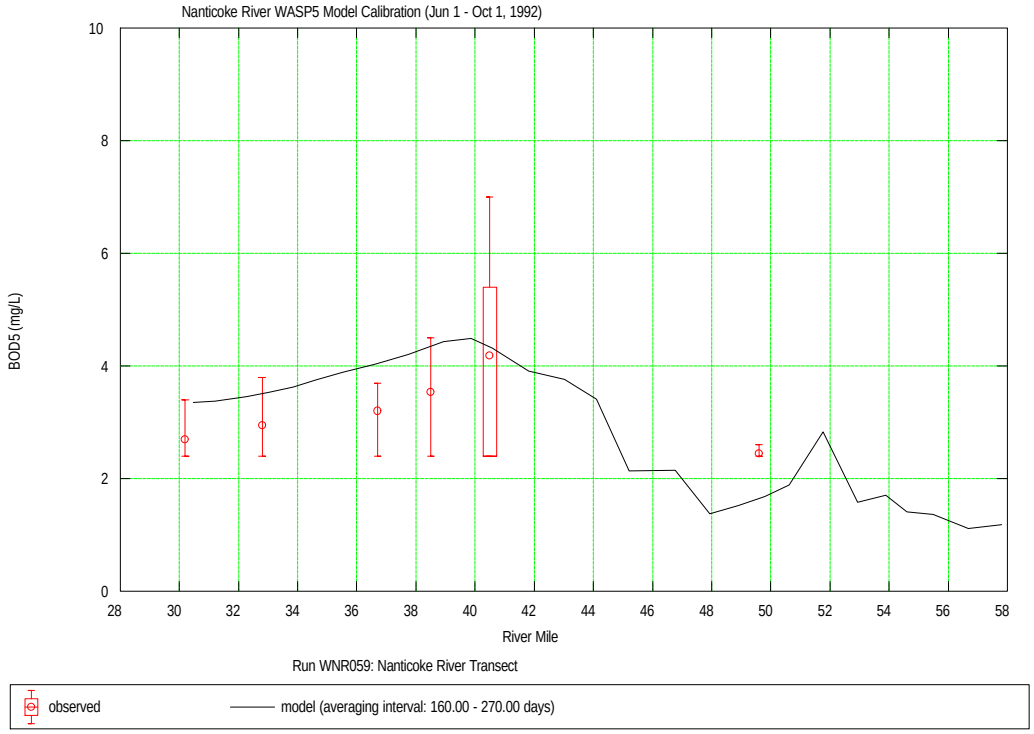
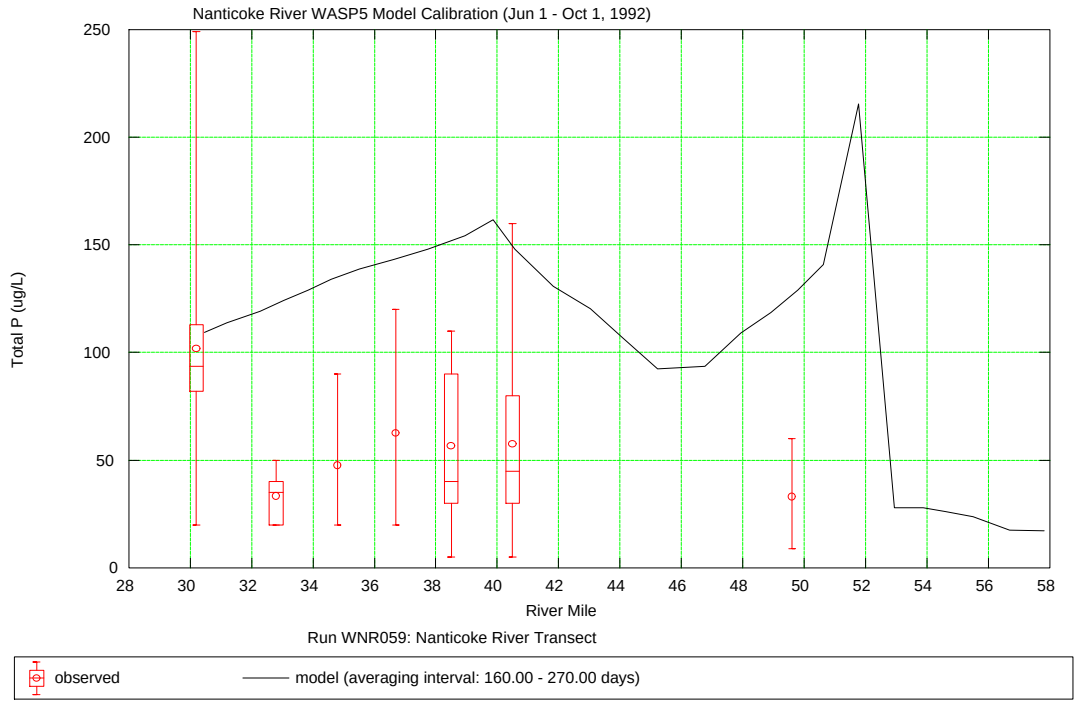


Figure 3-10. Concentrations of DO and BOD5 along Nanticoke River - Scenario Ten



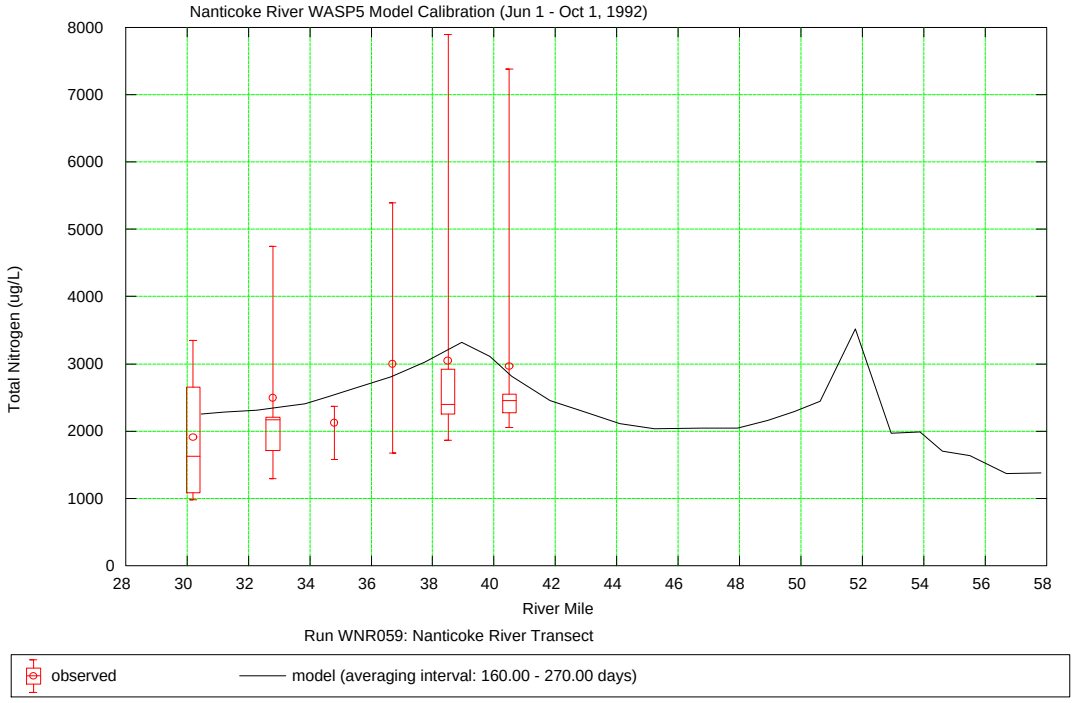
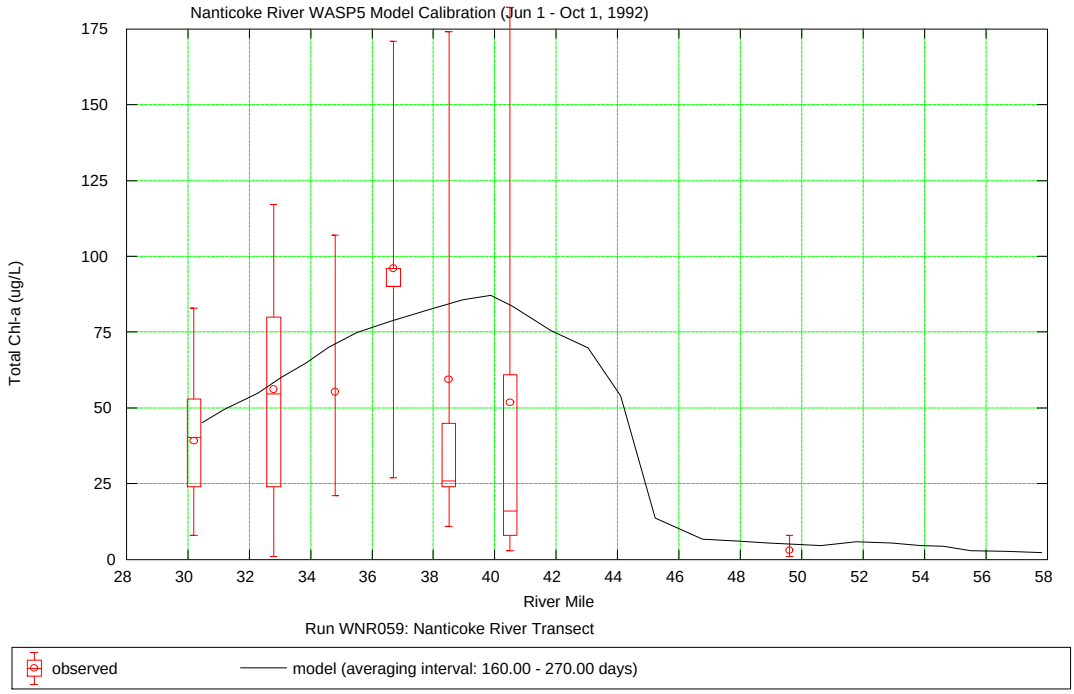


Figure 3-11. Concentrations of TP and TN along Nanticoke River - Scenario Ten



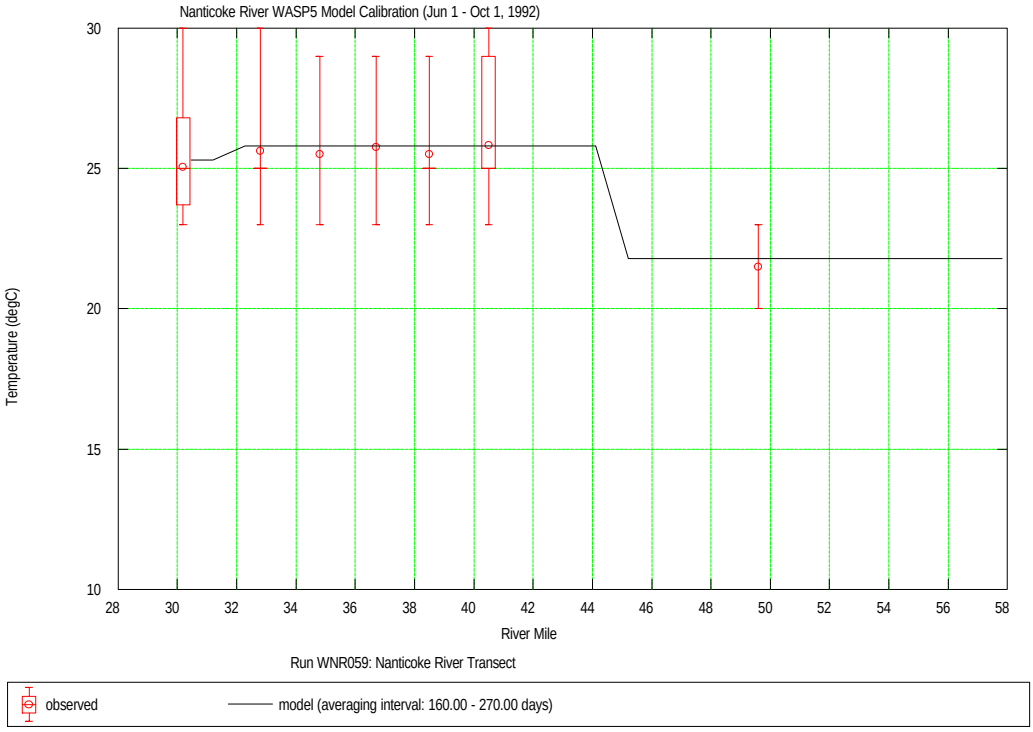


Figure 3-12. Concentrations of Total Chl-a and Temperature along Nanticoke River - Scenario Ten

3.7. Point Source and Nonpoint Source Load Reduction Under 7Q10 Flow Condition - Scenario Eleven

Scenario Eleven is considered in order to project additional water quality improvement that can be achieved as the result of controlling nonpoint source pollution loads. Specifically, this scenario considers: 7Q10 flow condition in the receiving streams and tributaries; BNR level of treatment for three large municipal facilities; current permitted flows and loads for other four treatment plants; and Best Management Practices (BMPs) for all land use activities within the sub-basin.

The reduction in nonpoint source nutrient loads that can be achieved by implementing best management practices is dependent on the soil type, topography, land use, and the specific BMPs being considered. Field studies and application of comprehensive watershed models have shown that in most cases, a reduction of 20% to 40% of nitrogen load and 45% to 80% of phosphorous load is achievable (16, 17). Considering these values, it is assumed that implementing BMPs in the Nanticoke River Sub-basin would reduce nonpoint source nitrogen loads by 30 percent and phosphorous loads by 50 percent. Table 3-7 lists the estimated nonpoint source nutrient loads from various tributaries for this scenario.

The results of the Nanticoke River WASP5 Model for this scenario are shown in Figures 3-13 through 3-15.

3.8. Further Load Reduction Under 7Q10 Condition - Scenarios Twelve Through Sixteen

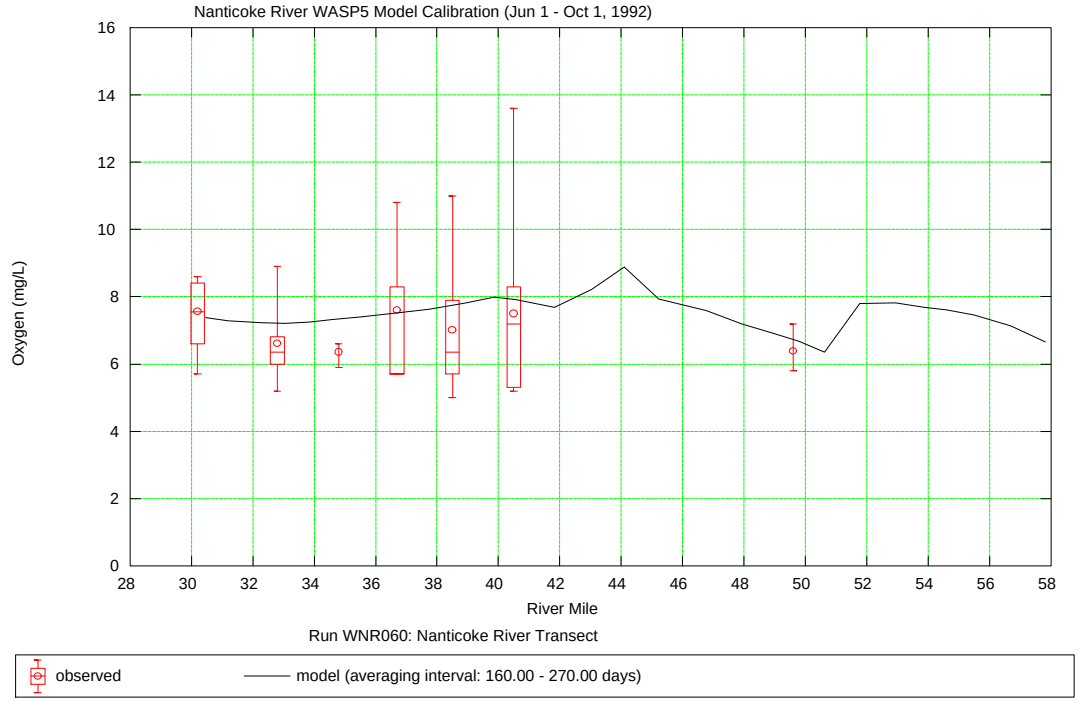
Scenarios Twelve through sixteen were considered in order to project additional water quality improvement that can be achieved if pollutants loads from large treatment plants in the sub-basin are reduced by 50 percent compared to Scenario Ten. The results of model run for scenario sixteen are shown in Figures 3-16 through 3-18. Scenario sixteen considers: 7Q10 flow in the receiving stream; BNR level of treatment for three large municipal facilities in the sub-basin; permitted flows and loads from other four treatment plants; and Best Management Practices for all land use activities within the sub-basin. In addition, it assumes that pollution loads from three large facilities in the sub-basin are reduced by additional 50%.

3.9 Hypothetical Natural Condition - Scenario Seventeen

In order to project hypothetical natural condition of the Nanticoke River, Scenario Seventeen was considered. For this scenario, it is assumed that all point source discharges are removed and best management practices are implemented in the entire sub-basin. Furthermore, it is assumed that because of reducing pollutants loads from point and nonpoint sources, concentration of pollutants at the boundary is reduced by 50%. The results of model runs for this scenario are presented in Figures 3-19 through 3-21.

Table 3-7. The Estimated Nonpoint Source Nutrient Load Under Scenario Eleven (BMPs during 7Q10 flow condition)

Tributary	Total Phosp. (Kg/d)	Total Nitrogen (Kg/d)
Dennis Creek	0.01	1
Gales Creek	0.10	10
Cod Creek	0.04	4
Wright Creek	0.02	2
Turtle Branch + Gum Branch (south)	0.08	10
Butler Branch	0.03	7
Chapel Branch + DuPont Gut	0.04	4
Clear Brook (Williams Pond)	0.24	14
Concord Pond (Deep Creek) +Cool	0.04	4
Gravely Branch	0.29	18
Gum Branch (North)	0.01	2
Bridgeville Branch + No Name Branch	0.05	7
Bee Branch	0.05	7
Glade Branch	0.01	1
Cart Branch	0.03	4
Above White Marsh Branch	0.11	15
Tussocky Branch	0.05	10
Collins & Culver Ditch	0.02	2
Holly Ditch	0.03	4
Little Creek	0.13	9
Records Pond (Laurel)	0.22	38
Total	**1.60**	**180**



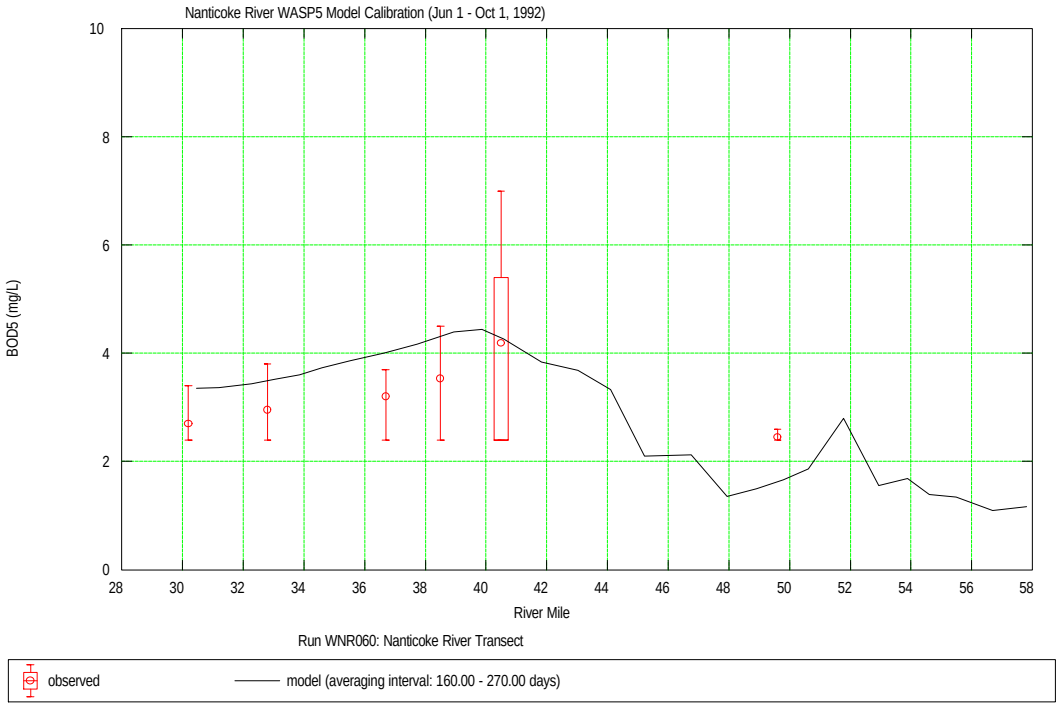
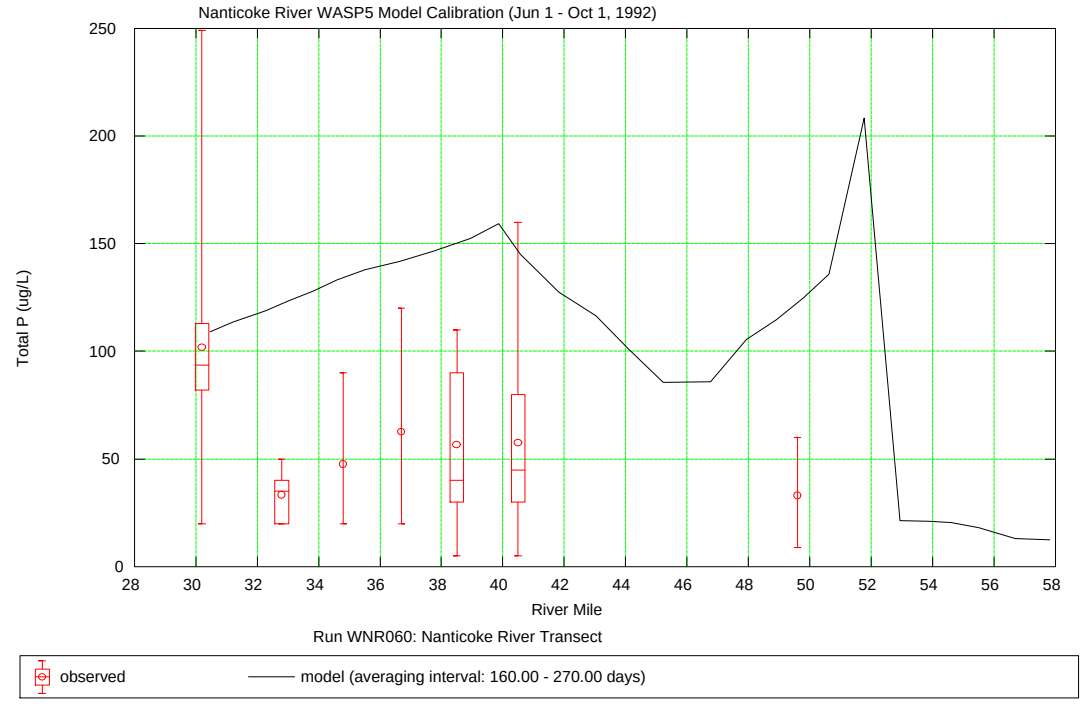


Figure 3-13. Concentrations of DO and BOD5 along Nanticoke River - Scenario Eleven



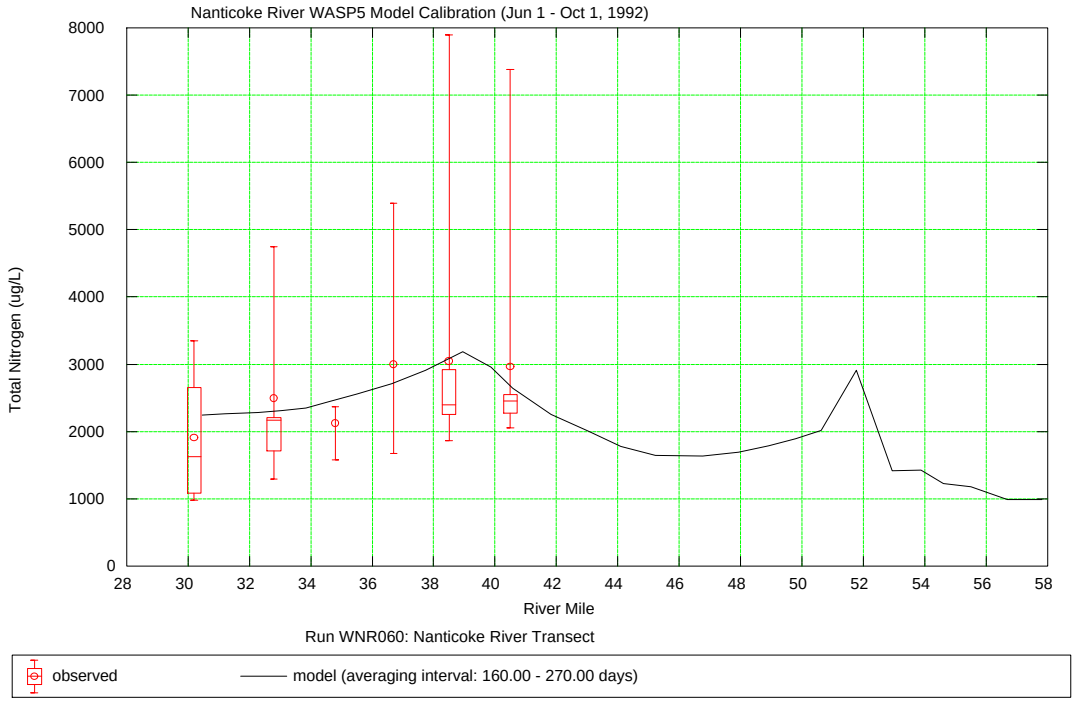
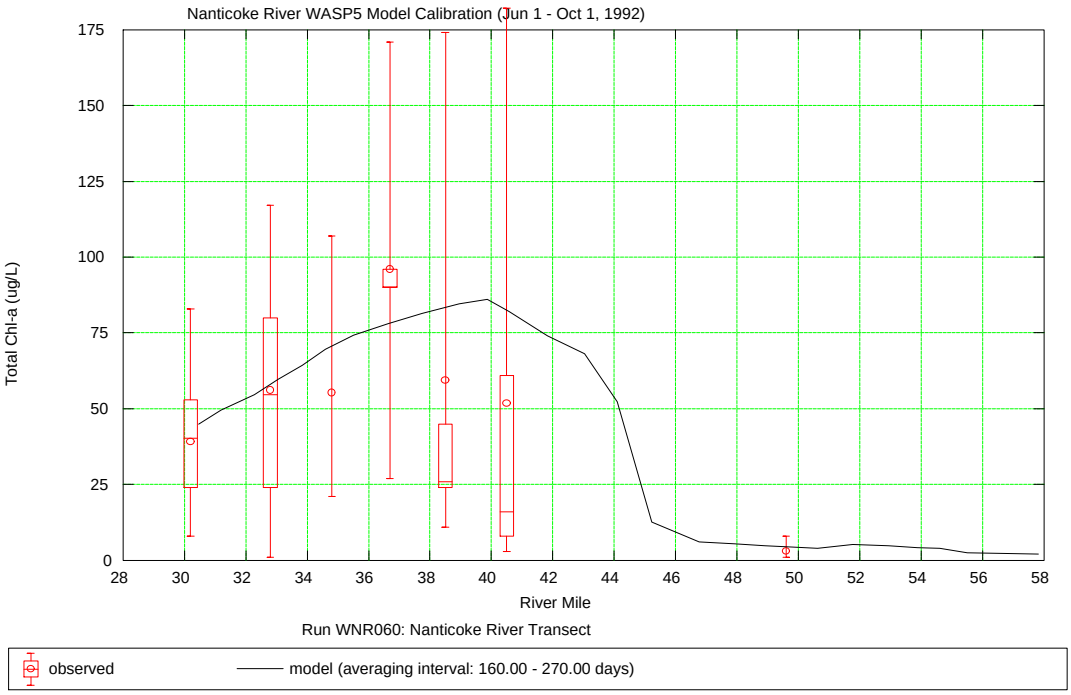


Figure 3-14. Concentrations of TP and TN along Nanticoke River - Scenario Eleven



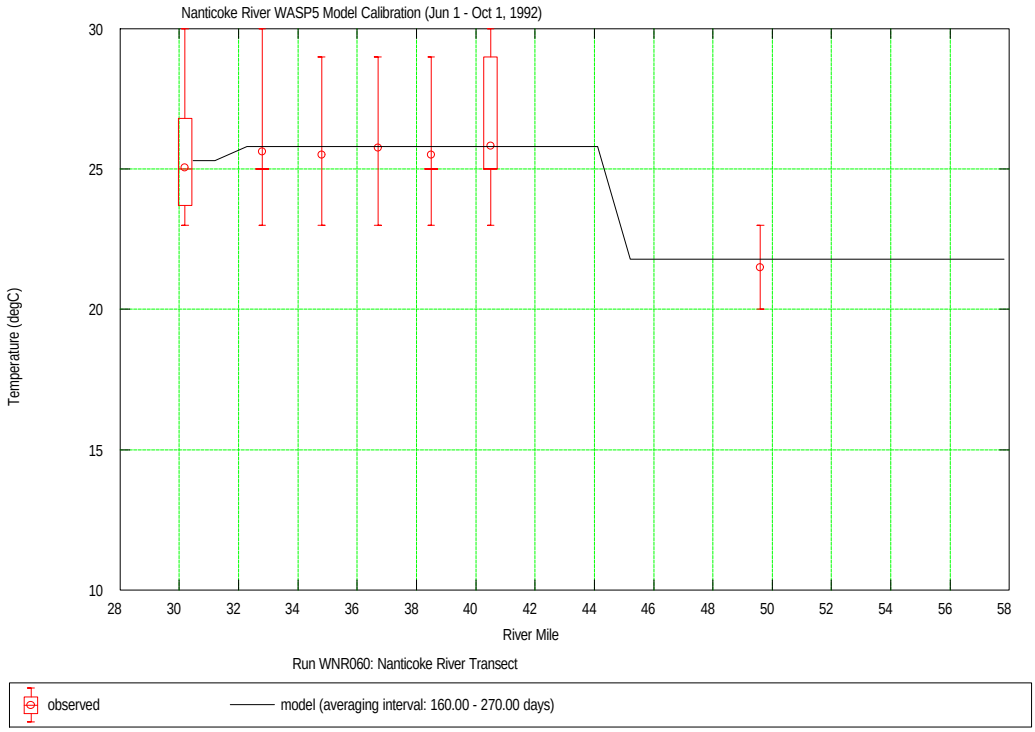
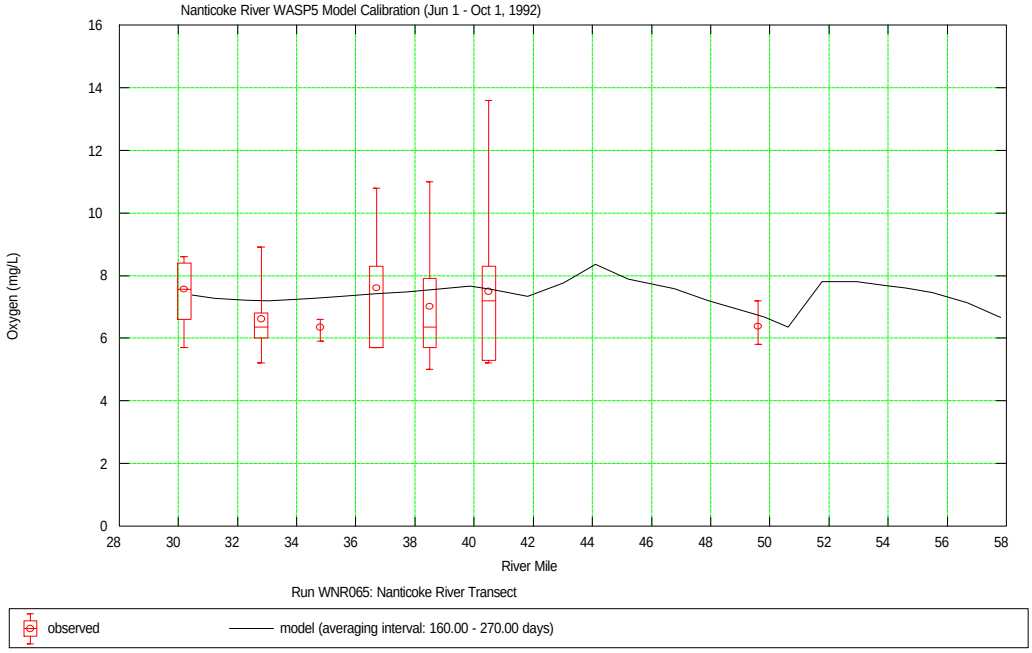


Figure 3-15. Concentrations of Total Chl-a and Temperature along Nanticoke River - Scenario Eleven



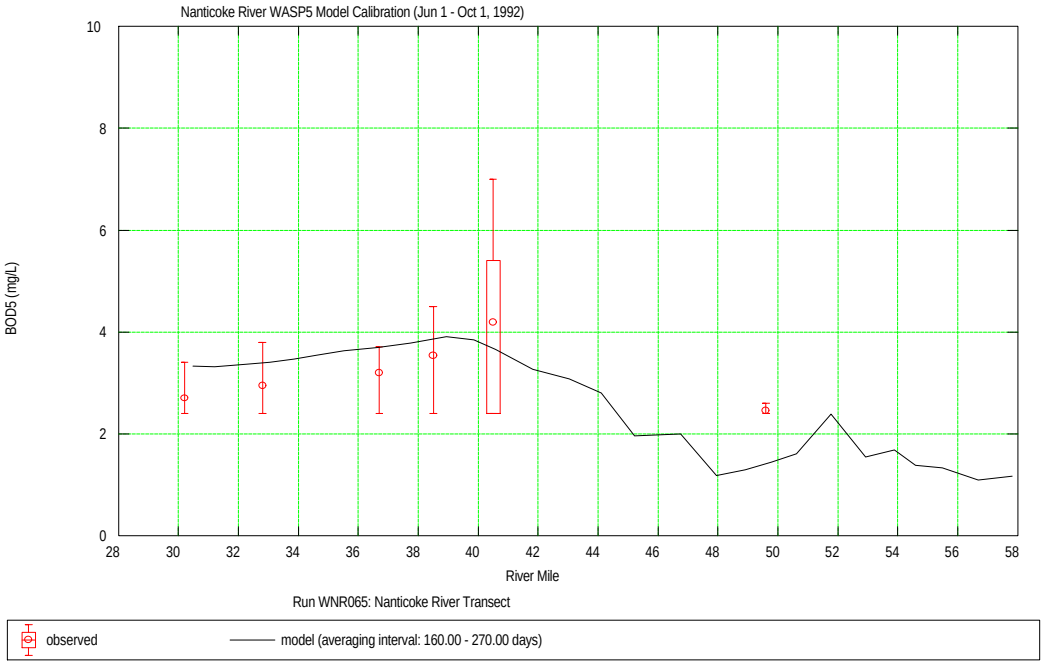
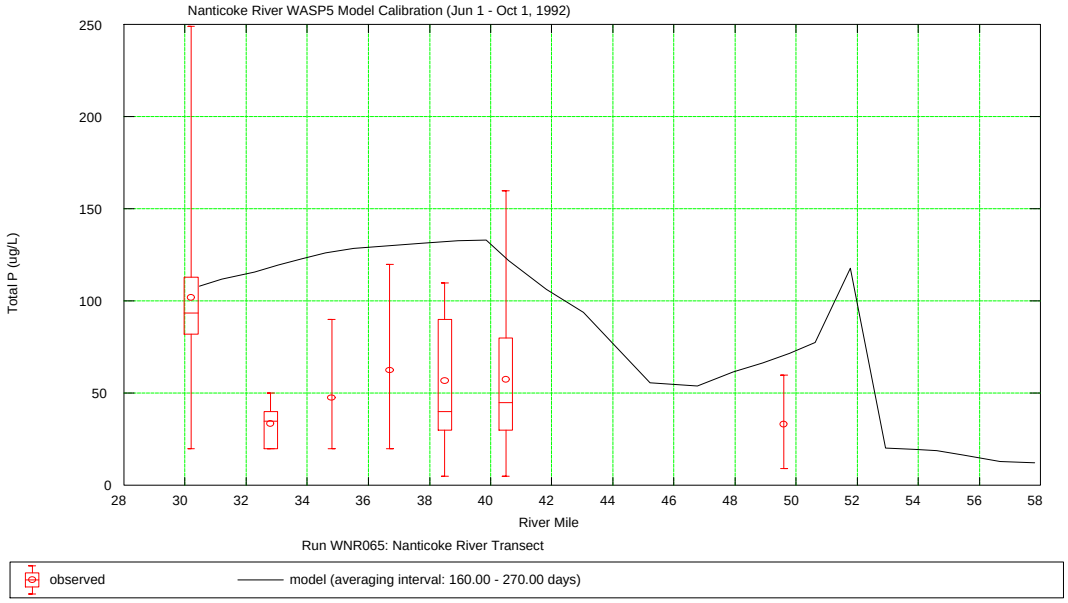


Figure 3-16. Concentrations of DO and BOD5 along Nanticoke River - Scenario Sixteen



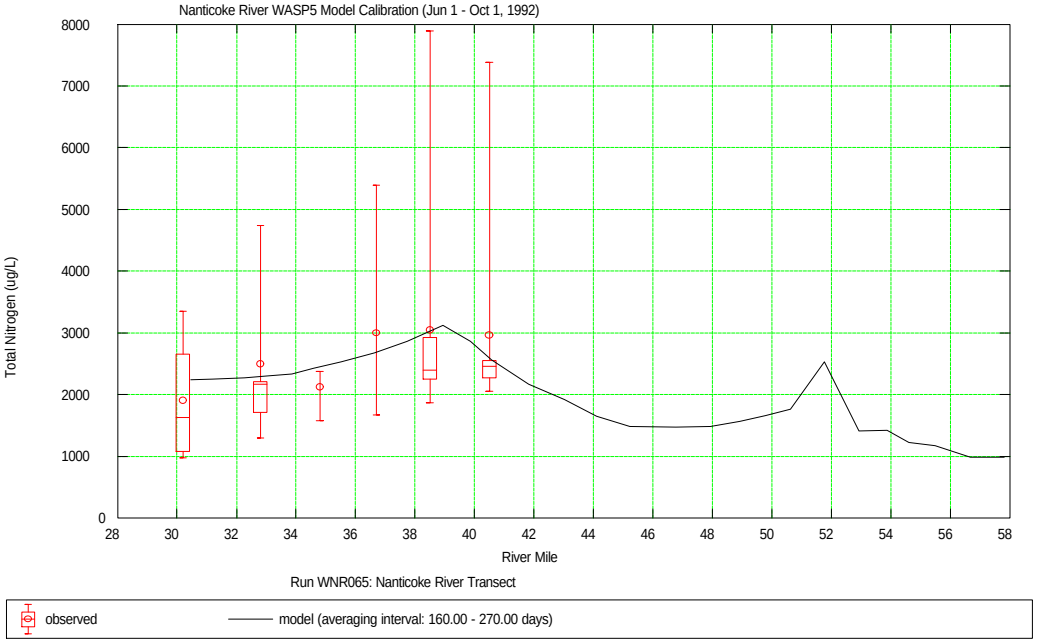
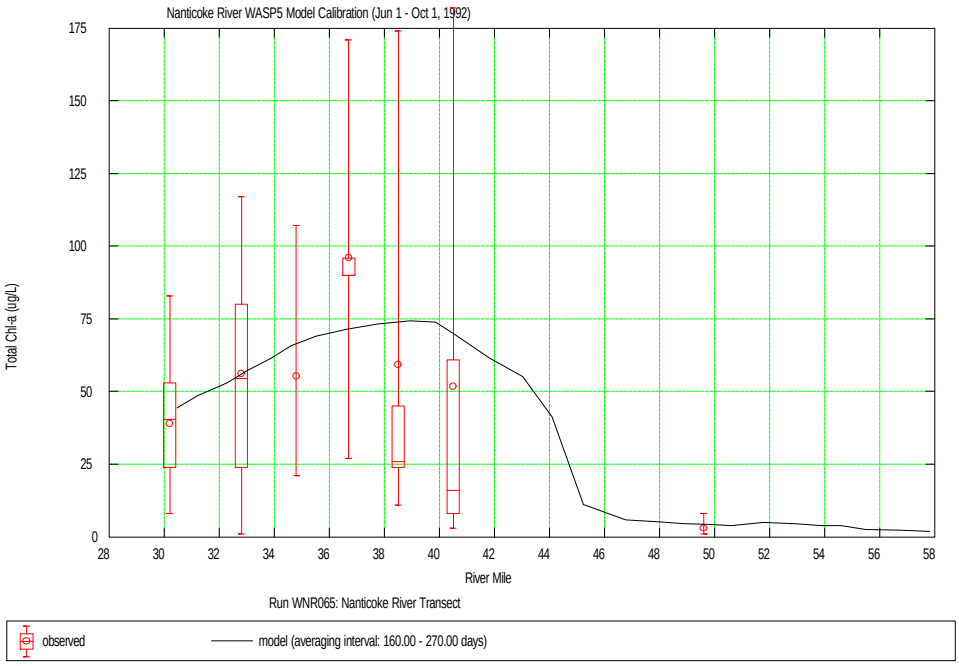


Figure 3-17. Concentrations of TP and TN along Nanticoke River - Scenario Sixteen



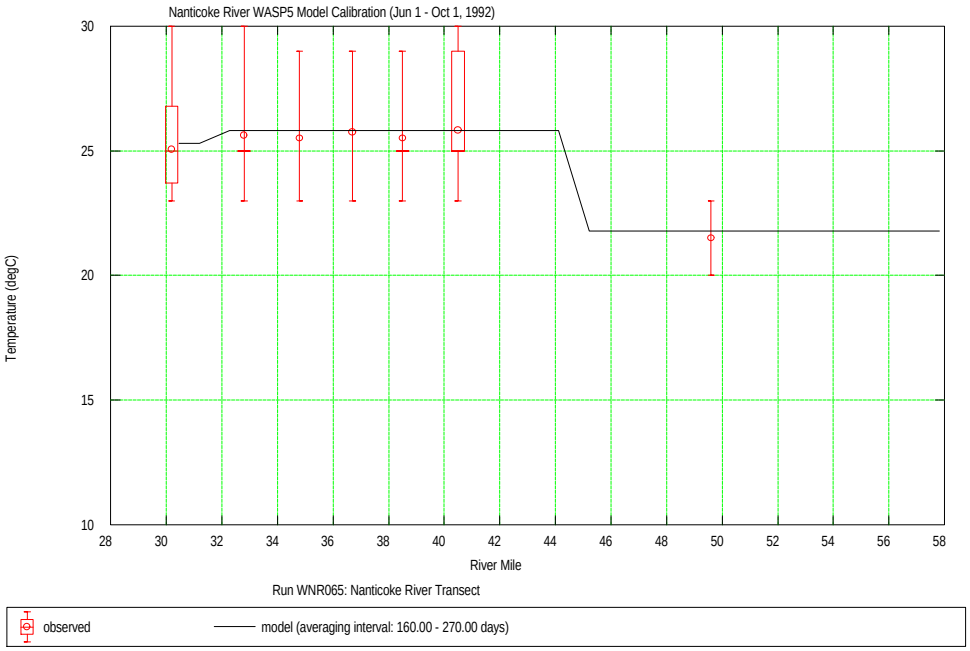
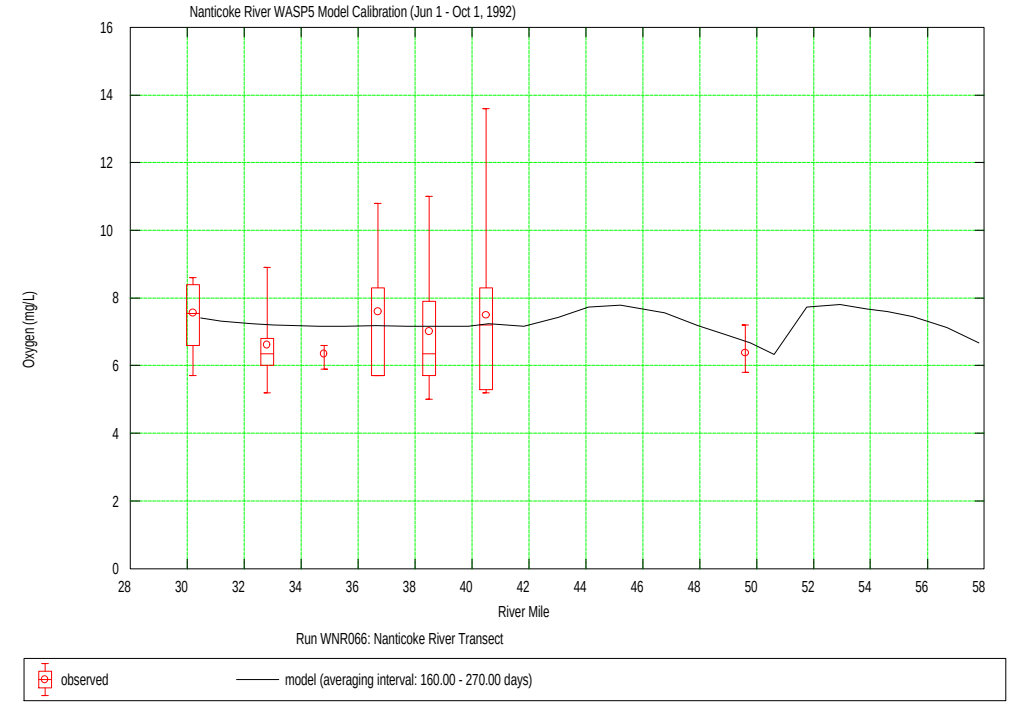


Figure 3-18. Concentrations of Total Chl-a and Temperature along Nanticoke River - Scenario Sixteen



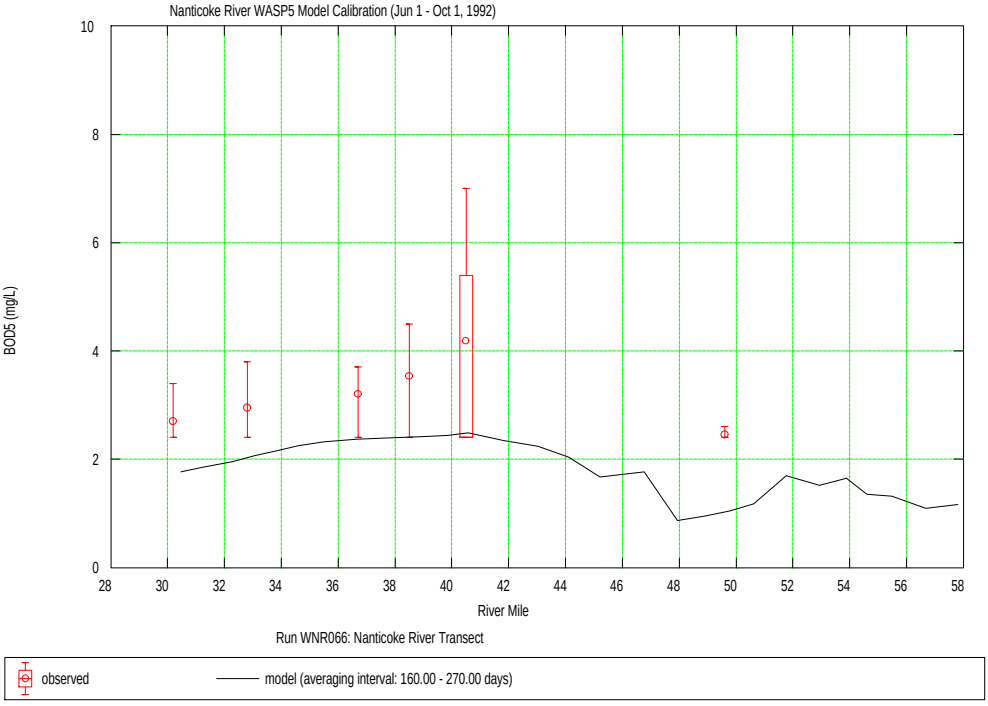
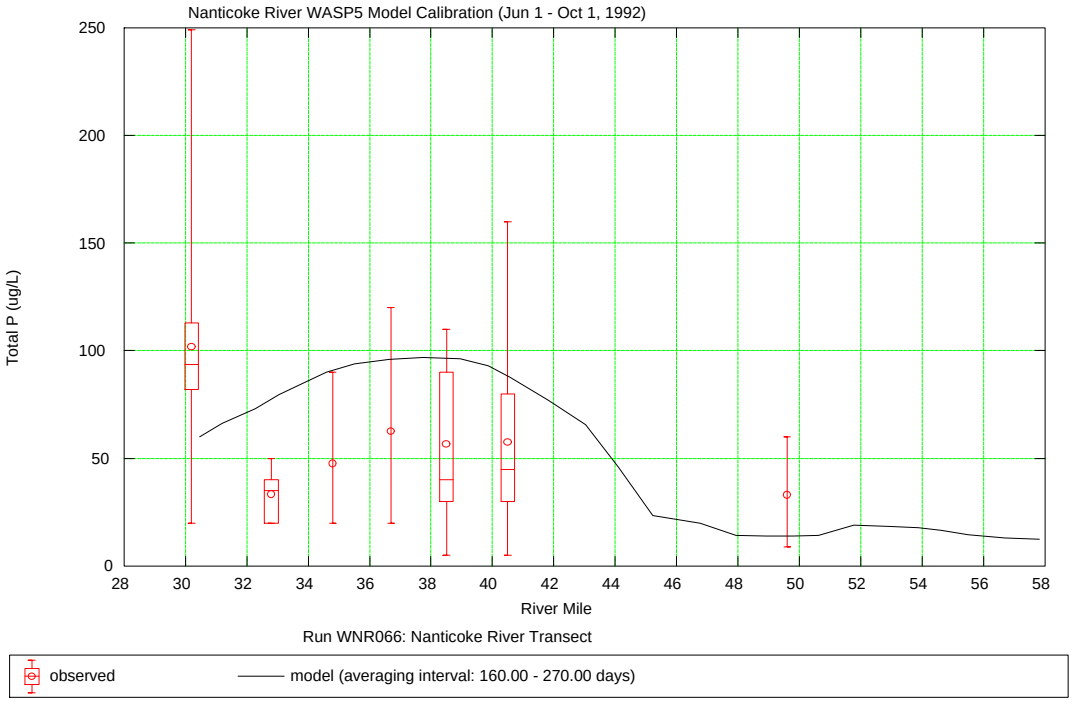


Figure 3-19. Concentrations of DO and BOD5 along Nanticoke River - Scenario Seventeen



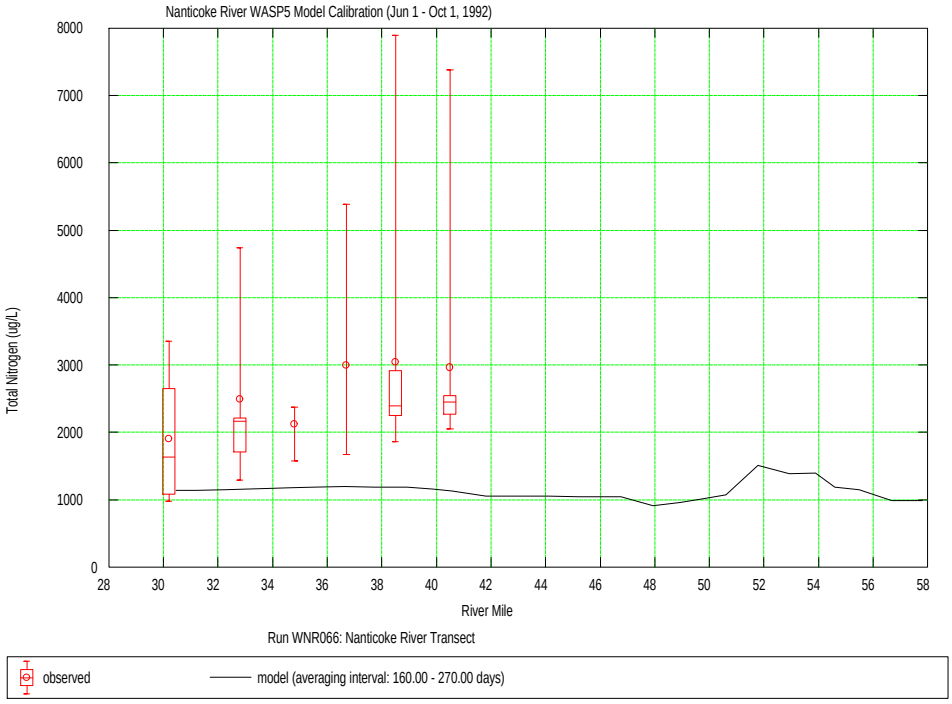
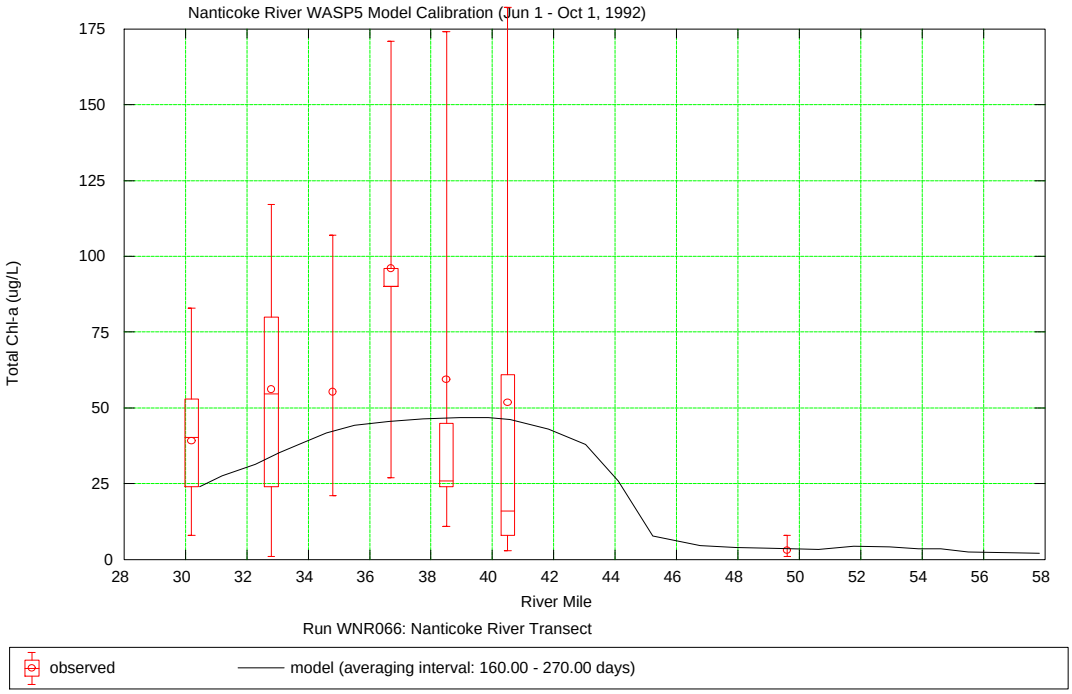


Figure 3-20. Concentrations of TP and TN along Nanticoke River - Scenario Seventeen



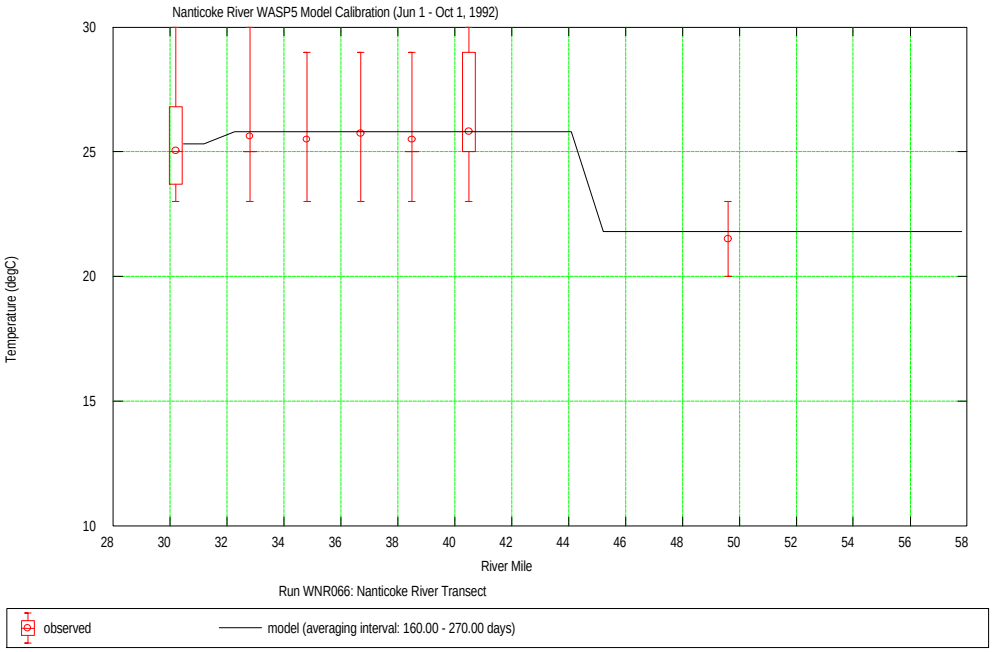


Figure 3-21. Concentrations of Total Chl-a and Temperature along Nanticoke River - Scenario Seventeen

4. Establishment of TMDL for Nanticoke River and Broad Creek

4.1. Selection of Loading Scenario for TMDL Establishment

A review of the summer-average (June - September) concentrations of dissolved oxygen (DO), 5-day biochemical oxygen demand (BOD5), total phosphorous (TP), total nitrogen (TN), and chlorophyll-a (Chl-a) in the Nanticoke River and Broad Creek for various loading conditions as presented in Chapter 3, suggests that Scenario Eleven is the least restrictive load reduction scenario, which still meet all water quality standards and TMDL targets.

For this scenario, it is assumed that stream flows during simulation period are 7Q10 flows. Under this flow regime, instream dissolved oxygen concentration meets the water quality standard of daily average 5.5 mg/l (see Figure 3-13).

With regard to nutrients (TP and TN), Figure 3-14 indicates that these concentrations exceed the 20% confidence limits of established targets of 3.0 mg/l for total N and 0.1 mg/l for total P. However, when a more realistic flow regime is considered, the TN and TP concentrations meet the established targets (within 20% confidence limit) (see Figure 4-1). For this more realistic flow condition, it is assumed that flow condition in the stream is the 1992 flow (dry weather condition) with the exception that for 7 days (July 20 through July 26) instream flow is equal to 7Q10 flow.

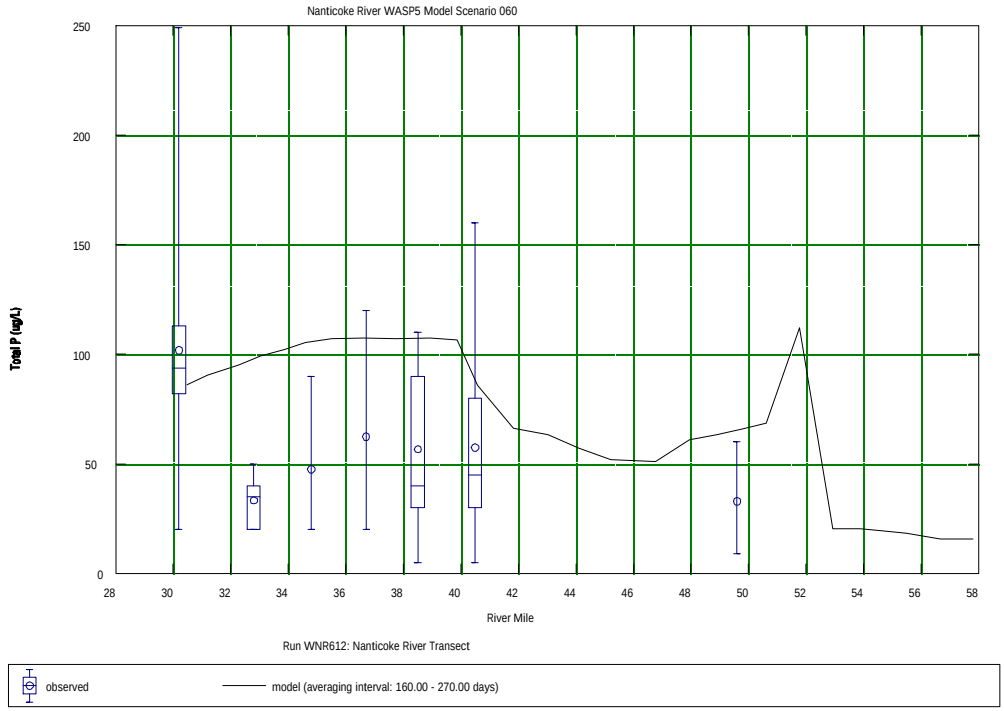
Considering the above, it can be concluded that Scenario Eleven can be used for establishing the TMDL for the Nanticoke River and Broad Creek.

As required, the TMDLs for the Nanticoke River and Broad Creek have three components including a Waste Load Allocation (WLA) for point sources discharges, a Load Allocation (LA) for nonpoint sources, and a Margin of Safety (MOS).

4.2. Waste Load Allocation (WLA)

The point source Waste Load Allocation corresponds to loading condition of Scenario Eleven which requires that:

1. Biological nutrient removal be implemented in three large municipal wastewater treatment plants in the sub-basin. These treatment plants are Seaford WWTP, Bridgeville WWTP, and Laurel WWTP.
2. Pollutant loads from other four treatment plants in the sub-basin should not exceed their current permitted loads.



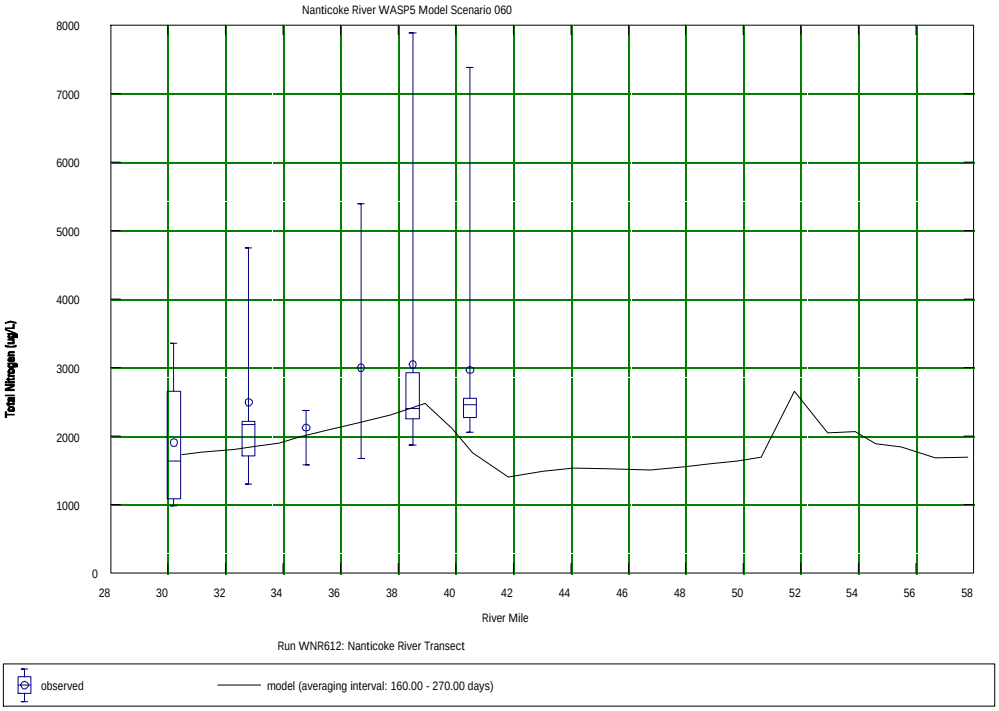


Figure 4-1. Concentrations of TP and TN along Nanticoke River - 1992 flow condition with 7 days 7Q10 flow

Based on the above requirements, Table 4-1 is arranged to list the proposed BOD5, TP, and TN Waste Load Allocation for all facilities in the sub-basin. These allocations can be incorporated into National Pollution Discharge Elimination System (NPDES) Permits through DNREC's administration of the NPDES program.

TABLE 4-1. Waste Load Allocation for Point Source Pollutants

FACILITY NAME	Flow (mgd)	Daily Load (kg/d)		
		BOD5	Total P	Total N
Seaford STP	2.0	91	15.2	61
Bridgeville STP	0.8	36	6.1	24
Laurel STP	0.5	23	3.8	15
Sub Total	**3.3**	**150**	**25.1**	**100**
DuPont Seaford	64.65	187 **	0.0 **	535 **
S.C. Johnson	0.4	0	0.0	10
DelAgra Corp.	0.715	14	0.3	20
Mobile Trailer Park	0.028	2	0.4	3
Sub Total	**66.193**	**203**	**0.7**	**568**
Total	**69.093**	**353**	**25.8**	**668**

** Net load from DuPont Plant (after considering load in the intake)

4.3. Load Allocation (LA)

With regard to nonpoint source loads, Scenario Eleven considers that Best Management Practices (BMPs) are employed in all land use activities within the sub-basin. Furthermore, it assumes that as the result of BMPs implementation, the loads of BOD5, nitrogen, and phosphorous from nonpoint sources will be reduced by 30, 30, and 50 percent, respectively. Based on these assumptions, the nonpoint source load allocations for BOD5, nitrogen, and phosphorous under 7Q10 flow condition, 1992 flow condition, normal year condition, and wet year condition are shown in Table 4-2. Load allocations for individual tributaries are listed in Tables 4-3, 4-4, and 4-5.

To allocate loads to major nonpoint source categories in the Nanticoke River Sub-basin, Table 4-6 is presented, which indicates that agriculture, unsewered urban areas and septic tanks are major sources of nonpoint source pollutants and are targeted for equal percentage load reduction at this time. Further refinement of these load allocations will be accomplished through development of a Pollution Control Strategy for the Nanticoke River and Broad Creek.

Table 4-2. Load Allocation for Nonpoint Source Pollutants

Load Allocation (kg/d)	Hydrologic Condition											
	7Q10 Flow Condition			1992 Flow Condition			Normal Year			Wet Year		
	BOD5	Total P	Total N	BOD5	Total P	Total N	BOD5	Total P	Total N	BOD5	Total P	Total N
	331	1.6	180	1407	7.0	764	1941	9.7	1055	3880	19.4	2109

Possible best management activities that can achieve the above proposed reductions are followings:

1. ***For Agricultural Activities***

a. Nutrient management
b. Conservation tillage
c. Contour farming
d. Contour cover crops
e. Cover crops
f. Crop rotation
g. Animal waste management
h. Integrated pest management

2. ***For Construction Activities:***

a. Runoff detention / retention
b. Nonvegetative soil stabilization
c. Disturbed area limits

3. ***Urban Areas:***

a. Runoff detention / retention
b. Flood storage
c. Street cleaning

4. ***Multi-category:***

a. Buffer strips
b. Detention /retention basins
c. Grassed waterway
d. Sediment traps
e. Vegetative stabilization / mulching
f. Stream side management zones.

Table 4-3. BOD5 Load Allocations for Tributaries

Tributary	Under 7Q10 Flow Condition (Kg/d)	Under 1992 Flow Condition (Kg/d)	Normal Year (Kg/d)	Wet Year (Kg/d)
Dennis Creek	2	7	10	20
Gales Creek	13	55	76	152
Cod Creek	5	21	29	57
Wright Creek	3	13	18	37
Turtle Branch + Gum Branch	11	48	66	133
Butler Branch	7	31	43	86
Chapel Branch + DuPont Gut	5	22	30	60
Clear Brook (Williams Pond)	43	189	261	521
Concord Pond (Deep Cr) +Cool Br.	5	22	30	60
Gravely Branch	47	205	283	565
Gum Branch (North)	3	11	15	30
Bridgeville Br. + No Name Br.	9	39	53	107
Bee Branch	9	38	52	103
Glade Branch	2	6	10	21
Cart Branch	5	21	28	57
Above White Marsh Branch	18	77	107	213
Tussocky Branch	12	52	72	144
Collins & Culver Ditch	2	11	15	30
Holly Ditch	4	20	27	54
Little Creek	20	87	120	239
Records Pond (Laurel)	99	432	596	1191
TOTAL	**331**	**1407**	**1941**	**3880**

Table 4-4. Total Nitrogen Load Allocations for Tributaries

Tributary	Under 7Q10 Flow Condition (Kg/d)	Under 1992 Flow Condition (Kg/d)	Normal Year (Kg/d)	Wet Year (Kg/d)
Dennis Creek	1	6	8	16
Gales Creek	10	44	60	121
Cod Creek	4	16	23	45
Wright Creek	2	11	15	29
Turtle Br. + Gum Br. (south)	10	45	62	124
Butler Branch	7	32	45	90
Chapel Branch + DuPont Gut	4	17	24	47
Clear Brook (Williams Pond)	14	62	86	171
Concord Pond (Deep Crk) +Cool Br.	4	16	22	45
Gravely Branch	18	80	110	220
Gum Branch (North)	2	9	13	25
Bridgeville Br. + No Name Br.	7	32	45	89
Bee Branch	7	31	43	89
Glade Branch	1	6	9	17
Cart Branch	4	17	24	48
Above White Marsh Branch	15	65	89	179
Tussocky Branch	10	45	62	124
Collins & Culver Ditch	2	9	12	24
Holly Ditch	4	16	21	43
Little Creek	9	40	55	109
Records Pond (Laurel)	38	165	227	454
TOTAL	**180**	**764**	**1055**	**2109**

Table 4-5. Total Phosphorous Load Allocations for Tributaries

Tributary	Under 7Q10 Flow Condition (Kg/d)	Under 1992 Flow Condition (Kg/d)	Normal Year (Kg/d)	Wet Year (Kg/d)
Dennis Creek	0.01	0.1	0.1	0.2
Gales Creek	0.10	0.4	0.6	1.2
Cod Creek	0.04	0.2	0.2	0.4
Wright Creek	0.02	0.1	0.1	0.3
Turtle Br. + Gum Br. (south)	0.08	0.3	0.5	0.9
Butler Branch	0.03	0.1	0.2	0.4
Chapel Branch + DuPont Gut	0.04	0.2	0.2	0.5
Clear Brook (Williams Pond)	0.24	1.1	1.5	2.9
Concord Pond (Deep Crk) +Cool Br.	0.04	0.2	0.2	0.5
Gravely Branch	0.29	1.3	1.7	3.5
Gum Branch (North)	0.01	0.1	0.1	0.2
Bridgeville Br. + No Name Br.	0.05	0.2	0.3	0.6
Bee Branch	0.05	0.2	0.3	0.6
Glade Branch	0.01	0.0	0.1	0.1
Cart Branch	0.03	0.1	0.2	0.3
Above White Marsh Branch	0.11	0.5	0.6	1.3
Tussocky Branch	0.05	0.2	0.3	0.6
Collins & Culver Ditch	0.02	0.1	0.1	0.2
Holly Ditch	0.03	0.2	0.2	0.4
Little Creek	0.13	0.6	0.8	1.6
Records Pond (Laurel)	0.22	1.0	1.4	2.7
TOTAL	**1.60**	**7.0**	**9.7**	**19.4**

Table 4-6. NPS Load Allocation On Land Use Activity (1992 base)

SOURCE	BOD5		Total Nitrogen		Total Phosphorus	
	Load (Kg/d)	Reduction (%)	Load (Kg/d)	Reduction (%)	Load (Kg/d)	Reduction (%)
Agriculture	1407	30	764	30	7	50
Unsewered Urban /Build-up Areas						
Septic Tanks						
Others						

4.4. Consideration of a Margin of Safety

Furthermore, Section 303(d)(1)(C) of the Clean Water Act, which requires States to develop TMDL, requires that the established TMDL includes a margin of safety to take into account any lack of knowledge or any simplified assumptions made during evaluation process. Consideration of a margin of safety will insure that water quality standards will be met despite the uncertainty that may exist as the result of the variability of field data or assumptions made during the analysis.

A review of the summer-average DO concentrations in the Nanticoke River for Scenario Eleven (Figure 3-13) shows that the concentrations are generally higher than 6.2 mg/l. Since summer-average DO standard for fresh waters of the State is 5.5 mg/l (1), a margin of safety of at least 0.7 mg/l exists throughout the river. For total nitrogen, the summer-average concentrations are all under 2.7 mg/l which provide a margin of safety of at least 0.3 (Figure 4-1). Total phosphorus concentrations are under targeted value 0.1 mg/l at most locations along the streams except for a few segments which are above the target but within the 20 percent confidence limit. Furthermore, conservative assumptions considered throughout the model simulation added more safety margins. These assumptions included: (1) constant point source loads, (2) maximum permitted flows and loads from the point sources, (3) concurrent discharges from all point sources, (4) warm temperature, and (5) the occurrence of all these conditions simultaneously.

4.5. Authority and Responsibility for TMDL Development

Authority to develop a total maximum daily load is provided by Section 6010 of Chapter 60, Title 7, of the Delaware Code and Section 303(d) of the Federal Clean Water Act, 33 U.S.C. 1251 et. seq., as amended. Section 402 of the Federal Clean Water Act, 33 U.S.C. 1251 et. seq., as amended and Chapter 60, Title 7, of the Delaware Code provide the authority for issuance of Discharge Permits. Section 7 of the State of Delaware Surface Water Quality Standards provides

the regulatory basis for establishing nutrient controls from point and human induced nonpoint sources. In addition, Section 7.05 of the State of Delaware Regulations Governing the Control of Water Pollution provides the authority for the establishment of additional effluent limitations to be uniformly imposed on all discharges within a region to assure compliance with Water Quality Standards.

Delaware Department of Natural Resources and Environmental Control (DNREC) will use its authority to implement the TMDL through issuance of National Pollution Discharge Elimination System Permits for the point sources within the Sub-basin. The Department will also cooperate with other agencies such as Sussex Conservation District, Department of Agriculture, Soil Conservation Service, and Sussex County Municipalities to achieve the nonpoint source load controls that are called for in this TMDL. EPA Region III has the overall authority for review and approval of the TMDL.

4.6. Pollution Control Strategy for the Sub-basin

DNREC is proposing to implement the requirements of the proposed total maximum daily loads for nitrogen and phosphorus through development of a Pollution Control Strategy (PCS). A PCS for the Nanticoke River and Broad Creek will be established through Department's Whole Basin Management Program in concert with the affected public.

4.7. Public Participation

Public participation is a key element of the TMDL process and its successful implementation. Therefore, it is DNREC's intent to solicit public input by forming TMDL advisory committees and holding public workshops and public hearings.

To this end, an interagency TMDL Work Group has been formed with representatives from many programs within the DNREC, Department of Health and Social Services, Department of Agriculture, and the EPA Region 3. This work group reviews TMDL activities in the State and provides valuable input. In addition, a TMDL Advisory Committee has been formed for the Nanticoke River Sub-basin which has reviewed the TMDL Regulations for the Nanticoke River Sub-basin. The public workshop and public hearing for the Nanticoke River and Broad Creek TMDLs were conducted on September 9, 1998. Public comments collected in the hearing have been incorporated in this report.

5. REFERENCES

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2. "Nanticoke River Basin, Environmental Quality Report," Delaware Department of Natural Resources and Environmental Control, December 1990.

3. "Preliminary Water Quality Assessment of the Nanticoke River Watershed," Delaware Department of Natural Resources and Environmental Control, 1993.

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6. "Final Determination, State of Delaware 1996 Clean Water Act Section 303(d) List of Waters Needing TMDLs", Department of Natural Resources and Environmental Control, 1996.

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8. "Hydrodynamic and Water Quality Model of the Nanticoke River, Delaware,", Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, Virginia, 22030, June 30, 1995 (revised November 30, 1995).

9. Robert B. Ambrose, Tim A. Wool, and James L. Martin, "The Water Quality Analysis Simulation Program, WASP5,", Environmental Research laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens, Georgia, 30613, September 20, 1993.

10. United States Geological Survey, Water Resources Information, United States Surface Water Online Data Retrieval (http://h2o.usgs.gov)

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Dipankar Sen, Virginia Tech Research Division, Personal communication.

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APPENDIX A INPUT FILES FOR WASP5 PROGRAM

1. HNR014.INP - Hydrodynamic Model input file for 1992 hygrological condition.

```
HNR_014.INP: DYNHYD5, NANTICOKE RIVER, 41 segments, June 1 - Sep 30, 1992
1992 USGS Measured Tides at Sharptown (for use with DYN51T.FOR)
***** Data Group A: PROGRAM CONTROL DATA ************************
   41   40    0   6.    5  152 0000  275 0000
***** Data Group B: PRINTOUT CONTROL DATA ************************
      24.0      24.0    7
    2    8   16   21   28   33   40
***** Data Group C: SUMMARY CONTROL DATA *************************
    2  153 0000 25.0  600  600
***** Data Group D: JUNCTION DATA ********************************
    1      0.01  350000.0      -5.5    0    1    0    0    0    0
    2      0.01  247140.0      -5.4    1    2    0    0    0    0
    3      0.01  265680.0      -5.3    2    3    0    0    0    0
    4      0.01  262080.0      -5.2    3    4    0    0    0    0
    5      0.01  233820.0      -5.1    4    5    0    0    0    0
    6      0.01  222990.0      -5.0    5    6   29    0    0    0
    7      0.01  222230.0      -4.9    6    7    0    0    0    0
    8      0.01  253655.0      -4.8    7    8    0    0    0    0
    9      0.01  265195.0      -4.7    8    9    0    0    0    0
   10      0.01  251875.0      -4.6    9   10    0    0    0    0
   11      0.01  211815.0      -4.5   10   11    0    0    0    0
   12      0.01  146110.0      -4.4   11   12    0    0    0    0
   13      0.01  126355.0      -4.2   12   13    0    0    0    0
   14      0.01  109405.0      -3.4   13   14    0    0    0    0
   15      0.01   61138.0      -2.4   14   15    0    0    0    0
   16      0.01   45563.0      -1.0   15   16    0    0    0    0
   17      1.50   50075.0       0.5   16   17    0    0    0    0
   18      2.30   44690.0       1.3   17   18    0    0    0    0
   19      3.50   30860.0       2.5   18   19    0    0    0    0
   20      4.70   22328.0       3.7   19   20    0    0    0    0
   21      5.60   20415.0       4.6   20   21    0    0    0    0
   22      6.20   21188.0       5.2   21   22    0    0    0    0
   23      7.10   20630.0       6.1   22   23    0    0    0    0
   24      7.80   17010.0       6.8   23   24    0    0    0    0
   25      8.30   13420.0       7.7   24   25    0    0    0    0
   26      9.50   11584.0       8.7   25   26    0    0    0    0
   27     11.00   10569.0      10.2   26   27    0    0    0    0
   28     12.40    9278.0      11.6   27   28    0    0    0    0
   29     13.30   54433.0      12.8   28    0    0    0    0    0
   30      0.01   83650.0      -4.0   29   30    0    0    0    0
   31      0.01   63395.0      -3.6   30   31    0    0    0    0
   32      0.01   64715.0      -3.2   31   32    0    0    0    0
   33      0.01   65027.0      -3.0   32   33    0    0    0    0
   34      0.01   54608.0      -2.7   33   34    0    0    0    0
   35      0.01   62931.0      -2.5   34   35    0    0    0    0
   36      0.01   83280.0      -2.2   35   36    0    0    0    0
   37      0.01  123210.0      -2.1   36   37    0    0    0    0
   38      0.01  104280.0      -2.1   37   38    0    0    0    0
   39      0.01   48090.0      -2.0   38   39    0    0    0    0
   40      0.01   35223.0      -2.0   39   40    0    0    0    0
   41      0.01   23819.0      -2.0   40    0    0    0    0    0
***** Data Group E: CHANNEL DATA ********************************
    1    1424.0     180.0     5.400     235.0     0.040      0.10    2    1
    2    1322.0     180.0     5.300     222.0     0.040      0.10    3    2
    3    1630.0     180.0     5.200     241.0     0.040      0.10    4    3
    4    1282.0     180.0     5.100     253.0     0.040      0.10    5    4
    5    1316.0     180.0     5.000     229.0     0.040      0.10    6    5
    6    1230.0     170.0     4.900     212.0     0.040      0.10    7    6
    7    1471.0     160.0     4.800     200.0     0.040      0.10    8    7
    8    1813.0     150.0     4.700     211.0     0.040      0.10    9    8
    9    1846.0     140.0     4.600     223.0     0.040      0.10   10    9
   10    1887.0     130.0     4.500     236.0     0.040      0.10   11   10
   11    1486.0     120.0     4.400     209.0     0.045      0.10   12   11
   12    1139.0     100.0     4.200     238.0     0.045      0.10   13   12
   13    1983.0      70.0     3.400     254.0     0.045      0.10   14   13
   14    2000.0      40.0     2.400     245.0     0.045      0.10   15   14
   15    1691.0      25.0     1.000     216.0     0.045      0.10   16   15
   16    1954.0      25.0     1.000     214.0     0.045      0.10   17   16
   17    2365.0      20.0     1.000     188.0     0.045      0.10   18   17
   18    2104.0      20.0     1.000     171.0     0.045      0.10   19   18
   19    1576.0      15.0     1.000     185.0     0.050      0.10   20   19
   20    1401.0      15.0     1.000     170.0     0.050      0.10   21   20
   21    1321.0      15.0     1.000     177.0     0.050      0.10   22   21
   22    1880.0      12.0     1.000     139.0     0.050      0.10   23   22
   23    1870.0      10.0     1.000     152.0     0.050      0.10   24   23
   24    1532.0      10.0     1.000     162.0     0.050      0.10   25   24
   25    1152.0      10.0     0.800     195.0     0.050      0.10   26   25
   26    1456.0       8.0     0.800     180.0     0.050      0.10   27   26
   27    1898.0       5.0     0.800     197.0     0.050      0.10   28   27
```



```
   28    1813.0       5.0     0.800     188.0     0.050      0.10   29   28
   29     998.0     100.0     4.000     312.0     0.040      0.10   30    6
   30     900.0      75.0     3.600     223.0     0.040      0.10   31   30
   31    1078.0      55.0     3.200     277.0     0.040      0.10   32   31
   32    1002.0      70.0     3.000     260.0     0.040      0.10   33   32
   33     951.0      63.0     2.700     268.0     0.040      0.10   34   33
   34     913.0      54.0     2.500     316.0     0.040      0.10   35   34
   35    1185.0      66.0     2.200     285.0     0.045      0.10   36   35
   36    1206.0      75.0     2.100     263.0     0.045      0.10   37   36
   37    1597.0     110.0     2.100     285.0     0.045      0.10   38   37
   38     922.0      55.0     2.000     271.0     0.045      0.10   39   38
   39    1134.0      40.0     2.000     303.0     0.045      0.10   40   39
   40     978.0      27.0     2.000     260.0     0.045      0.10   41   40
***** Data Group F.1: CONSTANT INFLOWS (m3/sec - 1992 average flow)
    7
       40   -0.0044    (Laurel STP = 0.100 MGD)
       29   -0.1600    (extra Nanticoke base flow)
       23   -0.0070    (Bridgeville STP = 0.160 MGD)
       21   -0.0333    (extra Nanticoke base flow not accounted for by tribs.)
       20   -0.0333    (extra Nanticoke base flow not accounted for by tribs.)
       19   -0.0333    (extra Nanticoke base flow not accounted for by tribs.)
       12   -0.0418    (Seaford STP = 0.955 MGD)
***** Data Group F.2: VARIABLE INFLOWS (m3/sec 1992 flows) ******
   21
       41       366    (Upstream of Laurel Dam)
    1 0000   -1.848    2 0000   -1.848    3 0000   -1.848    4 0000   -2.662
    5 0000   -2.944    6 0000   -2.568    7 0000   -2.412    8 0000   -2.318
    9 0000   -2.349   10 0000   -2.412   11 0000   -2.286   12 0000   -2.161
   13 0000   -2.192   14 0000   -2.255   15 0000   -2.161   16 0000   -2.067
   17 0000   -2.036   18 0000   -2.036   19 0000   -1.910   20 0000   -1.910
   21 0000   -1.942   22 0000   -1.910   23 0000   -2.036   24 0000   -2.130
   25 0000   -1.879   26 0000   -1.848   27 0000   -1.754   28 0000   -1.785
   29 0000   -1.785   30 0000   -1.785   31 0000   -1.816   32 0000   -1.785
   33 0000   -1.691   34 0000   -1.691   35 0000   -1.691   36 0000   -1.691
   37 0000   -1.660   38 0000   -1.660   39 0000   -1.660   40 0000   -1.597
   41 0000   -1.535   42 0000   -1.566   43 0000   -1.566   44 0000   -1.566
   45 0000   -1.629   46 0000   -1.785   47 0000   -3.320   48 0000   -2.662
   49 0000   -2.599   50 0000   -2.662   51 0000   -2.537   52 0000   -2.380
   53 0000   -2.318   54 0000   -2.286   55 0000   -2.599   56 0000   -2.568
   57 0000   -4.291   58 0000   -4.854   59 0000   -3.852   60 0000   -3.570
   61 0000   -3.288   62 0000   -3.257   63 0000   -3.163   64 0000   -3.069
   65 0000   -3.007   66 0000   -2.975   67 0000   -3.257   68 0000   -3.414
   69 0000   -3.194   70 0000   -3.226   71 0000   -5.543   72 0000   -4.792
   73 0000   -4.134   74 0000   -3.883   75 0000   -3.727   76 0000   -3.696
   77 0000   -3.633   78 0000   -3.602   79 0000   -4.228   80 0000   -4.353
   81 0000   -4.040   82 0000   -3.883   83 0000   -3.977   84 0000   -3.696
   85 0000   -3.508   86 0000   -3.883   87 0000   -7.235   88 0000   -4.604
   89 0000   -3.821   90 0000   -3.570   91 0000   -3.508   92 0000   -3.382
   93 0000   -3.351   94 0000   -3.226   95 0000   -3.163   96 0000   -3.069
   97 0000   -2.944   98 0000   -2.913   99 0000   -2.913  100 0000   -2.850
  101 0000   -2.819  102 0000   -2.819  103 0000   -2.819  104 0000   -2.725
  105 0000   -2.662  106 0000   -2.662  107 0000   -2.693  108 0000   -2.725
  109 0000   -2.756  110 0000   -3.351  111 0000   -3.226  112 0000   -3.038
  113 0000   -3.069  114 0000   -3.007  115 0000   -2.944  116 0000   -3.069
  117 0000   -3.007  118 0000   -2.913  119 0000   -2.850  120 0000   -2.756
  121 0000   -3.414  122 0000   -2.693  123 0000   -2.599  124 0000   -2.599
  125 0000   -2.662  126 0000   -2.599  127 0000   -2.568  128 0000   -2.443
  129 0000   -4.666  130 0000   -7.642  131 0000   -4.792  132 0000   -3.946
  133 0000   -3.539  134 0000   -3.382  135 0000   -3.257  136 0000   -3.069
  137 0000   -2.975  138 0000   -2.850  139 0000   -2.725  140 0000   -2.568
  141 0000   -2.349  142 0000   -2.224  143 0000   -2.130  144 0000   -1.973
  145 0000   -1.848  146 0000   -1.848  147 0000   -1.973  148 0000   -1.973
  149 0000   -1.816  150 0000   -1.723  151 0000   -1.691  152 0000   -2.349
  153 0000   -2.380  154 0000   -2.036  155 0000   -1.848  156 0000   -1.754
  157 0000   -2.599  158 0000   -3.758  159 0000   -3.163  160 0000   -2.881
  161 0000   -2.787  162 0000   -2.693  163 0000   -2.537  164 0000   -2.318
  165 0000   -2.161  166 0000   -2.067  167 0000   -1.973  168 0000   -1.816
  169 0000   -1.660  170 0000   -1.597  171 0000   -1.691  172 0000   -1.723
  173 0000   -1.660  174 0000   -1.660  175 0000   -1.472  176 0000   -1.503
  177 0000   -1.629  178 0000   -1.566  179 0000   -1.472  180 0000   -1.347
  181 0000   -1.253  182 0000   -1.065  183 0000   -1.096  184 0000   -1.127
  185 0000   -1.096  186 0000   -1.190  187 0000   -1.221  188 0000   -1.221
  189 0000   -1.096  190 0000   -1.065  191 0000   -1.002  192 0000   -0.908
  193 0000   -0.877  194 0000   -0.908  195 0000   -0.783  196 0000   -0.783
  197 0000   -0.783  198 0000   -0.752  199 0000   -0.814  200 0000   -0.783
  201 0000   -0.846  202 0000   -0.783  203 0000   -0.814  204 0000   -1.034
  205 0000   -1.034  206 0000   -1.065  207 0000   -1.127  208 0000   -1.034
  209 0000   -1.002  210 0000   -0.971  211 0000   -0.908  212 0000   -0.877
  213 0000   -1.096  214 0000   -1.284  215 0000   -1.002  216 0000   -1.002
  217 0000   -1.065  218 0000   -1.034  219 0000   -0.940  220 0000   -0.877
  221 0000   -0.846  222 0000   -0.846  223 0000   -0.814  224 0000   -0.783
  225 0000   -0.940  226 0000   -0.940  227 0000   -1.159  228 0000   -2.067
  229 0000   -2.443  230 0000   -3.069  231 0000   -6.076  232 0000   -3.101
  233 0000   -2.349  234 0000   -2.036  235 0000   -1.848  236 0000   -1.754
  237 0000   -1.660  238 0000   -1.566  239 0000   -1.503  240 0000   -1.378
```

241 0000	-1.441	242 0000	-1.566	243 0000	-1.409	244 0000	-1.347
245 0000	-1.284	246 0000	-1.127	247 0000	-1.127	248 0000	-1.190
249 0000	-1.221	250 0000	-1.315	251 0000	-1.347	252 0000	-1.253
253 0000	-1.190	254 0000	-1.284	255 0000	-1.535	256 0000	-1.253
257 0000	-1.159	258 0000	-1.127	259 0000	-1.127	260 0000	-1.096
261 0000	-1.065	262 0000	-1.002	263 0000	-1.065	264 0000	-1.065
265 0000	-1.002	266 0000	-1.034	267 0000	-1.065	268 0000	-1.002
269 0000	-1.472	270 0000	-3.226	271 0000	-2.318	272 0000	-1.879
273 0000	-1.691	274 0000	-1.566	275 0000	-1.503	276 0000	-1.441
277 0000	-1.409	278 0000	-1.409	279 0000	-1.441	280 0000	-1.347
281 0000	-1.284	282 0000	-1.253	283 0000	-1.253	284 0000	-1.347
285 0000	-1.284	286 0000	-1.284	287 0000	-1.253	288 0000	-1.190
289 0000	-1.159	290 0000	-1.159	291 0000	-1.159	292 0000	-1.159
293 0000	-1.221	294 0000	-1.190	295 0000	-1.159	296 0000	-1.159
297 0000	-1.159	298 0000	-1.159	299 0000	-1.315	300 0000	-1.221
301 0000	-1.190	302 0000	-1.159	303 0000	-1.159	304 0000	-1.159
305 0000	-1.409	306 0000	-1.221	307 0000	-1.096	308 0000	-1.816
309 0000	-1.503	310 0000	-1.597	311 0000	-1.691	312 0000	-1.472
313 0000	-1.409	314 0000	-1.347	315 0000	-1.315	316 0000	-1.315
317 0000	-1.378	318 0000	-1.503	319 0000	-1.409	320 0000	-1.347
321 0000	-1.315	322 0000	-1.315	323 0000	-1.347	324 0000	-1.315
325 0000	-1.284	326 0000	-1.284	327 0000	-1.315	328 0000	-1.378
329 0000	-1.315	330 0000	-1.315	331 0000	-1.441	332 0000	-1.409
333 0000	-1.347	334 0000	-1.315	335 0000	-1.284	336 0000	-1.315
337 0000	-1.347	338 0000	-1.315	339 0000	-1.253	340 0000	-1.284
341 0000	-1.253	342 0000	-1.221	343 0000	-1.221	344 0000	-1.190
345 0000	-1.347	346 0000	-2.850	347 0000	-2.599	348 0000	-2.224
349 0000	-2.067	350 0000	-2.004	351 0000	-1.942	352 0000	-2.036
353 0000	-2.255	354 0000	-2.067	355 0000	-2.318	356 0000	-2.443
357 0000	-2.318	358 0000	-2.349	359 0000	-2.286	360 0000	-2.161
361 0000	-2.161	362 0000	-2.036	363 0000	-2.067	364 0000	-2.098
365 0000	-2.161	366 0000	-2.161				
39	366	(Little Creek)					
1 0000	-0.371	2 0000	-0.371	3 0000	-0.371	4 0000	-0.534
5 0000	-0.591	6 0000	-0.515	7 0000	-0.484	8 0000	-0.465
9 0000	-0.471	10 0000	-0.484	11 0000	-0.459	12 0000	-0.434
13 0000	-0.440	14 0000	-0.453	15 0000	-0.434	16 0000	-0.415
17 0000	-0.409	18 0000	-0.409	19 0000	-0.383	20 0000	-0.383
21 0000	-0.390	22 0000	-0.383	23 0000	-0.409	24 0000	-0.427
25 0000	-0.377	26 0000	-0.371	27 0000	-0.352	28 0000	-0.358
29 0000	-0.358	30 0000	-0.358	31 0000	-0.365	32 0000	-0.358
33 0000	-0.339	34 0000	-0.339	35 0000	-0.339	36 0000	-0.339
37 0000	-0.333	38 0000	-0.333	39 0000	-0.333	40 0000	-0.321
41 0000	-0.308	42 0000	-0.314	43 0000	-0.314	44 0000	-0.314
45 0000	-0.327	46 0000	-0.358	47 0000	-0.666	48 0000	-0.534
49 0000	-0.522	50 0000	-0.534	51 0000	-0.509	52 0000	-0.478
53 0000	-0.465	54 0000	-0.459	55 0000	-0.522	56 0000	-0.515
57 0000	-0.861	58 0000	-0.974	59 0000	-0.773	60 0000	-0.717
61 0000	-0.660	62 0000	-0.654	63 0000	-0.635	64 0000	-0.616
65 0000	-0.603	66 0000	-0.597	67 0000	-0.654	68 0000	-0.685
69 0000	-0.641	70 0000	-0.647	71 0000	-1.113	72 0000	-0.962
73 0000	-0.830	74 0000	-0.780	75 0000	-0.748	76 0000	-0.742
77 0000	-0.729	78 0000	-0.723	79 0000	-0.849	80 0000	-0.874
81 0000	-0.811	82 0000	-0.780	83 0000	-0.798	84 0000	-0.742
85 0000	-0.704	86 0000	-0.780	87 0000	-1.452	88 0000	-0.924
89 0000	-0.767	90 0000	-0.717	91 0000	-0.704	92 0000	-0.679
93 0000	-0.673	94 0000	-0.647	95 0000	-0.635	96 0000	-0.616
97 0000	-0.591	98 0000	-0.585	99 0000	-0.585	100 0000	-0.572
101 0000	-0.566	102 0000	-0.566	103 0000	-0.566	104 0000	-0.547
105 0000	-0.534	106 0000	-0.534	107 0000	-0.541	108 0000	-0.547
109 0000	-0.553	110 0000	-0.673	111 0000	-0.647	112 0000	-0.610
113 0000	-0.616	114 0000	-0.603	115 0000	-0.591	116 0000	-0.616
117 0000	-0.603	118 0000	-0.585	119 0000	-0.572	120 0000	-0.553
121 0000	-0.685	122 0000	-0.541	123 0000	-0.522	124 0000	-0.522
125 0000	-0.534	126 0000	-0.522	127 0000	-0.515	128 0000	-0.490
129 0000	-0.937	130 0000	-1.534	131 0000	-0.962	132 0000	-0.792
133 0000	-0.710	134 0000	-0.679	135 0000	-0.654	136 0000	-0.616
137 0000	-0.597	138 0000	-0.572	139 0000	-0.547	140 0000	-0.515
141 0000	-0.471	142 0000	-0.446	143 0000	-0.427	144 0000	-0.396
145 0000	-0.371	146 0000	-0.371	147 0000	-0.396	148 0000	-0.396
149 0000	-0.365	150 0000	-0.346	151 0000	-0.339	152 0000	-0.471
153 0000	-0.478	154 0000	-0.409	155 0000	-0.371	156 0000	-0.352
157 0000	-0.522	158 0000	-0.754	159 0000	-0.635	160 0000	-0.578
161 0000	-0.559	162 0000	-0.541	163 0000	-0.509	164 0000	-0.465
165 0000	-0.434	166 0000	-0.415	167 0000	-0.396	168 0000	-0.365
169 0000	-0.333	170 0000	-0.321	171 0000	-0.339	172 0000	-0.346
173 0000	-0.333	174 0000	-0.333	175 0000	-0.295	176 0000	-0.302
177 0000	-0.327	178 0000	-0.314	179 0000	-0.295	180 0000	-0.270
181 0000	-0.251	182 0000	-0.214	183 0000	-0.220	184 0000	-0.226
185 0000	-0.220	186 0000	-0.239	187 0000	-0.245	188 0000	-0.245
189 0000	-0.220	190 0000	-0.214	191 0000	-0.201	192 0000	-0.182
193 0000	-0.176	194 0000	-0.182	195 0000	-0.157	196 0000	-0.157
197 0000	-0.157	198 0000	-0.151	199 0000	-0.163	200 0000	-0.157
201 0000	-0.170	202 0000	-0.157	203 0000	-0.163	204 0000	-0.207
205 0000	-0.207	206 0000	-0.214	207 0000	-0.226	208 0000	-0.207

209 0000	-0.201	210 0000	-0.195	211 0000	-0.182	212 0000	-0.176
213 0000	-0.220	214 0000	-0.258	215 0000	-0.201	216 0000	-0.201
217 0000	-0.214	218 0000	-0.207	219 0000	-0.189	220 0000	-0.176
221 0000	-0.170	222 0000	-0.170	223 0000	-0.163	224 0000	-0.157
225 0000	-0.189	226 0000	-0.189	227 0000	-0.233	228 0000	-0.415
229 0000	-0.490	230 0000	-0.616	231 0000	-1.220	232 0000	-0.622
233 0000	-0.471	234 0000	-0.409	235 0000	-0.371	236 0000	-0.352
237 0000	-0.333	238 0000	-0.314	239 0000	-0.302	240 0000	-0.277
241 0000	-0.289	242 0000	-0.314	243 0000	-0.283	244 0000	-0.270
245 0000	-0.258	246 0000	-0.226	247 0000	-0.226	248 0000	-0.239
249 0000	-0.245	250 0000	-0.264	251 0000	-0.270	252 0000	-0.251
253 0000	-0.239	254 0000	-0.258	255 0000	-0.308	256 0000	-0.251
257 0000	-0.233	258 0000	-0.226	259 0000	-0.226	260 0000	-0.220
261 0000	-0.214	262 0000	-0.201	263 0000	-0.214	264 0000	-0.214
265 0000	-0.201	266 0000	-0.207	267 0000	-0.214	268 0000	-0.201
269 0000	-0.295	270 0000	-0.647	271 0000	-0.465	272 0000	-0.377
273 0000	-0.339	274 0000	-0.314	275 0000	-0.302	276 0000	-0.289
277 0000	-0.283	278 0000	-0.283	279 0000	-0.289	280 0000	-0.270
281 0000	-0.258	282 0000	-0.251	283 0000	-0.251	284 0000	-0.270
285 0000	-0.258	286 0000	-0.258	287 0000	-0.251	288 0000	-0.239
289 0000	-0.233	290 0000	-0.233	291 0000	-0.233	292 0000	-0.233
293 0000	-0.245	294 0000	-0.239	295 0000	-0.233	296 0000	-0.233
297 0000	-0.233	298 0000	-0.233	299 0000	-0.264	300 0000	-0.245
301 0000	-0.239	302 0000	-0.233	303 0000	-0.233	304 0000	-0.233
305 0000	-0.283	306 0000	-0.245	307 0000	-0.220	308 0000	-0.365
309 0000	-0.302	310 0000	-0.321	311 0000	-0.339	312 0000	-0.295
313 0000	-0.283	314 0000	-0.270	315 0000	-0.264	316 0000	-0.264
317 0000	-0.277	318 0000	-0.302	319 0000	-0.283	320 0000	-0.270
321 0000	-0.264	322 0000	-0.264	323 0000	-0.270	324 0000	-0.264
325 0000	-0.258	326 0000	-0.258	327 0000	-0.264	328 0000	-0.277
329 0000	-0.264	330 0000	-0.264	331 0000	-0.289	332 0000	-0.283
333 0000	-0.270	334 0000	-0.264	335 0000	-0.258	336 0000	-0.264
337 0000	-0.270	338 0000	-0.264	339 0000	-0.251	340 0000	-0.258
341 0000	-0.251	342 0000	-0.245	343 0000	-0.245	344 0000	-0.239
345 0000	-0.270	346 0000	-0.572	347 0000	-0.522	348 0000	-0.446
349 0000	-0.415	350 0000	-0.402	351 0000	-0.390	352 0000	-0.409
353 0000	-0.453	354 0000	-0.415	355 0000	-0.465	356 0000	-0.490
357 0000	-0.465	358 0000	-0.471	359 0000	-0.459	360 0000	-0.434
361 0000	-0.434	362 0000	-0.409	363 0000	-0.415	364 0000	-0.421
365 0000	-0.434	366 0000	-0.434				
37	366	(Holly Ditch)					
1 0000	-0.084	2 0000	-0.084	3 0000	-0.084	4 0000	-0.120
5 0000	-0.133	6 0000	-0.116	7 0000	-0.109	8 0000	-0.105
9 0000	-0.106	10 0000	-0.109	11 0000	-0.103	12 0000	-0.098
13 0000	-0.099	14 0000	-0.102	15 0000	-0.098	16 0000	-0.093
17 0000	-0.092	18 0000	-0.092	19 0000	-0.086	20 0000	-0.086
21 0000	-0.088	22 0000	-0.086	23 0000	-0.092	24 0000	-0.096
25 0000	-0.085	26 0000	-0.084	27 0000	-0.079	28 0000	-0.081
29 0000	-0.081	30 0000	-0.081	31 0000	-0.082	32 0000	-0.081
33 0000	-0.076	34 0000	-0.076	35 0000	-0.076	36 0000	-0.076
37 0000	-0.075	38 0000	-0.075	39 0000	-0.075	40 0000	-0.072
41 0000	-0.069	42 0000	-0.071	43 0000	-0.071	44 0000	-0.071
45 0000	-0.074	46 0000	-0.081	47 0000	-0.150	48 0000	-0.120
49 0000	-0.118	50 0000	-0.120	51 0000	-0.115	52 0000	-0.108
53 0000	-0.105	54 0000	-0.103	55 0000	-0.118	56 0000	-0.116
57 0000	-0.194	58 0000	-0.219	59 0000	-0.174	60 0000	-0.161
61 0000	-0.149	62 0000	-0.147	63 0000	-0.143	64 0000	-0.139
65 0000	-0.136	66 0000	-0.135	67 0000	-0.147	68 0000	-0.154
69 0000	-0.144	70 0000	-0.146	71 0000	-0.251	72 0000	-0.217
73 0000	-0.187	74 0000	-0.176	75 0000	-0.168	76 0000	-0.167
77 0000	-0.164	78 0000	-0.163	79 0000	-0.191	80 0000	-0.197
81 0000	-0.183	82 0000	-0.176	83 0000	-0.180	84 0000	-0.167
85 0000	-0.159	86 0000	-0.176	87 0000	-0.327	88 0000	-0.208
89 0000	-0.173	90 0000	-0.161	91 0000	-0.159	92 0000	-0.153
93 0000	-0.151	94 0000	-0.146	95 0000	-0.143	96 0000	-0.139
97 0000	-0.133	98 0000	-0.132	99 0000	-0.132	100 0000	-0.129
101 0000	-0.127	102 0000	-0.127	103 0000	-0.127	104 0000	-0.123
105 0000	-0.120	106 0000	-0.120	107 0000	-0.122	108 0000	-0.123
109 0000	-0.125	110 0000	-0.151	111 0000	-0.146	112 0000	-0.137
113 0000	-0.139	114 0000	-0.136	115 0000	-0.133	116 0000	-0.139
117 0000	-0.136	118 0000	-0.132	119 0000	-0.129	120 0000	-0.125
121 0000	-0.154	122 0000	-0.122	123 0000	-0.118	124 0000	-0.118
125 0000	-0.120	126 0000	-0.118	127 0000	-0.116	128 0000	-0.110
129 0000	-0.211	130 0000	-0.345	131 0000	-0.217	132 0000	-0.178
133 0000	-0.160	134 0000	-0.153	135 0000	-0.147	136 0000	-0.139
137 0000	-0.135	138 0000	-0.129	139 0000	-0.123	140 0000	-0.116
141 0000	-0.106	142 0000	-0.101	143 0000	-0.096	144 0000	-0.089
145 0000	-0.084	146 0000	-0.084	147 0000	-0.089	148 0000	-0.089
149 0000	-0.082	150 0000	-0.078	151 0000	-0.076	152 0000	-0.106
153 0000	-0.108	154 0000	-0.092	155 0000	-0.084	156 0000	-0.079
157 0000	-0.118	158 0000	-0.170	159 0000	-0.143	160 0000	-0.130
161 0000	-0.126	162 0000	-0.122	163 0000	-0.115	164 0000	-0.105
165 0000	-0.098	166 0000	-0.093	167 0000	-0.089	168 0000	-0.082
169 0000	-0.075	170 0000	-0.072	171 0000	-0.076	172 0000	-0.078
173 0000	-0.075	174 0000	-0.075	175 0000	-0.067	176 0000	-0.068

177	0000	-0.074	178	0000	-0.071	179	0000	-0.067	180	0000	-0.061
181	0000	-0.057	182	0000	-0.048	183	0000	-0.050	184	0000	-0.051
185	0000	-0.050	186	0000	-0.054	187	0000	-0.055	188	0000	-0.055
189	0000	-0.050	190	0000	-0.048	191	0000	-0.045	192	0000	-0.041
193	0000	-0.040	194	0000	-0.041	195	0000	-0.035	196	0000	-0.035
197	0000	-0.035	198	0000	-0.034	199	0000	-0.037	200	0000	-0.035
201	0000	-0.038	202	0000	-0.035	203	0000	-0.037	204	0000	-0.047
205	0000	-0.047	206	0000	-0.048	207	0000	-0.051	208	0000	-0.047
209	0000	-0.045	210	0000	-0.044	211	0000	-0.041	212	0000	-0.040
213	0000	-0.050	214	0000	-0.058	215	0000	-0.045	216	0000	-0.045
217	0000	-0.048	218	0000	-0.047	219	0000	-0.042	220	0000	-0.040
221	0000	-0.038	222	0000	-0.038	223	0000	-0.037	224	0000	-0.035
225	0000	-0.042	226	0000	-0.042	227	0000	-0.052	228	0000	-0.093
229	0000	-0.110	230	0000	-0.139	231	0000	-0.275	232	0000	-0.140
233	0000	-0.106	234	0000	-0.092	235	0000	-0.084	236	0000	-0.079
237	0000	-0.075	238	0000	-0.071	239	0000	-0.068	240	0000	-0.062
241	0000	-0.065	242	0000	-0.071	243	0000	-0.064	244	0000	-0.061
245	0000	-0.058	246	0000	-0.051	247	0000	-0.051	248	0000	-0.054
249	0000	-0.055	250	0000	-0.059	251	0000	-0.061	252	0000	-0.057
253	0000	-0.054	254	0000	-0.058	255	0000	-0.069	256	0000	-0.057
257	0000	-0.052	258	0000	-0.051	259	0000	-0.051	260	0000	-0.050
261	0000	-0.048	262	0000	-0.045	263	0000	-0.048	264	0000	-0.048
265	0000	-0.045	266	0000	-0.047	267	0000	-0.048	268	0000	-0.045
269	0000	-0.067	270	0000	-0.146	271	0000	-0.105	272	0000	-0.085
273	0000	-0.076	274	0000	-0.071	275	0000	-0.068	276	0000	-0.065
277	0000	-0.064	278	0000	-0.064	279	0000	-0.065	280	0000	-0.061
281	0000	-0.058	282	0000	-0.057	283	0000	-0.057	284	0000	-0.061
285	0000	-0.058	286	0000	-0.058	287	0000	-0.057	288	0000	-0.054
289	0000	-0.052	290	0000	-0.052	291	0000	-0.052	292	0000	-0.052
293	0000	-0.055	294	0000	-0.054	295	0000	-0.052	296	0000	-0.052
297	0000	-0.052	298	0000	-0.052	299	0000	-0.059	300	0000	-0.055
301	0000	-0.054	302	0000	-0.052	303	0000	-0.052	304	0000	-0.052
305	0000	-0.064	306	0000	-0.055	307	0000	-0.050	308	0000	-0.082
309	0000	-0.068	310	0000	-0.072	311	0000	-0.076	312	0000	-0.067
313	0000	-0.064	314	0000	-0.061	315	0000	-0.059	316	0000	-0.059
317	0000	-0.062	318	0000	-0.068	319	0000	-0.064	320	0000	-0.061
321	0000	-0.059	322	0000	-0.059	323	0000	-0.061	324	0000	-0.059
325	0000	-0.058	326	0000	-0.058	327	0000	-0.059	328	0000	-0.062
329	0000	-0.059	330	0000	-0.059	331	0000	-0.065	332	0000	-0.064
333	0000	-0.061	334	0000	-0.059	335	0000	-0.058	336	0000	-0.059
337	0000	-0.061	338	0000	-0.059	339	0000	-0.057	340	0000	-0.058
341	0000	-0.057	342	0000	-0.055	343	0000	-0.055	344	0000	-0.054
345	0000	-0.061	346	0000	-0.129	347	0000	-0.118	348	0000	-0.101
349	0000	-0.093	350	0000	-0.091	351	0000	-0.088	352	0000	-0.092
353	0000	-0.102	354	0000	-0.093	355	0000	-0.105	356	0000	-0.110
357	0000	-0.105	358	0000	-0.106	359	0000	-0.103	360	0000	-0.098
361	0000	-0.098	362	0000	-0.092	363	0000	-0.093	364	0000	-0.095
365	0000	-0.098	366	0000	-0.098						
36		366	(Collins & Culver Ditch)								
1	0000	-0.047	2	0000	-0.047	3	0000	-0.047	4	0000	-0.067
5	0000	-0.075	6	0000	-0.065	7	0000	-0.061	8	0000	-0.059
9	0000	-0.059	10	0000	-0.061	11	0000	-0.058	12	0000	-0.055
13	0000	-0.056	14	0000	-0.057	15	0000	-0.055	16	0000	-0.052
17	0000	-0.052	18	0000	-0.052	19	0000	-0.048	20	0000	-0.048
21	0000	-0.049	22	0000	-0.048	23	0000	-0.052	24	0000	-0.054
25	0000	-0.048	26	0000	-0.047	27	0000	-0.044	28	0000	-0.045
29	0000	-0.045	30	0000	-0.045	31	0000	-0.046	32	0000	-0.045
33	0000	-0.043	34	0000	-0.043	35	0000	-0.043	36	0000	-0.043
37	0000	-0.042	38	0000	-0.042	39	0000	-0.042	40	0000	-0.040
41	0000	-0.039	42	0000	-0.040	43	0000	-0.040	44	0000	-0.040
45	0000	-0.041	46	0000	-0.045	47	0000	-0.084	48	0000	-0.067
49	0000	-0.066	50	0000	-0.067	51	0000	-0.064	52	0000	-0.060
53	0000	-0.059	54	0000	-0.058	55	0000	-0.066	56	0000	-0.065
57	0000	-0.109	58	0000	-0.123	59	0000	-0.098	60	0000	-0.090
61	0000	-0.083	62	0000	-0.082	63	0000	-0.080	64	0000	-0.078
65	0000	-0.076	66	0000	-0.075	67	0000	-0.082	68	0000	-0.086
69	0000	-0.081	70	0000	-0.082	71	0000	-0.140	72	0000	-0.121
73	0000	-0.105	74	0000	-0.098	75	0000	-0.094	76	0000	-0.094
77	0000	-0.092	78	0000	-0.091	79	0000	-0.107	80	0000	-0.110
81	0000	-0.102	82	0000	-0.098	83	0000	-0.101	84	0000	-0.094
85	0000	-0.089	86	0000	-0.098	87	0000	-0.183	88	0000	-0.117
89	0000	-0.097	90	0000	-0.090	91	0000	-0.089	92	0000	-0.086
93	0000	-0.085	94	0000	-0.082	95	0000	-0.080	96	0000	-0.078
97	0000	-0.075	98	0000	-0.074	99	0000	-0.074	100	0000	-0.072
101	0000	-0.071	102	0000	-0.071	103	0000	-0.071	104	0000	-0.069
105	0000	-0.067	106	0000	-0.067	107	0000	-0.068	108	0000	-0.069
109	0000	-0.070	110	0000	-0.085	111	0000	-0.082	112	0000	-0.077
113	0000	-0.078	114	0000	-0.076	115	0000	-0.075	116	0000	-0.078
117	0000	-0.076	118	0000	-0.074	119	0000	-0.072	120	0000	-0.070
121	0000	-0.086	122	0000	-0.068	123	0000	-0.066	124	0000	-0.066
125	0000	-0.067	126	0000	-0.066	127	0000	-0.065	128	0000	-0.062
129	0000	-0.118	130	0000	-0.193	131	0000	-0.121	132	0000	-0.100
133	0000	-0.090	134	0000	-0.086	135	0000	-0.082	136	0000	-0.078
137	0000	-0.075	138	0000	-0.072	139	0000	-0.069	140	0000	-0.065
141	0000	-0.059	142	0000	-0.056	143	0000	-0.054	144	0000	-0.050

145	0000	-0.047	146	0000	-0.047	147	0000	-0.050	148	0000	-0.050
149	0000	-0.046	150	0000	-0.044	151	0000	-0.043	152	0000	-0.059
153	0000	-0.060	154	0000	-0.052	155	0000	-0.047	156	0000	-0.044
157	0000	-0.066	158	0000	-0.095	159	0000	-0.080	160	0000	-0.073
161	0000	-0.071	162	0000	-0.068	163	0000	-0.064	164	0000	-0.059
165	0000	-0.055	166	0000	-0.052	167	0000	-0.050	168	0000	-0.046
169	0000	-0.042	170	0000	-0.040	171	0000	-0.043	172	0000	-0.044
173	0000	-0.042	174	0000	-0.042	175	0000	-0.037	176	0000	-0.038
177	0000	-0.041	178	0000	-0.040	179	0000	-0.037	180	0000	-0.034
181	0000	-0.032	182	0000	-0.027	183	0000	-0.028	184	0000	-0.029
185	0000	-0.028	186	0000	-0.030	187	0000	-0.031	188	0000	-0.031
189	0000	-0.028	190	0000	-0.027	191	0000	-0.025	192	0000	-0.023
193	0000	-0.022	194	0000	-0.023	195	0000	-0.020	196	0000	-0.020
197	0000	-0.020	198	0000	-0.019	199	0000	-0.021	200	0000	-0.020
201	0000	-0.021	202	0000	-0.020	203	0000	-0.021	204	0000	-0.026
205	0000	-0.026	206	0000	-0.027	207	0000	-0.029	208	0000	-0.026
209	0000	-0.025	210	0000	-0.025	211	0000	-0.023	212	0000	-0.022
213	0000	-0.028	214	0000	-0.033	215	0000	-0.025	216	0000	-0.025
217	0000	-0.027	218	0000	-0.026	219	0000	-0.024	220	0000	-0.022
221	0000	-0.021	222	0000	-0.021	223	0000	-0.021	224	0000	-0.020
225	0000	-0.024	226	0000	-0.024	227	0000	-0.029	228	0000	-0.052
229	0000	-0.062	230	0000	-0.078	231	0000	-0.154	232	0000	-0.078
233	0000	-0.059	234	0000	-0.052	235	0000	-0.047	236	0000	-0.044
237	0000	-0.042	238	0000	-0.040	239	0000	-0.038	240	0000	-0.035
241	0000	-0.036	242	0000	-0.040	243	0000	-0.036	244	0000	-0.034
245	0000	-0.033	246	0000	-0.029	247	0000	-0.029	248	0000	-0.030
249	0000	-0.031	250	0000	-0.033	251	0000	-0.034	252	0000	-0.032
253	0000	-0.030	254	0000	-0.033	255	0000	-0.039	256	0000	-0.032
257	0000	-0.029	258	0000	-0.029	259	0000	-0.029	260	0000	-0.028
261	0000	-0.027	262	0000	-0.025	263	0000	-0.027	264	0000	-0.027
265	0000	-0.025	266	0000	-0.026	267	0000	-0.027	268	0000	-0.025
269	0000	-0.037	270	0000	-0.082	271	0000	-0.059	272	0000	-0.048
273	0000	-0.043	274	0000	-0.040	275	0000	-0.038	276	0000	-0.036
277	0000	-0.036	278	0000	-0.036	279	0000	-0.036	280	0000	-0.034
281	0000	-0.033	282	0000	-0.032	283	0000	-0.032	284	0000	-0.034
285	0000	-0.033	286	0000	-0.033	287	0000	-0.032	288	0000	-0.030
289	0000	-0.029	290	0000	-0.029	291	0000	-0.029	292	0000	-0.029
293	0000	-0.031	294	0000	-0.030	295	0000	-0.029	296	0000	-0.029
297	0000	-0.029	298	0000	-0.029	299	0000	-0.033	300	0000	-0.031
301	0000	-0.030	302	0000	-0.029	303	0000	-0.029	304	0000	-0.029
305	0000	-0.036	306	0000	-0.031	307	0000	-0.028	308	0000	-0.046
309	0000	-0.038	310	0000	-0.040	311	0000	-0.043	312	0000	-0.037
313	0000	-0.036	314	0000	-0.034	315	0000	-0.033	316	0000	-0.033
317	0000	-0.035	318	0000	-0.038	319	0000	-0.036	320	0000	-0.034
321	0000	-0.033	322	0000	-0.033	323	0000	-0.034	324	0000	-0.033
325	0000	-0.033	326	0000	-0.033	327	0000	-0.033	328	0000	-0.035
329	0000	-0.033	330	0000	-0.033	331	0000	-0.036	332	0000	-0.036
333	0000	-0.034	334	0000	-0.033	335	0000	-0.033	336	0000	-0.033
337	0000	-0.034	338	0000	-0.033	339	0000	-0.032	340	0000	-0.033
341	0000	-0.032	342	0000	-0.031	343	0000	-0.031	344	0000	-0.030
345	0000	-0.034	346	0000	-0.072	347	0000	-0.066	348	0000	-0.056
349	0000	-0.052	350	0000	-0.051	351	0000	-0.049	352	0000	-0.052
353	0000	-0.057	354	0000	-0.052	355	0000	-0.059	356	0000	-0.062
357	0000	-0.059	358	0000	-0.059	359	0000	-0.058	360	0000	-0.055
361	0000	-0.055	362	0000	-0.052	363	0000	-0.052	364	0000	-0.053
365	0000	-0.055	366	0000	-0.055						
35		366	(Tussock Br.)								
1	0000	-0.224	2	0000	-0.224	3	0000	-0.224	4	0000	-0.323
5	0000	-0.357	6	0000	-0.311	7	0000	-0.292	8	0000	-0.281
9	0000	-0.285	10	0000	-0.292	11	0000	-0.277	12	0000	-0.262
13	0000	-0.266	14	0000	-0.273	15	0000	-0.262	16	0000	-0.250
17	0000	-0.247	18	0000	-0.247	19	0000	-0.231	20	0000	-0.231
21	0000	-0.235	22	0000	-0.231	23	0000	-0.247	24	0000	-0.258
25	0000	-0.228	26	0000	-0.224	27	0000	-0.212	28	0000	-0.216
29	0000	-0.216	30	0000	-0.216	31	0000	-0.220	32	0000	-0.216
33	0000	-0.205	34	0000	-0.205	35	0000	-0.205	36	0000	-0.205
37	0000	-0.201	38	0000	-0.201	39	0000	-0.201	40	0000	-0.194
41	0000	-0.186	42	0000	-0.190	43	0000	-0.190	44	0000	-0.190
45	0000	-0.197	46	0000	-0.216	47	0000	-0.402	48	0000	-0.323
49	0000	-0.315	50	0000	-0.323	51	0000	-0.307	52	0000	-0.288
53	0000	-0.281	54	0000	-0.277	55	0000	-0.315	56	0000	-0.311
57	0000	-0.520	58	0000	-0.588	59	0000	-0.467	60	0000	-0.433
61	0000	-0.398	62	0000	-0.395	63	0000	-0.383	64	0000	-0.372
65	0000	-0.364	66	0000	-0.360	67	0000	-0.395	68	0000	-0.414
69	0000	-0.387	70	0000	-0.391	71	0000	-0.672	72	0000	-0.581
73	0000	-0.501	74	0000	-0.471	75	0000	-0.452	76	0000	-0.448
77	0000	-0.440	78	0000	-0.436	79	0000	-0.512	80	0000	-0.527
81	0000	-0.489	82	0000	-0.471	83	0000	-0.482	84	0000	-0.448
85	0000	-0.425	86	0000	-0.471	87	0000	-0.877	88	0000	-0.558
89	0000	-0.463	90	0000	-0.433	91	0000	-0.425	92	0000	-0.410
93	0000	-0.406	94	0000	-0.391	95	0000	-0.383	96	0000	-0.372
97	0000	-0.357	98	0000	-0.353	99	0000	-0.353	100	0000	-0.345
101	0000	-0.342	102	0000	-0.342	103	0000	-0.342	104	0000	-0.330
105	0000	-0.323	106	0000	-0.323	107	0000	-0.326	108	0000	-0.330
109	0000	-0.334	110	0000	-0.406	111	0000	-0.391	112	0000	-0.368

113	0000	-0.372	114	0000	-0.364	115	0000	-0.357	116	0000	-0.372
117	0000	-0.364	118	0000	-0.353	119	0000	-0.345	120	0000	-0.334
121	0000	-0.414	122	0000	-0.326	123	0000	-0.315	124	0000	-0.315
125	0000	-0.323	126	0000	-0.315	127	0000	-0.311	128	0000	-0.296
129	0000	-0.565	130	0000	-0.926	131	0000	-0.581	132	0000	-0.478
133	0000	-0.429	134	0000	-0.410	135	0000	-0.395	136	0000	-0.372
137	0000	-0.360	138	0000	-0.345	139	0000	-0.330	140	0000	-0.311
141	0000	-0.285	142	0000	-0.269	143	0000	-0.258	144	0000	-0.239
145	0000	-0.224	146	0000	-0.224	147	0000	-0.239	148	0000	-0.239
149	0000	-0.220	150	0000	-0.209	151	0000	-0.205	152	0000	-0.285
153	0000	-0.288	154	0000	-0.247	155	0000	-0.224	156	0000	-0.212
157	0000	-0.315	158	0000	-0.455	159	0000	-0.383	160	0000	-0.349
161	0000	-0.338	162	0000	-0.326	163	0000	-0.307	164	0000	-0.281
165	0000	-0.262	166	0000	-0.250	167	0000	-0.239	168	0000	-0.220
169	0000	-0.201	170	0000	-0.194	171	0000	-0.205	172	0000	-0.209
173	0000	-0.201	174	0000	-0.201	175	0000	-0.178	176	0000	-0.182
177	0000	-0.197	178	0000	-0.190	179	0000	-0.178	180	0000	-0.163
181	0000	-0.152	182	0000	-0.129	183	0000	-0.133	184	0000	-0.137
185	0000	-0.133	186	0000	-0.144	187	0000	-0.148	188	0000	-0.148
189	0000	-0.133	190	0000	-0.129	191	0000	-0.121	192	0000	-0.110
193	0000	-0.106	194	0000	-0.110	195	0000	-0.095	196	0000	-0.095
197	0000	-0.095	198	0000	-0.091	199	0000	-0.099	200	0000	-0.095
201	0000	-0.102	202	0000	-0.095	203	0000	-0.099	204	0000	-0.125
205	0000	-0.125	206	0000	-0.129	207	0000	-0.137	208	0000	-0.125
209	0000	-0.121	210	0000	-0.118	211	0000	-0.110	212	0000	-0.106
213	0000	-0.133	214	0000	-0.156	215	0000	-0.121	216	0000	-0.121
217	0000	-0.129	218	0000	-0.125	219	0000	-0.114	220	0000	-0.106
221	0000	-0.102	222	0000	-0.102	223	0000	-0.099	224	0000	-0.095
225	0000	-0.114	226	0000	-0.114	227	0000	-0.140	228	0000	-0.250
229	0000	-0.296	230	0000	-0.372	231	0000	-0.736	232	0000	-0.376
233	0000	-0.285	234	0000	-0.247	235	0000	-0.224	236	0000	-0.212
237	0000	-0.201	238	0000	-0.190	239	0000	-0.182	240	0000	-0.167
241	0000	-0.175	242	0000	-0.190	243	0000	-0.171	244	0000	-0.163
245	0000	-0.156	246	0000	-0.137	247	0000	-0.137	248	0000	-0.144
249	0000	-0.148	250	0000	-0.159	251	0000	-0.163	252	0000	-0.152
253	0000	-0.144	254	0000	-0.156	255	0000	-0.186	256	0000	-0.152
257	0000	-0.140	258	0000	-0.137	259	0000	-0.137	260	0000	-0.133
261	0000	-0.129	262	0000	-0.121	263	0000	-0.129	264	0000	-0.129
265	0000	-0.121	266	0000	-0.125	267	0000	-0.129	268	0000	-0.121
269	0000	-0.178	270	0000	-0.391	271	0000	-0.281	272	0000	-0.228
273	0000	-0.205	274	0000	-0.190	275	0000	-0.182	276	0000	-0.175
277	0000	-0.171	278	0000	-0.171	279	0000	-0.175	280	0000	-0.163
281	0000	-0.156	282	0000	-0.152	283	0000	-0.152	284	0000	-0.163
285	0000	-0.156	286	0000	-0.156	287	0000	-0.152	288	0000	-0.144
289	0000	-0.140	290	0000	-0.140	291	0000	-0.140	292	0000	-0.140
293	0000	-0.148	294	0000	-0.144	295	0000	-0.140	296	0000	-0.140
297	0000	-0.140	298	0000	-0.140	299	0000	-0.159	300	0000	-0.148
301	0000	-0.144	302	0000	-0.140	303	0000	-0.140	304	0000	-0.140
305	0000	-0.171	306	0000	-0.148	307	0000	-0.133	308	0000	-0.220
309	0000	-0.182	310	0000	-0.194	311	0000	-0.205	312	0000	-0.178
313	0000	-0.171	314	0000	-0.163	315	0000	-0.159	316	0000	-0.159
317	0000	-0.167	318	0000	-0.182	319	0000	-0.171	320	0000	-0.163
321	0000	-0.159	322	0000	-0.159	323	0000	-0.163	324	0000	-0.159
325	0000	-0.156	326	0000	-0.156	327	0000	-0.159	328	0000	-0.167
329	0000	-0.159	330	0000	-0.159	331	0000	-0.175	332	0000	-0.171
333	0000	-0.163	334	0000	-0.159	335	0000	-0.156	336	0000	-0.159
337	0000	-0.163	338	0000	-0.159	339	0000	-0.152	340	0000	-0.156
341	0000	-0.152	342	0000	-0.148	343	0000	-0.148	344	0000	-0.144
345	0000	-0.163	346	0000	-0.345	347	0000	-0.315	348	0000	-0.269
349	0000	-0.250	350	0000	-0.243	351	0000	-0.235	352	0000	-0.247
353	0000	-0.273	354	0000	-0.250	355	0000	-0.281	356	0000	-0.296
357	0000	-0.281	358	0000	-0.285	359	0000	-0.277	360	0000	-0.262
361	0000	-0.262	362	0000	-0.247	363	0000	-0.250	364	0000	-0.254
365	0000	-0.262	366	0000	-0.262						

29 366 (Nanticoke River at White Marsh Br.)

1	0000	-0.331	2	0000	-0.331	3	0000	-0.331	4	0000	-0.477
5	0000	-0.527	6	0000	-0.460	7	0000	-0.432	8	0000	-0.415
9	0000	-0.421	10	0000	-0.432	11	0000	-0.409	12	0000	-0.387
13	0000	-0.392	14	0000	-0.404	15	0000	-0.387	16	0000	-0.370
17	0000	-0.364	18	0000	-0.364	19	0000	-0.342	20	0000	-0.342
21	0000	-0.348	22	0000	-0.342	23	0000	-0.364	24	0000	-0.381
25	0000	-0.336	26	0000	-0.331	27	0000	-0.314	28	0000	-0.320
29	0000	-0.320	30	0000	-0.320	31	0000	-0.325	32	0000	-0.320
33	0000	-0.303	34	0000	-0.303	35	0000	-0.303	36	0000	-0.303
37	0000	-0.297	38	0000	-0.297	39	0000	-0.297	40	0000	-0.286
41	0000	-0.275	42	0000	-0.280	43	0000	-0.280	44	0000	-0.280
45	0000	-0.292	46	0000	-0.320	47	0000	-0.594	48	0000	-0.477
49	0000	-0.465	50	0000	-0.477	51	0000	-0.454	52	0000	-0.426
53	0000	-0.415	54	0000	-0.409	55	0000	-0.465	56	0000	-0.460
57	0000	-0.768	58	0000	-0.869	59	0000	-0.690	60	0000	-0.639
61	0000	-0.589	62	0000	-0.583	63	0000	-0.566	64	0000	-0.549
65	0000	-0.538	66	0000	-0.533	67	0000	-0.583	68	0000	-0.611
69	0000	-0.572	70	0000	-0.577	71	0000	-0.992	72	0000	-0.858
73	0000	-0.740	74	0000	-0.695	75	0000	-0.667	76	0000	-0.662
77	0000	-0.650	78	0000	-0.645	79	0000	-0.757	80	0000	-0.779

81	0000	-0.723	82	0000	-0.695	83	0000	-0.712	84	0000	-0.662
85	0000	-0.628	86	0000	-0.695	87	0000	-1.295	88	0000	-0.824
89	0000	-0.684	90	0000	-0.639	91	0000	-0.628	92	0000	-0.606
93	0000	-0.600	94	0000	-0.577	95	0000	-0.566	96	0000	-0.549
97	0000	-0.527	98	0000	-0.521	99	0000	-0.521	100	0000	-0.510
101	0000	-0.505	102	0000	-0.505	103	0000	-0.505	104	0000	-0.488
105	0000	-0.477	106	0000	-0.477	107	0000	-0.482	108	0000	-0.488
109	0000	-0.493	110	0000	-0.600	111	0000	-0.577	112	0000	-0.544
113	0000	-0.549	114	0000	-0.538	115	0000	-0.527	116	0000	-0.549
117	0000	-0.538	118	0000	-0.521	119	0000	-0.510	120	0000	-0.493
121	0000	-0.611	122	0000	-0.482	123	0000	-0.465	124	0000	-0.465
125	0000	-0.477	126	0000	-0.465	127	0000	-0.460	128	0000	-0.437
129	0000	-0.835	130	0000	-1.368	131	0000	-0.858	132	0000	-0.706
133	0000	-0.634	134	0000	-0.606	135	0000	-0.583	136	0000	-0.549
137	0000	-0.533	138	0000	-0.510	139	0000	-0.488	140	0000	-0.460
141	0000	-0.421	142	0000	-0.398	143	0000	-0.381	144	0000	-0.353
145	0000	-0.331	146	0000	-0.331	147	0000	-0.353	148	0000	-0.353
149	0000	-0.325	150	0000	-0.308	151	0000	-0.303	152	0000	-0.421
153	0000	-0.426	154	0000	-0.364	155	0000	-0.331	156	0000	-0.314
157	0000	-0.465	158	0000	-0.673	159	0000	-0.566	160	0000	-0.516
161	0000	-0.499	162	0000	-0.482	163	0000	-0.454	164	0000	-0.415
165	0000	-0.387	166	0000	-0.370	167	0000	-0.353	168	0000	-0.325
169	0000	-0.297	170	0000	-0.286	171	0000	-0.303	172	0000	-0.308
173	0000	-0.297	174	0000	-0.297	175	0000	-0.264	176	0000	-0.269
177	0000	-0.292	178	0000	-0.280	179	0000	-0.264	180	0000	-0.241
181	0000	-0.224	182	0000	-0.191	183	0000	-0.196	184	0000	-0.202
185	0000	-0.196	186	0000	-0.213	187	0000	-0.219	188	0000	-0.219
189	0000	-0.196	190	0000	-0.191	191	0000	-0.179	192	0000	-0.163
193	0000	-0.157	194	0000	-0.163	195	0000	-0.140	196	0000	-0.140
197	0000	-0.140	198	0000	-0.135	199	0000	-0.146	200	0000	-0.140
201	0000	-0.151	202	0000	-0.140	203	0000	-0.146	204	0000	-0.185
205	0000	-0.185	206	0000	-0.191	207	0000	-0.202	208	0000	-0.185
209	0000	-0.179	210	0000	-0.174	211	0000	-0.163	212	0000	-0.157
213	0000	-0.196	214	0000	-0.230	215	0000	-0.179	216	0000	-0.179
217	0000	-0.191	218	0000	-0.185	219	0000	-0.168	220	0000	-0.157
221	0000	-0.151	222	0000	-0.151	223	0000	-0.146	224	0000	-0.140
225	0000	-0.168	226	0000	-0.168	227	0000	-0.207	228	0000	-0.370
229	0000	-0.437	230	0000	-0.549	231	0000	-1.088	232	0000	-0.555
233	0000	-0.421	234	0000	-0.364	235	0000	-0.331	236	0000	-0.314
237	0000	-0.297	238	0000	-0.280	239	0000	-0.269	240	0000	-0.247
241	0000	-0.258	242	0000	-0.280	243	0000	-0.252	244	0000	-0.241
245	0000	-0.230	246	0000	-0.202	247	0000	-0.202	248	0000	-0.213
249	0000	-0.219	250	0000	-0.235	251	0000	-0.241	252	0000	-0.224
253	0000	-0.213	254	0000	-0.230	255	0000	-0.275	256	0000	-0.224
257	0000	-0.207	258	0000	-0.202	259	0000	-0.202	260	0000	-0.196
261	0000	-0.191	262	0000	-0.179	263	0000	-0.191	264	0000	-0.191
265	0000	-0.179	266	0000	-0.185	267	0000	-0.191	268	0000	-0.179
269	0000	-0.264	270	0000	-0.577	271	0000	-0.415	272	0000	-0.336
273	0000	-0.303	274	0000	-0.280	275	0000	-0.269	276	0000	-0.258
277	0000	-0.252	278	0000	-0.252	279	0000	-0.258	280	0000	-0.241
281	0000	-0.230	282	0000	-0.224	283	0000	-0.224	284	0000	-0.241
285	0000	-0.230	286	0000	-0.230	287	0000	-0.224	288	0000	-0.213
289	0000	-0.207	290	0000	-0.207	291	0000	-0.207	292	0000	-0.207
293	0000	-0.219	294	0000	-0.213	295	0000	-0.207	296	0000	-0.207
297	0000	-0.207	298	0000	-0.207	299	0000	-0.235	300	0000	-0.219
301	0000	-0.213	302	0000	-0.207	303	0000	-0.207	304	0000	-0.207
305	0000	-0.252	306	0000	-0.219	307	0000	-0.196	308	0000	-0.325
309	0000	-0.269	310	0000	-0.286	311	0000	-0.303	312	0000	-0.264
313	0000	-0.252	314	0000	-0.241	315	0000	-0.235	316	0000	-0.235
317	0000	-0.247	318	0000	-0.269	319	0000	-0.252	320	0000	-0.241
321	0000	-0.235	322	0000	-0.235	323	0000	-0.241	324	0000	-0.235
325	0000	-0.230	326	0000	-0.230	327	0000	-0.235	328	0000	-0.247
329	0000	-0.235	330	0000	-0.235	331	0000	-0.258	332	0000	-0.252
333	0000	-0.241	334	0000	-0.235	335	0000	-0.230	336	0000	-0.235
337	0000	-0.241	338	0000	-0.235	339	0000	-0.224	340	0000	-0.230
341	0000	-0.224	342	0000	-0.219	343	0000	-0.219	344	0000	-0.213
345	0000	-0.241	346	0000	-0.510	347	0000	-0.465	348	0000	-0.398
349	0000	-0.370	350	0000	-0.359	351	0000	-0.348	352	0000	-0.364
353	0000	-0.404	354	0000	-0.370	355	0000	-0.415	356	0000	-0.437
357	0000	-0.415	358	0000	-0.421	359	0000	-0.409	360	0000	-0.387
361	0000	-0.387	362	0000	-0.364	363	0000	-0.370	364	0000	-0.376
365	0000	-0.387	366	0000	-0.387						

27 366 (Cart Br.)

1	0000	-0.089	2	0000	-0.089	3	0000	-0.089	4	0000	-0.128
5	0000	-0.141	6	0000	-0.123	7	0000	-0.116	8	0000	-0.111
9	0000	-0.113	10	0000	-0.116	11	0000	-0.110	12	0000	-0.104
13	0000	-0.105	14	0000	-0.108	15	0000	-0.104	16	0000	-0.099
17	0000	-0.098	18	0000	-0.098	19	0000	-0.092	20	0000	-0.092
21	0000	-0.093	22	0000	-0.092	23	0000	-0.098	24	0000	-0.102
25	0000	-0.090	26	0000	-0.089	27	0000	-0.084	28	0000	-0.086
29	0000	-0.086	30	0000	-0.086	31	0000	-0.087	32	0000	-0.086
33	0000	-0.081	34	0000	-0.081	35	0000	-0.081	36	0000	-0.081
37	0000	-0.080	38	0000	-0.080	39	0000	-0.080	40	0000	-0.077
41	0000	-0.074	42	0000	-0.075	43	0000	-0.075	44	0000	-0.075
45	0000	-0.078	46	0000	-0.086	47	0000	-0.159	48	0000	-0.128

49	0000	-0.125	50	0000	-0.128	51	0000	-0.122	52	0000	-0.114
53	0000	-0.111	54	0000	-0.110	55	0000	-0.125	56	0000	-0.123
57	0000	-0.206	58	0000	-0.233	59	0000	-0.185	60	0000	-0.171
61	0000	-0.158	62	0000	-0.156	63	0000	-0.152	64	0000	-0.147
65	0000	-0.144	66	0000	-0.143	67	0000	-0.156	68	0000	-0.164
69	0000	-0.153	70	0000	-0.155	71	0000	-0.266	72	0000	-0.230
73	0000	-0.198	74	0000	-0.186	75	0000	-0.179	76	0000	-0.177
77	0000	-0.174	78	0000	-0.173	79	0000	-0.203	80	0000	-0.209
81	0000	-0.194	82	0000	-0.186	83	0000	-0.191	84	0000	-0.177
85	0000	-0.168	86	0000	-0.186	87	0000	-0.347	88	0000	-0.221
89	0000	-0.183	90	0000	-0.171	91	0000	-0.168	92	0000	-0.162
93	0000	-0.161	94	0000	-0.155	95	0000	-0.152	96	0000	-0.147
97	0000	-0.141	98	0000	-0.140	99	0000	-0.140	100	0000	-0.137
101	0000	-0.135	102	0000	-0.135	103	0000	-0.135	104	0000	-0.131
105	0000	-0.128	106	0000	-0.128	107	0000	-0.129	108	0000	-0.131
109	0000	-0.132	110	0000	-0.161	111	0000	-0.155	112	0000	-0.146
113	0000	-0.147	114	0000	-0.144	115	0000	-0.141	116	0000	-0.147
117	0000	-0.144	118	0000	-0.140	119	0000	-0.137	120	0000	-0.132
121	0000	-0.164	122	0000	-0.129	123	0000	-0.125	124	0000	-0.125
125	0000	-0.128	126	0000	-0.125	127	0000	-0.123	128	0000	-0.117
129	0000	-0.224	130	0000	-0.366	131	0000	-0.230	132	0000	-0.189
133	0000	-0.170	134	0000	-0.162	135	0000	-0.156	136	0000	-0.147
137	0000	-0.143	138	0000	-0.137	139	0000	-0.131	140	0000	-0.123
141	0000	-0.113	142	0000	-0.107	143	0000	-0.102	144	0000	-0.095
145	0000	-0.089	146	0000	-0.089	147	0000	-0.095	148	0000	-0.095
149	0000	-0.087	150	0000	-0.083	151	0000	-0.081	152	0000	-0.113
153	0000	-0.114	154	0000	-0.098	155	0000	-0.089	156	0000	-0.084
157	0000	-0.125	158	0000	-0.180	159	0000	-0.152	160	0000	-0.138
161	0000	-0.134	162	0000	-0.129	163	0000	-0.122	164	0000	-0.111
165	0000	-0.104	166	0000	-0.099	167	0000	-0.095	168	0000	-0.087
169	0000	-0.080	170	0000	-0.077	171	0000	-0.081	172	0000	-0.083
173	0000	-0.080	174	0000	-0.080	175	0000	-0.071	176	0000	-0.072
177	0000	-0.078	178	0000	-0.075	179	0000	-0.071	180	0000	-0.065
181	0000	-0.060	182	0000	-0.051	183	0000	-0.053	184	0000	-0.054
185	0000	-0.053	186	0000	-0.057	187	0000	-0.059	188	0000	-0.059
189	0000	-0.053	190	0000	-0.051	191	0000	-0.048	192	0000	-0.044
193	0000	-0.042	194	0000	-0.044	195	0000	-0.038	196	0000	-0.038
197	0000	-0.038	198	0000	-0.036	199	0000	-0.039	200	0000	-0.038
201	0000	-0.041	202	0000	-0.038	203	0000	-0.039	204	0000	-0.050
205	0000	-0.050	206	0000	-0.051	207	0000	-0.054	208	0000	-0.050
209	0000	-0.048	210	0000	-0.047	211	0000	-0.044	212	0000	-0.042
213	0000	-0.053	214	0000	-0.062	215	0000	-0.048	216	0000	-0.048
217	0000	-0.051	218	0000	-0.050	219	0000	-0.045	220	0000	-0.042
221	0000	-0.041	222	0000	-0.041	223	0000	-0.039	224	0000	-0.038
225	0000	-0.045	226	0000	-0.045	227	0000	-0.056	228	0000	-0.099
229	0000	-0.117	230	0000	-0.147	231	0000	-0.291	232	0000	-0.149
233	0000	-0.113	234	0000	-0.098	235	0000	-0.089	236	0000	-0.084
237	0000	-0.080	238	0000	-0.075	239	0000	-0.072	240	0000	-0.066
241	0000	-0.069	242	0000	-0.075	243	0000	-0.068	244	0000	-0.065
245	0000	-0.062	246	0000	-0.054	247	0000	-0.054	248	0000	-0.057
249	0000	-0.059	250	0000	-0.063	251	0000	-0.065	252	0000	-0.060
253	0000	-0.057	254	0000	-0.062	255	0000	-0.074	256	0000	-0.060
257	0000	-0.056	258	0000	-0.054	259	0000	-0.054	260	0000	-0.053
261	0000	-0.051	262	0000	-0.048	263	0000	-0.051	264	0000	-0.051
265	0000	-0.048	266	0000	-0.050	267	0000	-0.051	268	0000	-0.048
269	0000	-0.071	270	0000	-0.155	271	0000	-0.111	272	0000	-0.090
273	0000	-0.081	274	0000	-0.075	275	0000	-0.072	276	0000	-0.069
277	0000	-0.068	278	0000	-0.068	279	0000	-0.069	280	0000	-0.065
281	0000	-0.062	282	0000	-0.060	283	0000	-0.060	284	0000	-0.065
285	0000	-0.062	286	0000	-0.062	287	0000	-0.060	288	0000	-0.057
289	0000	-0.056	290	0000	-0.056	291	0000	-0.056	292	0000	-0.056
293	0000	-0.059	294	0000	-0.057	295	0000	-0.056	296	0000	-0.056
297	0000	-0.056	298	0000	-0.056	299	0000	-0.063	300	0000	-0.059
301	0000	-0.057	302	0000	-0.056	303	0000	-0.056	304	0000	-0.056
305	0000	-0.068	306	0000	-0.059	307	0000	-0.053	308	0000	-0.087
309	0000	-0.072	310	0000	-0.077	311	0000	-0.081	312	0000	-0.071
313	0000	-0.068	314	0000	-0.065	315	0000	-0.063	316	0000	-0.063
317	0000	-0.066	318	0000	-0.072	319	0000	-0.068	320	0000	-0.065
321	0000	-0.063	322	0000	-0.063	323	0000	-0.065	324	0000	-0.063
325	0000	-0.062	326	0000	-0.062	327	0000	-0.063	328	0000	-0.066
329	0000	-0.063	330	0000	-0.063	331	0000	-0.069	332	0000	-0.068
333	0000	-0.065	334	0000	-0.063	335	0000	-0.062	336	0000	-0.063
337	0000	-0.065	338	0000	-0.063	339	0000	-0.060	340	0000	-0.062
341	0000	-0.060	342	0000	-0.059	343	0000	-0.059	344	0000	-0.057
345	0000	-0.065	346	0000	-0.137	347	0000	-0.125	348	0000	-0.107
349	0000	-0.099	350	0000	-0.096	351	0000	-0.093	352	0000	-0.098
353	0000	-0.108	354	0000	-0.099	355	0000	-0.111	356	0000	-0.117
357	0000	-0.111	358	0000	-0.113	359	0000	-0.110	360	0000	-0.104
361	0000	-0.104	362	0000	-0.098	363	0000	-0.099	364	0000	-0.101
365	0000	-0.104	366	0000	-0.104						
	26		366		(Glade Br.)						
1	0000	-0.032	2	0000	-0.032	3	0000	-0.032	4	0000	-0.046
5	0000	-0.051	6	0000	-0.044	7	0000	-0.041	8	0000	-0.040
9	0000	-0.040	10	0000	-0.041	11	0000	-0.039	12	0000	-0.037
13	0000	-0.038	14	0000	-0.039	15	0000	-0.037	16	0000	-0.036

17	0000	-0.035	18	0000	-0.035	19	0000	-0.033	20	0000	-0.033
21	0000	-0.033	22	0000	-0.033	23	0000	-0.035	24	0000	-0.037
25	0000	-0.032	26	0000	-0.032	27	0000	-0.030	28	0000	-0.031
29	0000	-0.031	30	0000	-0.031	31	0000	-0.031	32	0000	-0.031
33	0000	-0.029	34	0000	-0.029	35	0000	-0.029	36	0000	-0.029
37	0000	-0.029	38	0000	-0.029	39	0000	-0.029	40	0000	-0.027
41	0000	-0.026	42	0000	-0.027	43	0000	-0.027	44	0000	-0.027
45	0000	-0.028	46	0000	-0.031	47	0000	-0.057	48	0000	-0.046
49	0000	-0.045	50	0000	-0.046	51	0000	-0.044	52	0000	-0.041
53	0000	-0.040	54	0000	-0.039	55	0000	-0.045	56	0000	-0.044
57	0000	-0.074	58	0000	-0.083	59	0000	-0.066	60	0000	-0.061
61	0000	-0.056	62	0000	-0.056	63	0000	-0.054	64	0000	-0.053
65	0000	-0.052	66	0000	-0.051	67	0000	-0.056	68	0000	-0.059
69	0000	-0.055	70	0000	-0.055	71	0000	-0.095	72	0000	-0.082
73	0000	-0.071	74	0000	-0.067	75	0000	-0.064	76	0000	-0.063
77	0000	-0.062	78	0000	-0.062	79	0000	-0.073	80	0000	-0.075
81	0000	-0.069	82	0000	-0.067	83	0000	-0.068	84	0000	-0.063
85	0000	-0.060	86	0000	-0.067	87	0000	-0.124	88	0000	-0.079
89	0000	-0.066	90	0000	-0.061	91	0000	-0.060	92	0000	-0.058
93	0000	-0.058	94	0000	-0.055	95	0000	-0.054	96	0000	-0.053
97	0000	-0.051	98	0000	-0.050	99	0000	-0.050	100	0000	-0.049
101	0000	-0.048	102	0000	-0.048	103	0000	-0.048	104	0000	-0.047
105	0000	-0.046	106	0000	-0.046	107	0000	-0.046	108	0000	-0.047
109	0000	-0.047	110	0000	-0.058	111	0000	-0.055	112	0000	-0.052
113	0000	-0.053	114	0000	-0.052	115	0000	-0.051	116	0000	-0.053
117	0000	-0.052	118	0000	-0.050	119	0000	-0.049	120	0000	-0.047
121	0000	-0.059	122	0000	-0.046	123	0000	-0.045	124	0000	-0.045
125	0000	-0.046	126	0000	-0.045	127	0000	-0.044	128	0000	-0.042
129	0000	-0.080	130	0000	-0.131	131	0000	-0.082	132	0000	-0.068
133	0000	-0.061	134	0000	-0.058	135	0000	-0.056	136	0000	-0.053
137	0000	-0.051	138	0000	-0.049	139	0000	-0.047	140	0000	-0.044
141	0000	-0.040	142	0000	-0.038	143	0000	-0.037	144	0000	-0.034
145	0000	-0.032	146	0000	-0.032	147	0000	-0.034	148	0000	-0.034
149	0000	-0.031	150	0000	-0.030	151	0000	-0.029	152	0000	-0.040
153	0000	-0.041	154	0000	-0.035	155	0000	-0.032	156	0000	-0.030
157	0000	-0.045	158	0000	-0.065	159	0000	-0.054	160	0000	-0.049
161	0000	-0.048	162	0000	-0.046	163	0000	-0.044	164	0000	-0.040
165	0000	-0.037	166	0000	-0.036	167	0000	-0.034	168	0000	-0.031
169	0000	-0.029	170	0000	-0.027	171	0000	-0.029	172	0000	-0.030
173	0000	-0.029	174	0000	-0.029	175	0000	-0.025	176	0000	-0.026
177	0000	-0.028	178	0000	-0.027	179	0000	-0.025	180	0000	-0.023
181	0000	-0.022	182	0000	-0.018	183	0000	-0.019	184	0000	-0.019
185	0000	-0.019	186	0000	-0.020	187	0000	-0.021	188	0000	-0.021
189	0000	-0.019	190	0000	-0.018	191	0000	-0.017	192	0000	-0.016
193	0000	-0.015	194	0000	-0.016	195	0000	-0.013	196	0000	-0.013
197	0000	-0.013	198	0000	-0.013	199	0000	-0.014	200	0000	-0.013
201	0000	-0.015	202	0000	-0.013	203	0000	-0.014	204	0000	-0.018
205	0000	-0.018	206	0000	-0.018	207	0000	-0.019	208	0000	-0.018
209	0000	-0.017	210	0000	-0.017	211	0000	-0.016	212	0000	-0.015
213	0000	-0.019	214	0000	-0.022	215	0000	-0.017	216	0000	-0.017
217	0000	-0.018	218	0000	-0.018	219	0000	-0.016	220	0000	-0.015
221	0000	-0.015	222	0000	-0.015	223	0000	-0.014	224	0000	-0.013
225	0000	-0.016	226	0000	-0.016	227	0000	-0.020	228	0000	-0.036
229	0000	-0.042	230	0000	-0.053	231	0000	-0.104	232	0000	-0.053
233	0000	-0.040	234	0000	-0.035	235	0000	-0.032	236	0000	-0.030
237	0000	-0.029	238	0000	-0.027	239	0000	-0.026	240	0000	-0.024
241	0000	-0.025	242	0000	-0.027	243	0000	-0.024	244	0000	-0.023
245	0000	-0.022	246	0000	-0.019	247	0000	-0.019	248	0000	-0.020
249	0000	-0.021	250	0000	-0.023	251	0000	-0.023	252	0000	-0.022
253	0000	-0.020	254	0000	-0.022	255	0000	-0.026	256	0000	-0.022
257	0000	-0.020	258	0000	-0.019	259	0000	-0.019	260	0000	-0.019
261	0000	-0.018	262	0000	-0.017	263	0000	-0.018	264	0000	-0.018
265	0000	-0.017	266	0000	-0.018	267	0000	-0.018	268	0000	-0.017
269	0000	-0.025	270	0000	-0.055	271	0000	-0.040	272	0000	-0.032
273	0000	-0.029	274	0000	-0.027	275	0000	-0.026	276	0000	-0.025
277	0000	-0.024	278	0000	-0.024	279	0000	-0.025	280	0000	-0.023
281	0000	-0.022	282	0000	-0.022	283	0000	-0.022	284	0000	-0.023
285	0000	-0.022	286	0000	-0.022	287	0000	-0.022	288	0000	-0.020
289	0000	-0.020	290	0000	-0.020	291	0000	-0.020	292	0000	-0.020
293	0000	-0.021	294	0000	-0.020	295	0000	-0.020	296	0000	-0.020
297	0000	-0.020	298	0000	-0.020	299	0000	-0.023	300	0000	-0.021
301	0000	-0.020	302	0000	-0.020	303	0000	-0.020	304	0000	-0.020
305	0000	-0.024	306	0000	-0.021	307	0000	-0.019	308	0000	-0.031
309	0000	-0.026	310	0000	-0.027	311	0000	-0.029	312	0000	-0.025
313	0000	-0.024	314	0000	-0.023	315	0000	-0.023	316	0000	-0.023
317	0000	-0.024	318	0000	-0.026	319	0000	-0.024	320	0000	-0.023
321	0000	-0.023	322	0000	-0.023	323	0000	-0.023	324	0000	-0.023
325	0000	-0.022	326	0000	-0.022	327	0000	-0.023	328	0000	-0.024
329	0000	-0.023	330	0000	-0.023	331	0000	-0.025	332	0000	-0.024
333	0000	-0.023	334	0000	-0.023	335	0000	-0.022	336	0000	-0.023
337	0000	-0.023	338	0000	-0.023	339	0000	-0.022	340	0000	-0.022
341	0000	-0.022	342	0000	-0.021	343	0000	-0.021	344	0000	-0.020
345	0000	-0.023	346	0000	-0.049	347	0000	-0.045	348	0000	-0.038
349	0000	-0.036	350	0000	-0.034	351	0000	-0.033	352	0000	-0.035
353	0000	-0.039	354	0000	-0.036	355	0000	-0.040	356	0000	-0.042

357	0000	-0.040	358	0000	-0.040	359	0000	-0.039	360	0000	-0.037
361	0000	-0.037	362	0000	-0.035	363	0000	-0.036	364	0000	-0.036
365	0000	-0.037	366	0000	-0.037						

25 366 (Bee Branch - Polk Br. - Grubby Neck Br.)

1	0000	-0.160	2	0000	-0.160	3	0000	-0.160	4	0000	-0.231
5	0000	-0.256	6	0000	-0.223	7	0000	-0.209	8	0000	-0.201
9	0000	-0.204	10	0000	-0.209	11	0000	-0.198	12	0000	-0.188
13	0000	-0.190	14	0000	-0.196	15	0000	-0.188	16	0000	-0.179
17	0000	-0.177	18	0000	-0.177	19	0000	-0.166	20	0000	-0.166
21	0000	-0.169	22	0000	-0.166	23	0000	-0.177	24	0000	-0.185
25	0000	-0.163	26	0000	-0.160	27	0000	-0.152	28	0000	-0.155
29	0000	-0.155	30	0000	-0.155	31	0000	-0.158	32	0000	-0.155
33	0000	-0.147	34	0000	-0.147	35	0000	-0.147	36	0000	-0.147
37	0000	-0.144	38	0000	-0.144	39	0000	-0.144	40	0000	-0.139
41	0000	-0.133	42	0000	-0.136	43	0000	-0.136	44	0000	-0.136
45	0000	-0.141	46	0000	-0.155	47	0000	-0.288	48	0000	-0.231
49	0000	-0.226	50	0000	-0.231	51	0000	-0.220	52	0000	-0.207
53	0000	-0.201	54	0000	-0.198	55	0000	-0.226	56	0000	-0.223
57	0000	-0.372	58	0000	-0.421	59	0000	-0.334	60	0000	-0.310
61	0000	-0.285	62	0000	-0.283	63	0000	-0.275	64	0000	-0.266
65	0000	-0.261	66	0000	-0.258	67	0000	-0.283	68	0000	-0.296
69	0000	-0.277	70	0000	-0.280	71	0000	-0.481	72	0000	-0.416
73	0000	-0.359	74	0000	-0.337	75	0000	-0.323	76	0000	-0.321
77	0000	-0.315	78	0000	-0.313	79	0000	-0.367	80	0000	-0.378
81	0000	-0.351	82	0000	-0.337	83	0000	-0.345	84	0000	-0.321
85	0000	-0.304	86	0000	-0.337	87	0000	-0.628	88	0000	-0.400
89	0000	-0.332	90	0000	-0.310	91	0000	-0.304	92	0000	-0.294
93	0000	-0.291	94	0000	-0.280	95	0000	-0.275	96	0000	-0.266
97	0000	-0.256	98	0000	-0.253	99	0000	-0.253	100	0000	-0.247
101	0000	-0.245	102	0000	-0.245	103	0000	-0.245	104	0000	-0.237
105	0000	-0.231	106	0000	-0.231	107	0000	-0.234	108	0000	-0.237
109	0000	-0.239	110	0000	-0.291	111	0000	-0.280	112	0000	-0.264
113	0000	-0.266	114	0000	-0.261	115	0000	-0.256	116	0000	-0.266
117	0000	-0.261	118	0000	-0.253	119	0000	-0.247	120	0000	-0.239
121	0000	-0.296	122	0000	-0.234	123	0000	-0.226	124	0000	-0.226
125	0000	-0.231	126	0000	-0.226	127	0000	-0.223	128	0000	-0.212
129	0000	-0.405	130	0000	-0.663	131	0000	-0.416	132	0000	-0.343
133	0000	-0.307	134	0000	-0.294	135	0000	-0.283	136	0000	-0.266
137	0000	-0.258	138	0000	-0.247	139	0000	-0.237	140	0000	-0.223
141	0000	-0.204	142	0000	-0.193	143	0000	-0.185	144	0000	-0.171
145	0000	-0.160	146	0000	-0.160	147	0000	-0.171	148	0000	-0.171
149	0000	-0.158	150	0000	-0.150	151	0000	-0.147	152	0000	-0.204
153	0000	-0.207	154	0000	-0.177	155	0000	-0.160	156	0000	-0.152
157	0000	-0.226	158	0000	-0.326	159	0000	-0.275	160	0000	-0.250
161	0000	-0.242	162	0000	-0.234	163	0000	-0.220	164	0000	-0.201
165	0000	-0.188	166	0000	-0.179	167	0000	-0.171	168	0000	-0.158
169	0000	-0.144	170	0000	-0.139	171	0000	-0.147	172	0000	-0.150
173	0000	-0.144	174	0000	-0.144	175	0000	-0.128	176	0000	-0.130
177	0000	-0.141	178	0000	-0.136	179	0000	-0.128	180	0000	-0.117
181	0000	-0.109	182	0000	-0.092	183	0000	-0.095	184	0000	-0.098
185	0000	-0.095	186	0000	-0.103	187	0000	-0.106	188	0000	-0.106
189	0000	-0.095	190	0000	-0.092	191	0000	-0.087	192	0000	-0.079
193	0000	-0.076	194	0000	-0.079	195	0000	-0.068	196	0000	-0.068
197	0000	-0.068	198	0000	-0.065	199	0000	-0.071	200	0000	-0.068
201	0000	-0.073	202	0000	-0.068	203	0000	-0.071	204	0000	-0.090
205	0000	-0.090	206	0000	-0.092	207	0000	-0.098	208	0000	-0.090
209	0000	-0.087	210	0000	-0.084	211	0000	-0.079	212	0000	-0.076
213	0000	-0.095	214	0000	-0.111	215	0000	-0.087	216	0000	-0.087
217	0000	-0.092	218	0000	-0.090	219	0000	-0.082	220	0000	-0.076
221	0000	-0.073	222	0000	-0.073	223	0000	-0.071	224	0000	-0.068
225	0000	-0.082	226	0000	-0.082	227	0000	-0.101	228	0000	-0.179
229	0000	-0.212	230	0000	-0.266	231	0000	-0.527	232	0000	-0.269
233	0000	-0.204	234	0000	-0.177	235	0000	-0.160	236	0000	-0.152
237	0000	-0.144	238	0000	-0.136	239	0000	-0.130	240	0000	-0.120
241	0000	-0.125	242	0000	-0.136	243	0000	-0.122	244	0000	-0.117
245	0000	-0.111	246	0000	-0.098	247	0000	-0.098	248	0000	-0.103
249	0000	-0.106	250	0000	-0.114	251	0000	-0.117	252	0000	-0.109
253	0000	-0.103	254	0000	-0.111	255	0000	-0.133	256	0000	-0.109
257	0000	-0.101	258	0000	-0.098	259	0000	-0.098	260	0000	-0.095
261	0000	-0.092	262	0000	-0.087	263	0000	-0.092	264	0000	-0.092
265	0000	-0.087	266	0000	-0.090	267	0000	-0.092	268	0000	-0.087
269	0000	-0.128	270	0000	-0.280	271	0000	-0.201	272	0000	-0.163
273	0000	-0.147	274	0000	-0.136	275	0000	-0.130	276	0000	-0.125
277	0000	-0.122	278	0000	-0.122	279	0000	-0.125	280	0000	-0.117
281	0000	-0.111	282	0000	-0.109	283	0000	-0.109	284	0000	-0.117
285	0000	-0.111	286	0000	-0.111	287	0000	-0.109	288	0000	-0.103
289	0000	-0.101	290	0000	-0.101	291	0000	-0.101	292	0000	-0.101
293	0000	-0.106	294	0000	-0.103	295	0000	-0.101	296	0000	-0.101
297	0000	-0.101	298	0000	-0.101	299	0000	-0.114	300	0000	-0.106
301	0000	-0.103	302	0000	-0.101	303	0000	-0.101	304	0000	-0.101
305	0000	-0.122	306	0000	-0.106	307	0000	-0.095	308	0000	-0.158
309	0000	-0.130	310	0000	-0.139	311	0000	-0.147	312	0000	-0.128
313	0000	-0.122	314	0000	-0.117	315	0000	-0.114	316	0000	-0.114
317	0000	-0.120	318	0000	-0.130	319	0000	-0.122	320	0000	-0.117
321	0000	-0.114	322	0000	-0.114	323	0000	-0.117	324	0000	-0.114

325	0000	-0.111	326	0000	-0.111	327	0000	-0.114	328	0000	-0.120
329	0000	-0.114	330	0000	-0.114	331	0000	-0.125	332	0000	-0.122
333	0000	-0.117	334	0000	-0.114	335	0000	-0.111	336	0000	-0.114
337	0000	-0.117	338	0000	-0.114	339	0000	-0.109	340	0000	-0.111
341	0000	-0.109	342	0000	-0.106	343	0000	-0.106	344	0000	-0.103
345	0000	-0.117	346	0000	-0.247	347	0000	-0.226	348	0000	-0.193
349	0000	-0.179	350	0000	-0.174	351	0000	-0.169	352	0000	-0.177
353	0000	-0.196	354	0000	-0.179	355	0000	-0.201	356	0000	-0.212
357	0000	-0.201	358	0000	-0.204	359	0000	-0.198	360	0000	-0.188
361	0000	-0.188	362	0000	-0.177	363	0000	-0.179	364	0000	-0.182
365	0000	-0.188	366	0000	-0.188						

23 366 (Bridgeville Branch)

1	0000	-0.165	2	0000	-0.165	3	0000	-0.165	4	0000	-0.238
5	0000	-0.264	6	0000	-0.230	7	0000	-0.216	8	0000	-0.207
9	0000	-0.210	10	0000	-0.216	11	0000	-0.205	12	0000	-0.193
13	0000	-0.196	14	0000	-0.202	15	0000	-0.193	16	0000	-0.185
17	0000	-0.182	18	0000	-0.182	19	0000	-0.171	20	0000	-0.171
21	0000	-0.174	22	0000	-0.171	23	0000	-0.182	24	0000	-0.191
25	0000	-0.168	26	0000	-0.165	27	0000	-0.157	28	0000	-0.160
29	0000	-0.160	30	0000	-0.160	31	0000	-0.163	32	0000	-0.160
33	0000	-0.151	34	0000	-0.151	35	0000	-0.151	36	0000	-0.151
37	0000	-0.149	38	0000	-0.149	39	0000	-0.149	40	0000	-0.143
41	0000	-0.137	42	0000	-0.140	43	0000	-0.140	44	0000	-0.140
45	0000	-0.146	46	0000	-0.160	47	0000	-0.297	48	0000	-0.238
49	0000	-0.233	50	0000	-0.238	51	0000	-0.227	52	0000	-0.213
53	0000	-0.207	54	0000	-0.205	55	0000	-0.233	56	0000	-0.230
57	0000	-0.384	58	0000	-0.435	59	0000	-0.345	60	0000	-0.320
61	0000	-0.294	62	0000	-0.292	63	0000	-0.283	64	0000	-0.275
65	0000	-0.269	66	0000	-0.266	67	0000	-0.292	68	0000	-0.306
69	0000	-0.286	70	0000	-0.289	71	0000	-0.496	72	0000	-0.429
73	0000	-0.370	74	0000	-0.348	75	0000	-0.334	76	0000	-0.331
77	0000	-0.325	78	0000	-0.322	79	0000	-0.378	80	0000	-0.390
81	0000	-0.362	82	0000	-0.348	83	0000	-0.356	84	0000	-0.331
85	0000	-0.314	86	0000	-0.348	87	0000	-0.648	88	0000	-0.412
89	0000	-0.342	90	0000	-0.320	91	0000	-0.314	92	0000	-0.303
93	0000	-0.300	94	0000	-0.289	95	0000	-0.283	96	0000	-0.275
97	0000	-0.264	98	0000	-0.261	99	0000	-0.261	100	0000	-0.255
101	0000	-0.252	102	0000	-0.252	103	0000	-0.252	104	0000	-0.244
105	0000	-0.238	106	0000	-0.238	107	0000	-0.241	108	0000	-0.244
109	0000	-0.247	110	0000	-0.300	111	0000	-0.289	112	0000	-0.272
113	0000	-0.275	114	0000	-0.269	115	0000	-0.264	116	0000	-0.275
117	0000	-0.269	118	0000	-0.261	119	0000	-0.255	120	0000	-0.247
121	0000	-0.306	122	0000	-0.241	123	0000	-0.233	124	0000	-0.233
125	0000	-0.238	126	0000	-0.233	127	0000	-0.230	128	0000	-0.219
129	0000	-0.418	130	0000	-0.684	131	0000	-0.429	132	0000	-0.353
133	0000	-0.317	134	0000	-0.303	135	0000	-0.292	136	0000	-0.275
137	0000	-0.266	138	0000	-0.255	139	0000	-0.244	140	0000	-0.230
141	0000	-0.210	142	0000	-0.199	143	0000	-0.191	144	0000	-0.177
145	0000	-0.165	146	0000	-0.165	147	0000	-0.177	148	0000	-0.177
149	0000	-0.163	150	0000	-0.154	151	0000	-0.151	152	0000	-0.210
153	0000	-0.213	154	0000	-0.182	155	0000	-0.165	156	0000	-0.157
157	0000	-0.233	158	0000	-0.336	159	0000	-0.283	160	0000	-0.258
161	0000	-0.249	162	0000	-0.241	163	0000	-0.227	164	0000	-0.207
165	0000	-0.193	166	0000	-0.185	167	0000	-0.177	168	0000	-0.163
169	0000	-0.149	170	0000	-0.143	171	0000	-0.151	172	0000	-0.154
173	0000	-0.149	174	0000	-0.149	175	0000	-0.132	176	0000	-0.135
177	0000	-0.146	178	0000	-0.140	179	0000	-0.132	180	0000	-0.121
181	0000	-0.112	182	0000	-0.095	183	0000	-0.098	184	0000	-0.101
185	0000	-0.098	186	0000	-0.107	187	0000	-0.109	188	0000	-0.109
189	0000	-0.098	190	0000	-0.095	191	0000	-0.090	192	0000	-0.081
193	0000	-0.078	194	0000	-0.081	195	0000	-0.070	196	0000	-0.070
197	0000	-0.070	198	0000	-0.067	199	0000	-0.073	200	0000	-0.070
201	0000	-0.076	202	0000	-0.070	203	0000	-0.073	204	0000	-0.093
205	0000	-0.093	206	0000	-0.095	207	0000	-0.101	208	0000	-0.093
209	0000	-0.090	210	0000	-0.087	211	0000	-0.081	212	0000	-0.078
213	0000	-0.098	214	0000	-0.115	215	0000	-0.090	216	0000	-0.090
217	0000	-0.095	218	0000	-0.093	219	0000	-0.084	220	0000	-0.078
221	0000	-0.076	222	0000	-0.076	223	0000	-0.073	224	0000	-0.070
225	0000	-0.084	226	0000	-0.084	227	0000	-0.104	228	0000	-0.185
229	0000	-0.219	230	0000	-0.275	231	0000	-0.544	232	0000	-0.278
233	0000	-0.210	234	0000	-0.182	235	0000	-0.165	236	0000	-0.157
237	0000	-0.149	238	0000	-0.140	239	0000	-0.135	240	0000	-0.123
241	0000	-0.129	242	0000	-0.140	243	0000	-0.126	244	0000	-0.121
245	0000	-0.115	246	0000	-0.101	247	0000	-0.101	248	0000	-0.107
249	0000	-0.109	250	0000	-0.118	251	0000	-0.121	252	0000	-0.112
253	0000	-0.107	254	0000	-0.115	255	0000	-0.137	256	0000	-0.112
257	0000	-0.104	258	0000	-0.101	259	0000	-0.101	260	0000	-0.098
261	0000	-0.095	262	0000	-0.090	263	0000	-0.095	264	0000	-0.095
265	0000	-0.090	266	0000	-0.093	267	0000	-0.095	268	0000	-0.090
269	0000	-0.132	270	0000	-0.289	271	0000	-0.207	272	0000	-0.168
273	0000	-0.151	274	0000	-0.140	275	0000	-0.135	276	0000	-0.129
277	0000	-0.126	278	0000	-0.126	279	0000	-0.129	280	0000	-0.121
281	0000	-0.115	282	0000	-0.112	283	0000	-0.112	284	0000	-0.121
285	0000	-0.115	286	0000	-0.115	287	0000	-0.112	288	0000	-0.107
289	0000	-0.104	290	0000	-0.104	291	0000	-0.104	292	0000	-0.104

293	0000	-0.109	294	0000	-0.107	295	0000	-0.104	296	0000	-0.104
297	0000	-0.104	298	0000	-0.104	299	0000	-0.118	300	0000	-0.109
301	0000	-0.107	302	0000	-0.104	303	0000	-0.104	304	0000	-0.104
305	0000	-0.126	306	0000	-0.109	307	0000	-0.098	308	0000	-0.163
309	0000	-0.135	310	0000	-0.143	311	0000	-0.151	312	0000	-0.132
313	0000	-0.126	314	0000	-0.121	315	0000	-0.118	316	0000	-0.118
317	0000	-0.123	318	0000	-0.135	319	0000	-0.126	320	0000	-0.121
321	0000	-0.118	322	0000	-0.118	323	0000	-0.121	324	0000	-0.118
325	0000	-0.115	326	0000	-0.115	327	0000	-0.118	328	0000	-0.123
329	0000	-0.118	330	0000	-0.118	331	0000	-0.129	332	0000	-0.126
333	0000	-0.121	334	0000	-0.118	335	0000	-0.115	336	0000	-0.118
337	0000	-0.121	338	0000	-0.118	339	0000	-0.112	340	0000	-0.115
341	0000	-0.112	342	0000	-0.109	343	0000	-0.109	344	0000	-0.107
345	0000	-0.121	346	0000	-0.255	347	0000	-0.233	348	0000	-0.199
349	0000	-0.185	350	0000	-0.179	351	0000	-0.174	352	0000	-0.182
353	0000	-0.202	354	0000	-0.185	355	0000	-0.207	356	0000	-0.219
357	0000	-0.207	358	0000	-0.210	359	0000	-0.205	360	0000	-0.193
361	0000	-0.193	362	0000	-0.182	363	0000	-0.185	364	0000	-0.188
365	0000	-0.193	366	0000	-0.193						
22		366	(Gum Br. + Turkey Br.)								
1	0000	-0.740	2	0000	-0.740	3	0000	-0.740	4	0000	-1.066
5	0000	-1.179	6	0000	-1.029	7	0000	-0.966	8	0000	-0.928
9	0000	-0.941	10	0000	-0.966	11	0000	-0.916	12	0000	-0.866
13	0000	-0.878	14	0000	-0.903	15	0000	-0.866	16	0000	-0.828
17	0000	-0.815	18	0000	-0.815	19	0000	-0.765	20	0000	-0.765
21	0000	-0.778	22	0000	-0.765	23	0000	-0.815	24	0000	-0.853
25	0000	-0.753	26	0000	-0.740	27	0000	-0.702	28	0000	-0.715
29	0000	-0.715	30	0000	-0.715	31	0000	-0.728	32	0000	-0.715
33	0000	-0.677	34	0000	-0.677	35	0000	-0.677	36	0000	-0.677
37	0000	-0.665	38	0000	-0.665	39	0000	-0.665	40	0000	-0.640
41	0000	-0.615	42	0000	-0.627	43	0000	-0.627	44	0000	-0.627
45	0000	-0.652	46	0000	-0.715	47	0000	-1.330	48	0000	-1.066
49	0000	-1.041	50	0000	-1.066	51	0000	-1.016	52	0000	-0.953
53	0000	-0.928	54	0000	-0.916	55	0000	-1.041	56	0000	-1.029
57	0000	-1.719	58	0000	-1.944	59	0000	-1.543	60	0000	-1.430
61	0000	-1.317	62	0000	-1.305	63	0000	-1.267	64	0000	-1.229
65	0000	-1.204	66	0000	-1.192	67	0000	-1.305	68	0000	-1.367
69	0000	-1.280	70	0000	-1.292	71	0000	-2.220	72	0000	-1.919
73	0000	-1.656	74	0000	-1.556	75	0000	-1.493	76	0000	-1.480
77	0000	-1.455	78	0000	-1.443	79	0000	-1.693	80	0000	-1.744
81	0000	-1.618	82	0000	-1.556	83	0000	-1.593	84	0000	-1.480
85	0000	-1.405	86	0000	-1.556	87	0000	-2.898	88	0000	-1.844
89	0000	-1.530	90	0000	-1.430	91	0000	-1.405	92	0000	-1.355
93	0000	-1.342	94	0000	-1.292	95	0000	-1.267	96	0000	-1.229
97	0000	-1.179	98	0000	-1.167	99	0000	-1.167	100	0000	-1.142
101	0000	-1.129	102	0000	-1.129	103	0000	-1.129	104	0000	-1.091
105	0000	-1.066	106	0000	-1.066	107	0000	-1.079	108	0000	-1.091
109	0000	-1.104	110	0000	-1.342	111	0000	-1.292	112	0000	-1.217
113	0000	-1.229	114	0000	-1.204	115	0000	-1.179	116	0000	-1.229
117	0000	-1.204	118	0000	-1.167	119	0000	-1.142	120	0000	-1.104
121	0000	-1.367	122	0000	-1.079	123	0000	-1.041	124	0000	-1.041
125	0000	-1.066	126	0000	-1.041	127	0000	-1.029	128	0000	-0.978
129	0000	-1.869	130	0000	-3.061	131	0000	-1.919	132	0000	-1.581
133	0000	-1.418	134	0000	-1.355	135	0000	-1.305	136	0000	-1.229
137	0000	-1.192	138	0000	-1.142	139	0000	-1.091	140	0000	-1.029
141	0000	-0.941	142	0000	-0.891	143	0000	-0.853	144	0000	-0.790
145	0000	-0.740	146	0000	-0.740	147	0000	-0.790	148	0000	-0.790
149	0000	-0.728	150	0000	-0.690	151	0000	-0.677	152	0000	-0.941
153	0000	-0.953	154	0000	-0.815	155	0000	-0.740	156	0000	-0.702
157	0000	-1.041	158	0000	-1.505	159	0000	-1.267	160	0000	-1.154
161	0000	-1.116	162	0000	-1.079	163	0000	-1.016	164	0000	-0.928
165	0000	-0.866	166	0000	-0.828	167	0000	-0.790	168	0000	-0.728
169	0000	-0.665	170	0000	-0.640	171	0000	-0.677	172	0000	-0.690
173	0000	-0.665	174	0000	-0.665	175	0000	-0.590	176	0000	-0.602
177	0000	-0.652	178	0000	-0.627	179	0000	-0.590	180	0000	-0.539
181	0000	-0.502	182	0000	-0.427	183	0000	-0.439	184	0000	-0.452
185	0000	-0.439	186	0000	-0.477	187	0000	-0.489	188	0000	-0.489
189	0000	-0.439	190	0000	-0.427	191	0000	-0.401	192	0000	-0.364
193	0000	-0.351	194	0000	-0.364	195	0000	-0.314	196	0000	-0.314
197	0000	-0.314	198	0000	-0.301	199	0000	-0.326	200	0000	-0.314
201	0000	-0.339	202	0000	-0.314	203	0000	-0.326	204	0000	-0.414
205	0000	-0.414	206	0000	-0.427	207	0000	-0.452	208	0000	-0.414
209	0000	-0.401	210	0000	-0.389	211	0000	-0.364	212	0000	-0.351
213	0000	-0.439	214	0000	-0.514	215	0000	-0.401	216	0000	-0.401
217	0000	-0.427	218	0000	-0.414	219	0000	-0.376	220	0000	-0.351
221	0000	-0.339	222	0000	-0.339	223	0000	-0.326	224	0000	-0.314
225	0000	-0.376	226	0000	-0.376	227	0000	-0.464	228	0000	-0.828
229	0000	-0.978	230	0000	-1.229	231	0000	-2.434	232	0000	-1.242
233	0000	-0.941	234	0000	-0.815	235	0000	-0.740	236	0000	-0.702
237	0000	-0.665	238	0000	-0.627	239	0000	-0.602	240	0000	-0.552
241	0000	-0.577	242	0000	-0.627	243	0000	-0.564	244	0000	-0.539
245	0000	-0.514	246	0000	-0.452	247	0000	-0.452	248	0000	-0.477
249	0000	-0.489	250	0000	-0.527	251	0000	-0.539	252	0000	-0.502
253	0000	-0.477	254	0000	-0.514	255	0000	-0.615	256	0000	-0.502
257	0000	-0.464	258	0000	-0.452	259	0000	-0.452	260	0000	-0.439

261	0000	-0.427	262	0000	-0.401	263	0000	-0.427	264	0000	-0.427
265	0000	-0.401	266	0000	-0.414	267	0000	-0.427	268	0000	-0.401
269	0000	-0.590	270	0000	-1.292	271	0000	-0.928	272	0000	-0.753
273	0000	-0.677	274	0000	-0.627	275	0000	-0.602	276	0000	-0.577
277	0000	-0.564	278	0000	-0.564	279	0000	-0.577	280	0000	-0.539
281	0000	-0.514	282	0000	-0.502	283	0000	-0.502	284	0000	-0.539
285	0000	-0.514	286	0000	-0.514	287	0000	-0.502	288	0000	-0.477
289	0000	-0.464	290	0000	-0.464	291	0000	-0.464	292	0000	-0.464
293	0000	-0.489	294	0000	-0.477	295	0000	-0.464	296	0000	-0.464
297	0000	-0.464	298	0000	-0.464	299	0000	-0.527	300	0000	-0.489
301	0000	-0.477	302	0000	-0.464	303	0000	-0.464	304	0000	-0.464
305	0000	-0.564	306	0000	-0.489	307	0000	-0.439	308	0000	-0.728
309	0000	-0.602	310	0000	-0.640	311	0000	-0.677	312	0000	-0.590
313	0000	-0.564	314	0000	-0.539	315	0000	-0.527	316	0000	-0.527
317	0000	-0.552	318	0000	-0.602	319	0000	-0.564	320	0000	-0.539
321	0000	-0.527	322	0000	-0.527	323	0000	-0.539	324	0000	-0.527
325	0000	-0.514	326	0000	-0.514	327	0000	-0.527	328	0000	-0.552
329	0000	-0.527	330	0000	-0.527	331	0000	-0.577	332	0000	-0.564
333	0000	-0.539	334	0000	-0.527	335	0000	-0.514	336	0000	-0.527
337	0000	-0.539	338	0000	-0.527	339	0000	-0.502	340	0000	-0.514
341	0000	-0.502	342	0000	-0.489	343	0000	-0.489	344	0000	-0.477
345	0000	-0.539	346	0000	-1.142	347	0000	-1.041	348	0000	-0.891
349	0000	-0.828	350	0000	-0.803	351	0000	-0.778	352	0000	-0.815
353	0000	-0.903	354	0000	-0.828	355	0000	-0.928	356	0000	-0.978
357	0000	-0.928	358	0000	-0.941	359	0000	-0.916	360	0000	-0.866
361	0000	-0.866	362	0000	-0.815	363	0000	-0.828	364	0000	-0.840
365	0000	-0.866	366	0000	-0.866						
18		366	(Gravelly Br.)								
1	0000	-0.885	2	0000	-0.885	3	0000	-0.885	4	0000	-1.276
5	0000	-1.411	6	0000	-1.231	7	0000	-1.156	8	0000	-1.111
9	0000	-1.126	10	0000	-1.156	11	0000	-1.096	12	0000	-1.036
13	0000	-1.051	14	0000	-1.081	15	0000	-1.036	16	0000	-0.991
17	0000	-0.976	18	0000	-0.976	19	0000	-0.915	20	0000	-0.915
21	0000	-0.930	22	0000	-0.915	23	0000	-0.976	24	0000	-1.021
25	0000	-0.900	26	0000	-0.885	27	0000	-0.840	28	0000	-0.855
29	0000	-0.855	30	0000	-0.855	31	0000	-0.870	32	0000	-0.855
33	0000	-0.810	34	0000	-0.810	35	0000	-0.810	36	0000	-0.810
37	0000	-0.795	38	0000	-0.795	39	0000	-0.795	40	0000	-0.765
41	0000	-0.735	42	0000	-0.750	43	0000	-0.750	44	0000	-0.750
45	0000	-0.780	46	0000	-0.855	47	0000	-1.591	48	0000	-1.276
49	0000	-1.246	50	0000	-1.276	51	0000	-1.216	52	0000	-1.141
53	0000	-1.111	54	0000	-1.096	55	0000	-1.246	56	0000	-1.231
57	0000	-2.056	58	0000	-2.326	59	0000	-1.846	60	0000	-1.711
61	0000	-1.576	62	0000	-1.561	63	0000	-1.516	64	0000	-1.471
65	0000	-1.441	66	0000	-1.426	67	0000	-1.561	68	0000	-1.636
69	0000	-1.531	70	0000	-1.546	71	0000	-2.656	72	0000	-2.296
73	0000	-1.981	74	0000	-1.861	75	0000	-1.786	76	0000	-1.771
77	0000	-1.741	78	0000	-1.726	79	0000	-2.026	80	0000	-2.086
81	0000	-1.936	82	0000	-1.861	83	0000	-1.906	84	0000	-1.771
85	0000	-1.681	86	0000	-1.861	87	0000	-3.467	88	0000	-2.206
89	0000	-1.831	90	0000	-1.711	91	0000	-1.681	92	0000	-1.621
93	0000	-1.606	94	0000	-1.546	95	0000	-1.516	96	0000	-1.471
97	0000	-1.411	98	0000	-1.396	99	0000	-1.396	100	0000	-1.366
101	0000	-1.351	102	0000	-1.351	103	0000	-1.351	104	0000	-1.306
105	0000	-1.276	106	0000	-1.276	107	0000	-1.291	108	0000	-1.306
109	0000	-1.321	110	0000	-1.606	111	0000	-1.546	112	0000	-1.456
113	0000	-1.471	114	0000	-1.441	115	0000	-1.411	116	0000	-1.471
117	0000	-1.441	118	0000	-1.396	119	0000	-1.366	120	0000	-1.321
121	0000	-1.636	122	0000	-1.291	123	0000	-1.246	124	0000	-1.246
125	0000	-1.276	126	0000	-1.246	127	0000	-1.231	128	0000	-1.171
129	0000	-2.236	130	0000	-3.662	131	0000	-2.296	132	0000	-1.891
133	0000	-1.696	134	0000	-1.621	135	0000	-1.561	136	0000	-1.471
137	0000	-1.426	138	0000	-1.366	139	0000	-1.306	140	0000	-1.231
141	0000	-1.126	142	0000	-1.066	143	0000	-1.021	144	0000	-0.945
145	0000	-0.885	146	0000	-0.885	147	0000	-0.945	148	0000	-0.945
149	0000	-0.870	150	0000	-0.825	151	0000	-0.810	152	0000	-1.126
153	0000	-1.141	154	0000	-0.976	155	0000	-0.885	156	0000	-0.840
157	0000	-1.246	158	0000	-1.801	159	0000	-1.516	160	0000	-1.381
161	0000	-1.336	162	0000	-1.291	163	0000	-1.216	164	0000	-1.111
165	0000	-1.036	166	0000	-0.991	167	0000	-0.945	168	0000	-0.870
169	0000	-0.795	170	0000	-0.765	171	0000	-0.810	172	0000	-0.825
173	0000	-0.795	174	0000	-0.795	175	0000	-0.705	176	0000	-0.720
177	0000	-0.780	178	0000	-0.750	179	0000	-0.705	180	0000	-0.645
181	0000	-0.600	182	0000	-0.510	183	0000	-0.525	184	0000	-0.540
185	0000	-0.525	186	0000	-0.570	187	0000	-0.585	188	0000	-0.585
189	0000	-0.525	190	0000	-0.510	191	0000	-0.480	192	0000	-0.435
193	0000	-0.420	194	0000	-0.435	195	0000	-0.375	196	0000	-0.375
197	0000	-0.375	198	0000	-0.360	199	0000	-0.390	200	0000	-0.375
201	0000	-0.405	202	0000	-0.375	203	0000	-0.390	204	0000	-0.495
205	0000	-0.495	206	0000	-0.510	207	0000	-0.540	208	0000	-0.495
209	0000	-0.480	210	0000	-0.465	211	0000	-0.435	212	0000	-0.420
213	0000	-0.525	214	0000	-0.615	215	0000	-0.480	216	0000	-0.480
217	0000	-0.510	218	0000	-0.495	219	0000	-0.450	220	0000	-0.420
221	0000	-0.405	222	0000	-0.405	223	0000	-0.390	224	0000	-0.375
225	0000	-0.450	226	0000	-0.450	227	0000	-0.555	228	0000	-0.991

229 0000	-1.171	230 0000	-1.471	231 0000	-2.912	232 0000	-1.486
233 0000	-1.126	234 0000	-0.976	235 0000	-0.885	236 0000	-0.840
237 0000	-0.795	238 0000	-0.750	239 0000	-0.720	240 0000	-0.660
241 0000	-0.690	242 0000	-0.750	243 0000	-0.675	244 0000	-0.645
245 0000	-0.615	246 0000	-0.540	247 0000	-0.540	248 0000	-0.570
249 0000	-0.585	250 0000	-0.630	251 0000	-0.645	252 0000	-0.600
253 0000	-0.570	254 0000	-0.615	255 0000	-0.735	256 0000	-0.600
257 0000	-0.555	258 0000	-0.540	259 0000	-0.540	260 0000	-0.525
261 0000	-0.510	262 0000	-0.480	263 0000	-0.510	264 0000	-0.510
265 0000	-0.480	266 0000	-0.495	267 0000	-0.510	268 0000	-0.480
269 0000	-0.705	270 0000	-1.546	271 0000	-1.111	272 0000	-0.900
273 0000	-0.810	274 0000	-0.750	275 0000	-0.720	276 0000	-0.690
277 0000	-0.675	278 0000	-0.675	279 0000	-0.690	280 0000	-0.645
281 0000	-0.615	282 0000	-0.600	283 0000	-0.600	284 0000	-0.645
285 0000	-0.615	286 0000	-0.615	287 0000	-0.600	288 0000	-0.570
289 0000	-0.555	290 0000	-0.555	291 0000	-0.555	292 0000	-0.555
293 0000	-0.585	294 0000	-0.570	295 0000	-0.555	296 0000	-0.555
297 0000	-0.555	298 0000	-0.555	299 0000	-0.630	300 0000	-0.585
301 0000	-0.570	302 0000	-0.555	303 0000	-0.555	304 0000	-0.555
305 0000	-0.675	306 0000	-0.585	307 0000	-0.525	308 0000	-0.870
309 0000	-0.720	310 0000	-0.765	311 0000	-0.810	312 0000	-0.705
313 0000	-0.675	314 0000	-0.645	315 0000	-0.630	316 0000	-0.630
317 0000	-0.660	318 0000	-0.720	319 0000	-0.675	320 0000	-0.645
321 0000	-0.630	322 0000	-0.630	323 0000	-0.645	324 0000	-0.630
325 0000	-0.615	326 0000	-0.615	327 0000	-0.630	328 0000	-0.660
329 0000	-0.630	330 0000	-0.630	331 0000	-0.690	332 0000	-0.675
333 0000	-0.645	334 0000	-0.630	335 0000	-0.615	336 0000	-0.630
337 0000	-0.645	338 0000	-0.630	339 0000	-0.600	340 0000	-0.615
341 0000	-0.600	342 0000	-0.585	343 0000	-0.585	344 0000	-0.570
345 0000	-0.645	346 0000	-1.366	347 0000	-1.246	348 0000	-1.066
349 0000	-0.991	350 0000	-0.961	351 0000	-0.930	352 0000	-0.976
353 0000	-1.081	354 0000	-0.991	355 0000	-1.111	356 0000	-1.171
357 0000	-1.111	358 0000	-1.126	359 0000	-1.096	360 0000	-1.036
361 0000	-1.036	362 0000	-0.976	363 0000	-0.991	364 0000	-1.006
365 0000	-1.036	366 0000	-1.036				

14 366 (Deep Cr.)

1 0000	-1.489	2 0000	-1.489	3 0000	-1.489	4 0000	-2.145
5 0000	-2.372	6 0000	-2.069	7 0000	-1.943	8 0000	-1.867
9 0000	-1.892	10 0000	-1.943	11 0000	-1.842	12 0000	-1.741
13 0000	-1.766	14 0000	-1.817	15 0000	-1.741	16 0000	-1.665
17 0000	-1.640	18 0000	-1.640	19 0000	-1.539	20 0000	-1.539
21 0000	-1.564	22 0000	-1.539	23 0000	-1.640	24 0000	-1.716
25 0000	-1.514	26 0000	-1.489	27 0000	-1.413	28 0000	-1.438
29 0000	-1.438	30 0000	-1.438	31 0000	-1.463	32 0000	-1.438
33 0000	-1.362	34 0000	-1.362	35 0000	-1.362	36 0000	-1.362
37 0000	-1.337	38 0000	-1.337	39 0000	-1.337	40 0000	-1.287
41 0000	-1.236	42 0000	-1.262	43 0000	-1.262	44 0000	-1.262
45 0000	-1.312	46 0000	-1.438	47 0000	-2.674	48 0000	-2.145
49 0000	-2.094	50 0000	-2.145	51 0000	-2.044	52 0000	-1.918
53 0000	-1.867	54 0000	-1.842	55 0000	-2.094	56 0000	-2.069
57 0000	-3.457	58 0000	-3.911	59 0000	-3.103	60 0000	-2.876
61 0000	-2.649	62 0000	-2.624	63 0000	-2.548	64 0000	-2.473
65 0000	-2.422	66 0000	-2.397	67 0000	-2.624	68 0000	-2.750
69 0000	-2.573	70 0000	-2.599	71 0000	-4.466	72 0000	-3.860
73 0000	-3.330	74 0000	-3.129	75 0000	-3.002	76 0000	-2.977
77 0000	-2.927	78 0000	-2.901	79 0000	-3.406	80 0000	-3.507
81 0000	-3.255	82 0000	-3.129	83 0000	-3.204	84 0000	-2.977
85 0000	-2.826	86 0000	-3.129	87 0000	-5.828	88 0000	-3.709
89 0000	-3.078	90 0000	-2.876	91 0000	-2.826	92 0000	-2.725
93 0000	-2.700	94 0000	-2.599	95 0000	-2.548	96 0000	-2.473
97 0000	-2.372	98 0000	-2.346	99 0000	-2.346	100 0000	-2.296
101 0000	-2.271	102 0000	-2.271	103 0000	-2.271	104 0000	-2.195
105 0000	-2.145	106 0000	-2.145	107 0000	-2.170	108 0000	-2.195
109 0000	-2.220	110 0000	-2.700	111 0000	-2.599	112 0000	-2.447
113 0000	-2.473	114 0000	-2.422	115 0000	-2.372	116 0000	-2.473
117 0000	-2.422	118 0000	-2.346	119 0000	-2.296	120 0000	-2.220
121 0000	-2.750	122 0000	-2.170	123 0000	-2.094	124 0000	-2.094
125 0000	-2.145	126 0000	-2.094	127 0000	-2.069	128 0000	-1.968
129 0000	-3.759	130 0000	-6.156	131 0000	-3.860	132 0000	-3.179
133 0000	-2.851	134 0000	-2.725	135 0000	-2.624	136 0000	-2.473
137 0000	-2.397	138 0000	-2.296	139 0000	-2.195	140 0000	-2.069
141 0000	-1.892	142 0000	-1.791	143 0000	-1.716	144 0000	-1.590
145 0000	-1.489	146 0000	-1.489	147 0000	-1.590	148 0000	-1.590
149 0000	-1.463	150 0000	-1.388	151 0000	-1.362	152 0000	-1.892
153 0000	-1.918	154 0000	-1.640	155 0000	-1.489	156 0000	-1.413
157 0000	-2.094	158 0000	-3.028	159 0000	-2.548	160 0000	-2.321
161 0000	-2.245	162 0000	-2.170	163 0000	-2.044	164 0000	-1.867
165 0000	-1.741	166 0000	-1.665	167 0000	-1.590	168 0000	-1.463
169 0000	-1.337	170 0000	-1.287	171 0000	-1.362	172 0000	-1.388
173 0000	-1.337	174 0000	-1.337	175 0000	-1.186	176 0000	-1.211
177 0000	-1.312	178 0000	-1.262	179 0000	-1.186	180 0000	-1.085
181 0000	-1.009	182 0000	-0.858	183 0000	-0.883	184 0000	-0.908
185 0000	-0.883	186 0000	-0.959	187 0000	-0.984	188 0000	-0.984
189 0000	-0.883	190 0000	-0.858	191 0000	-0.807	192 0000	-0.732
193 0000	-0.706	194 0000	-0.732	195 0000	-0.631	196 0000	-0.631

197 0000	-0.631	198 0000	-0.606	199 0000	-0.656	200 0000	-0.631
201 0000	-0.681	202 0000	-0.631	203 0000	-0.656	204 0000	-0.833
205 0000	-0.833	206 0000	-0.858	207 0000	-0.908	208 0000	-0.833
209 0000	-0.807	210 0000	-0.782	211 0000	-0.732	212 0000	-0.706
213 0000	-0.883	214 0000	-1.034	215 0000	-0.807	216 0000	-0.807
217 0000	-0.858	218 0000	-0.833	219 0000	-0.757	220 0000	-0.706
221 0000	-0.681	222 0000	-0.681	223 0000	-0.656	224 0000	-0.631
225 0000	-0.757	226 0000	-0.757	227 0000	-0.934	228 0000	-1.665
229 0000	-1.968	230 0000	-2.473	231 0000	-4.895	232 0000	-2.498
233 0000	-1.892	234 0000	-1.640	235 0000	-1.489	236 0000	-1.413
237 0000	-1.337	238 0000	-1.262	239 0000	-1.211	240 0000	-1.110
241 0000	-1.161	242 0000	-1.262	243 0000	-1.135	244 0000	-1.085
245 0000	-1.034	246 0000	-0.908	247 0000	-0.908	248 0000	-0.959
249 0000	-0.984	250 0000	-1.060	251 0000	-1.085	252 0000	-1.009
253 0000	-0.959	254 0000	-1.034	255 0000	-1.236	256 0000	-1.009
257 0000	-0.934	258 0000	-0.908	259 0000	-0.908	260 0000	-0.883
261 0000	-0.858	262 0000	-0.807	263 0000	-0.858	264 0000	-0.858
265 0000	-0.807	266 0000	-0.833	267 0000	-0.858	268 0000	-0.807
269 0000	-1.186	270 0000	-2.599	271 0000	-1.867	272 0000	-1.514
273 0000	-1.362	274 0000	-1.262	275 0000	-1.211	276 0000	-1.161
277 0000	-1.135	278 0000	-1.135	279 0000	-1.161	280 0000	-1.085
281 0000	-1.034	282 0000	-1.009	283 0000	-1.009	284 0000	-1.085
285 0000	-1.034	286 0000	-1.034	287 0000	-1.009	288 0000	-0.959
289 0000	-0.934	290 0000	-0.934	291 0000	-0.934	292 0000	-0.934
293 0000	-0.984	294 0000	-0.959	295 0000	-0.934	296 0000	-0.934
297 0000	-0.934	298 0000	-0.934	299 0000	-1.060	300 0000	-0.984
301 0000	-0.959	302 0000	-0.934	303 0000	-0.934	304 0000	-0.934
305 0000	-1.135	306 0000	-0.984	307 0000	-0.883	308 0000	-1.463
309 0000	-1.211	310 0000	-1.287	311 0000	-1.362	312 0000	-1.186
313 0000	-1.135	314 0000	-1.085	315 0000	-1.060	316 0000	-1.060
317 0000	-1.110	318 0000	-1.211	319 0000	-1.135	320 0000	-1.085
321 0000	-1.060	322 0000	-1.060	323 0000	-1.085	324 0000	-1.060
325 0000	-1.034	326 0000	-1.034	327 0000	-1.060	328 0000	-1.110
329 0000	-1.060	330 0000	-1.060	331 0000	-1.161	332 0000	-1.135
333 0000	-1.085	334 0000	-1.060	335 0000	-1.034	336 0000	-1.060
337 0000	-1.085	338 0000	-1.060	339 0000	-1.009	340 0000	-1.034
341 0000	-1.009	342 0000	-0.984	343 0000	-0.984	344 0000	-0.959
345 0000	-1.085	346 0000	-2.296	347 0000	-2.094	348 0000	-1.791
349 0000	-1.665	350 0000	-1.615	351 0000	-1.564	352 0000	-1.640
353 0000	-1.817	354 0000	-1.665	355 0000	-1.867	356 0000	-1.968
357 0000	-1.867	358 0000	-1.892	359 0000	-1.842	360 0000	-1.741
361 0000	-1.741	362 0000	-1.640	363 0000	-1.665	364 0000	-1.690
365 0000	-1.741	366 0000	-1.741				

13 366 (Clear Brook)

1 0000	-0.523	2 0000	-0.523	3 0000	-0.523	4 0000	-0.753
5 0000	-0.833	6 0000	-0.727	7 0000	-0.682	8 0000	-0.656
9 0000	-0.665	10 0000	-0.682	11 0000	-0.647	12 0000	-0.612
13 0000	-0.620	14 0000	-0.638	15 0000	-0.612	16 0000	-0.585
17 0000	-0.576	18 0000	-0.576	19 0000	-0.541	20 0000	-0.541
21 0000	-0.550	22 0000	-0.541	23 0000	-0.576	24 0000	-0.603
25 0000	-0.532	26 0000	-0.523	27 0000	-0.496	28 0000	-0.505
29 0000	-0.505	30 0000	-0.505	31 0000	-0.514	32 0000	-0.505
33 0000	-0.479	34 0000	-0.479	35 0000	-0.479	36 0000	-0.479
37 0000	-0.470	38 0000	-0.470	39 0000	-0.470	40 0000	-0.452
41 0000	-0.434	42 0000	-0.443	43 0000	-0.443	44 0000	-0.443
45 0000	-0.461	46 0000	-0.505	47 0000	-0.939	48 0000	-0.753
49 0000	-0.736	50 0000	-0.753	51 0000	-0.718	52 0000	-0.674
53 0000	-0.656	54 0000	-0.647	55 0000	-0.736	56 0000	-0.727
57 0000	-1.214	58 0000	-1.374	59 0000	-1.090	60 0000	-1.010
61 0000	-0.931	62 0000	-0.922	63 0000	-0.895	64 0000	-0.869
65 0000	-0.851	66 0000	-0.842	67 0000	-0.922	68 0000	-0.966
69 0000	-0.904	70 0000	-0.913	71 0000	-1.569	72 0000	-1.356
73 0000	-1.170	74 0000	-1.099	75 0000	-1.055	76 0000	-1.046
77 0000	-1.028	78 0000	-1.019	79 0000	-1.197	80 0000	-1.232
81 0000	-1.143	82 0000	-1.099	83 0000	-1.126	84 0000	-1.046
85 0000	-0.993	86 0000	-1.099	87 0000	-2.047	88 0000	-1.303
89 0000	-1.081	90 0000	-1.010	91 0000	-0.993	92 0000	-0.957
93 0000	-0.948	94 0000	-0.913	95 0000	-0.895	96 0000	-0.869
97 0000	-0.833	98 0000	-0.824	99 0000	-0.824	100 0000	-0.807
101 0000	-0.798	102 0000	-0.798	103 0000	-0.798	104 0000	-0.771
105 0000	-0.753	106 0000	-0.753	107 0000	-0.762	108 0000	-0.771
109 0000	-0.780	110 0000	-0.948	111 0000	-0.913	112 0000	-0.860
113 0000	-0.869	114 0000	-0.851	115 0000	-0.833	116 0000	-0.869
117 0000	-0.851	118 0000	-0.824	119 0000	-0.807	120 0000	-0.780
121 0000	-0.966	122 0000	-0.762	123 0000	-0.736	124 0000	-0.736
125 0000	-0.753	126 0000	-0.736	127 0000	-0.727	128 0000	-0.691
129 0000	-1.321	130 0000	-2.163	131 0000	-1.356	132 0000	-1.117
133 0000	-1.002	134 0000	-0.957	135 0000	-0.922	136 0000	-0.869
137 0000	-0.842	138 0000	-0.807	139 0000	-0.771	140 0000	-0.727
141 0000	-0.665	142 0000	-0.629	143 0000	-0.603	144 0000	-0.558
145 0000	-0.523	146 0000	-0.523	147 0000	-0.558	148 0000	-0.558
149 0000	-0.514	150 0000	-0.487	151 0000	-0.479	152 0000	-0.665
153 0000	-0.674	154 0000	-0.576	155 0000	-0.523	156 0000	-0.496
157 0000	-0.736	158 0000	-1.064	159 0000	-0.895	160 0000	-0.815
161 0000	-0.789	162 0000	-0.762	163 0000	-0.718	164 0000	-0.656

165	0000	-0.612	166	0000	-0.585	167	0000	-0.558	168	0000	-0.514
169	0000	-0.470	170	0000	-0.452	171	0000	-0.479	172	0000	-0.487
173	0000	-0.470	174	0000	-0.470	175	0000	-0.417	176	0000	-0.425
177	0000	-0.461	178	0000	-0.443	179	0000	-0.417	180	0000	-0.381
181	0000	-0.355	182	0000	-0.301	183	0000	-0.310	184	0000	-0.319
185	0000	-0.310	186	0000	-0.337	187	0000	-0.346	188	0000	-0.346
189	0000	-0.310	190	0000	-0.301	191	0000	-0.284	192	0000	-0.257
193	0000	-0.248	194	0000	-0.257	195	0000	-0.222	196	0000	-0.222
197	0000	-0.222	198	0000	-0.213	199	0000	-0.230	200	0000	-0.222
201	0000	-0.239	202	0000	-0.222	203	0000	-0.230	204	0000	-0.292
205	0000	-0.292	206	0000	-0.301	207	0000	-0.319	208	0000	-0.292
209	0000	-0.284	210	0000	-0.275	211	0000	-0.257	212	0000	-0.248
213	0000	-0.310	214	0000	-0.363	215	0000	-0.284	216	0000	-0.284
217	0000	-0.301	218	0000	-0.292	219	0000	-0.266	220	0000	-0.248
221	0000	-0.239	222	0000	-0.239	223	0000	-0.230	224	0000	-0.222
225	0000	-0.266	226	0000	-0.266	227	0000	-0.328	228	0000	-0.585
229	0000	-0.691	230	0000	-0.869	231	0000	-1.719	232	0000	-0.877
233	0000	-0.665	234	0000	-0.576	235	0000	-0.523	236	0000	-0.496
237	0000	-0.470	238	0000	-0.443	239	0000	-0.425	240	0000	-0.390
241	0000	-0.408	242	0000	-0.443	243	0000	-0.399	244	0000	-0.381
245	0000	-0.363	246	0000	-0.319	247	0000	-0.319	248	0000	-0.337
249	0000	-0.346	250	0000	-0.372	251	0000	-0.381	252	0000	-0.355
253	0000	-0.337	254	0000	-0.363	255	0000	-0.434	256	0000	-0.355
257	0000	-0.328	258	0000	-0.319	259	0000	-0.319	260	0000	-0.310
261	0000	-0.301	262	0000	-0.284	263	0000	-0.301	264	0000	-0.301
265	0000	-0.284	266	0000	-0.292	267	0000	-0.301	268	0000	-0.284
269	0000	-0.417	270	0000	-0.913	271	0000	-0.656	272	0000	-0.532
273	0000	-0.479	274	0000	-0.443	275	0000	-0.425	276	0000	-0.408
277	0000	-0.399	278	0000	-0.399	279	0000	-0.408	280	0000	-0.381
281	0000	-0.363	282	0000	-0.355	283	0000	-0.355	284	0000	-0.381
285	0000	-0.363	286	0000	-0.363	287	0000	-0.355	288	0000	-0.337
289	0000	-0.328	290	0000	-0.328	291	0000	-0.328	292	0000	-0.328
293	0000	-0.346	294	0000	-0.337	295	0000	-0.328	296	0000	-0.328
297	0000	-0.328	298	0000	-0.328	299	0000	-0.372	300	0000	-0.346
301	0000	-0.337	302	0000	-0.328	303	0000	-0.328	304	0000	-0.328
305	0000	-0.399	306	0000	-0.346	307	0000	-0.310	308	0000	-0.514
309	0000	-0.425	310	0000	-0.452	311	0000	-0.479	312	0000	-0.417
313	0000	-0.399	314	0000	-0.381	315	0000	-0.372	316	0000	-0.372
317	0000	-0.390	318	0000	-0.425	319	0000	-0.399	320	0000	-0.381
321	0000	-0.372	322	0000	-0.372	323	0000	-0.381	324	0000	-0.372
325	0000	-0.363	326	0000	-0.363	327	0000	-0.372	328	0000	-0.390
329	0000	-0.372	330	0000	-0.372	331	0000	-0.408	332	0000	-0.399
333	0000	-0.381	334	0000	-0.372	335	0000	-0.363	336	0000	-0.372
337	0000	-0.381	338	0000	-0.372	339	0000	-0.355	340	0000	-0.363
341	0000	-0.355	342	0000	-0.346	343	0000	-0.346	344	0000	-0.337
345	0000	-0.381	346	0000	-0.807	347	0000	-0.736	348	0000	-0.629
349	0000	-0.585	350	0000	-0.567	351	0000	-0.550	352	0000	-0.576
353	0000	-0.638	354	0000	-0.585	355	0000	-0.656	356	0000	-0.691
357	0000	-0.656	358	0000	-0.665	359	0000	-0.647	360	0000	-0.612
361	0000	-0.612	362	0000	-0.576	363	0000	-0.585	364	0000	-0.594
365	0000	-0.612	366	0000	-0.612						
11		366	(Morgan Br.)								
1	0000	-0.094	2	0000	-0.094	3	0000	-0.094	4	0000	-0.135
5	0000	-0.149	6	0000	-0.130	7	0000	-0.122	8	0000	-0.117
9	0000	-0.119	10	0000	-0.122	11	0000	-0.116	12	0000	-0.109
13	0000	-0.111	14	0000	-0.114	15	0000	-0.109	16	0000	-0.105
17	0000	-0.103	18	0000	-0.103	19	0000	-0.097	20	0000	-0.097
21	0000	-0.098	22	0000	-0.097	23	0000	-0.103	24	0000	-0.108
25	0000	-0.095	26	0000	-0.094	27	0000	-0.089	28	0000	-0.090
29	0000	-0.090	30	0000	-0.090	31	0000	-0.092	32	0000	-0.090
33	0000	-0.086	34	0000	-0.086	35	0000	-0.086	36	0000	-0.086
37	0000	-0.084	38	0000	-0.084	39	0000	-0.084	40	0000	-0.081
41	0000	-0.078	42	0000	-0.079	43	0000	-0.079	44	0000	-0.079
45	0000	-0.082	46	0000	-0.090	47	0000	-0.168	48	0000	-0.135
49	0000	-0.132	50	0000	-0.135	51	0000	-0.128	52	0000	-0.121
53	0000	-0.117	54	0000	-0.116	55	0000	-0.132	56	0000	-0.130
57	0000	-0.217	58	0000	-0.246	59	0000	-0.195	60	0000	-0.181
61	0000	-0.167	62	0000	-0.165	63	0000	-0.160	64	0000	-0.155
65	0000	-0.152	66	0000	-0.151	67	0000	-0.165	68	0000	-0.173
69	0000	-0.162	70	0000	-0.163	71	0000	-0.281	72	0000	-0.243
73	0000	-0.209	74	0000	-0.197	75	0000	-0.189	76	0000	-0.187
77	0000	-0.184	78	0000	-0.182	79	0000	-0.214	80	0000	-0.220
81	0000	-0.205	82	0000	-0.197	83	0000	-0.201	84	0000	-0.187
85	0000	-0.178	86	0000	-0.197	87	0000	-0.366	88	0000	-0.233
89	0000	-0.193	90	0000	-0.181	91	0000	-0.178	92	0000	-0.171
93	0000	-0.170	94	0000	-0.163	95	0000	-0.160	96	0000	-0.155
97	0000	-0.149	98	0000	-0.147	99	0000	-0.147	100	0000	-0.144
101	0000	-0.143	102	0000	-0.143	103	0000	-0.143	104	0000	-0.138
105	0000	-0.135	106	0000	-0.135	107	0000	-0.136	108	0000	-0.138
109	0000	-0.140	110	0000	-0.170	111	0000	-0.163	112	0000	-0.154
113	0000	-0.155	114	0000	-0.152	115	0000	-0.149	116	0000	-0.155
117	0000	-0.152	118	0000	-0.147	119	0000	-0.144	120	0000	-0.140
121	0000	-0.173	122	0000	-0.136	123	0000	-0.132	124	0000	-0.132
125	0000	-0.135	126	0000	-0.132	127	0000	-0.130	128	0000	-0.124
129	0000	-0.236	130	0000	-0.387	131	0000	-0.243	132	0000	-0.200

133	0000	-0.179	134	0000	-0.171	135	0000	-0.165	136	0000	-0.155
137	0000	-0.151	138	0000	-0.144	139	0000	-0.138	140	0000	-0.130
141	0000	-0.119	142	0000	-0.113	143	0000	-0.108	144	0000	-0.100
145	0000	-0.094	146	0000	-0.094	147	0000	-0.100	148	0000	-0.100
149	0000	-0.092	150	0000	-0.087	151	0000	-0.086	152	0000	-0.119
153	0000	-0.121	154	0000	-0.103	155	0000	-0.094	156	0000	-0.089
157	0000	-0.132	158	0000	-0.190	159	0000	-0.160	160	0000	-0.146
161	0000	-0.141	162	0000	-0.136	163	0000	-0.128	164	0000	-0.117
165	0000	-0.109	166	0000	-0.105	167	0000	-0.100	168	0000	-0.092
169	0000	-0.084	170	0000	-0.081	171	0000	-0.086	172	0000	-0.087
173	0000	-0.084	174	0000	-0.084	175	0000	-0.075	176	0000	-0.076
177	0000	-0.082	178	0000	-0.079	179	0000	-0.075	180	0000	-0.068
181	0000	-0.063	182	0000	-0.054	183	0000	-0.056	184	0000	-0.057
185	0000	-0.056	186	0000	-0.060	187	0000	-0.062	188	0000	-0.062
189	0000	-0.056	190	0000	-0.054	191	0000	-0.051	192	0000	-0.046
193	0000	-0.044	194	0000	-0.046	195	0000	-0.040	196	0000	-0.040
197	0000	-0.040	198	0000	-0.038	199	0000	-0.041	200	0000	-0.040
201	0000	-0.043	202	0000	-0.040	203	0000	-0.041	204	0000	-0.052
205	0000	-0.052	206	0000	-0.054	207	0000	-0.057	208	0000	-0.052
209	0000	-0.051	210	0000	-0.049	211	0000	-0.046	212	0000	-0.044
213	0000	-0.056	214	0000	-0.065	215	0000	-0.051	216	0000	-0.051
217	0000	-0.054	218	0000	-0.052	219	0000	-0.048	220	0000	-0.044
221	0000	-0.043	222	0000	-0.043	223	0000	-0.041	224	0000	-0.040
225	0000	-0.048	226	0000	-0.048	227	0000	-0.059	228	0000	-0.105
229	0000	-0.124	230	0000	-0.155	231	0000	-0.308	232	0000	-0.157
233	0000	-0.119	234	0000	-0.103	235	0000	-0.094	236	0000	-0.089
237	0000	-0.084	238	0000	-0.079	239	0000	-0.076	240	0000	-0.070
241	0000	-0.073	242	0000	-0.079	243	0000	-0.071	244	0000	-0.068
245	0000	-0.065	246	0000	-0.057	247	0000	-0.057	248	0000	-0.060
249	0000	-0.062	250	0000	-0.067	251	0000	-0.068	252	0000	-0.063
253	0000	-0.060	254	0000	-0.065	255	0000	-0.078	256	0000	-0.063
257	0000	-0.059	258	0000	-0.057	259	0000	-0.057	260	0000	-0.056
261	0000	-0.054	262	0000	-0.051	263	0000	-0.054	264	0000	-0.054
265	0000	-0.051	266	0000	-0.052	267	0000	-0.054	268	0000	-0.051
269	0000	-0.075	270	0000	-0.163	271	0000	-0.117	272	0000	-0.095
273	0000	-0.086	274	0000	-0.079	275	0000	-0.076	276	0000	-0.073
277	0000	-0.071	278	0000	-0.071	279	0000	-0.073	280	0000	-0.068
281	0000	-0.065	282	0000	-0.063	283	0000	-0.063	284	0000	-0.068
285	0000	-0.065	286	0000	-0.065	287	0000	-0.063	288	0000	-0.060
289	0000	-0.059	290	0000	-0.059	291	0000	-0.059	292	0000	-0.059
293	0000	-0.062	294	0000	-0.060	295	0000	-0.059	296	0000	-0.059
297	0000	-0.059	298	0000	-0.059	299	0000	-0.067	300	0000	-0.062
301	0000	-0.060	302	0000	-0.059	303	0000	-0.059	304	0000	-0.059
305	0000	-0.071	306	0000	-0.062	307	0000	-0.056	308	0000	-0.092
309	0000	-0.076	310	0000	-0.081	311	0000	-0.086	312	0000	-0.075
313	0000	-0.071	314	0000	-0.068	315	0000	-0.067	316	0000	-0.067
317	0000	-0.070	318	0000	-0.076	319	0000	-0.071	320	0000	-0.068
321	0000	-0.067	322	0000	-0.067	323	0000	-0.068	324	0000	-0.067
325	0000	-0.065	326	0000	-0.065	327	0000	-0.067	328	0000	-0.070
329	0000	-0.067	330	0000	-0.067	331	0000	-0.073	332	0000	-0.071
333	0000	-0.068	334	0000	-0.067	335	0000	-0.065	336	0000	-0.067
337	0000	-0.068	338	0000	-0.067	339	0000	-0.063	340	0000	-0.065
341	0000	-0.063	342	0000	-0.062	343	0000	-0.062	344	0000	-0.060
345	0000	-0.068	346	0000	-0.144	347	0000	-0.132	348	0000	-0.113
349	0000	-0.105	350	0000	-0.101	351	0000	-0.098	352	0000	-0.103
353	0000	-0.114	354	0000	-0.105	355	0000	-0.117	356	0000	-0.124
357	0000	-0.117	358	0000	-0.119	359	0000	-0.116	360	0000	-0.109
361	0000	-0.109	362	0000	-0.103	363	0000	-0.105	364	0000	-0.106
365	0000	-0.109	366	0000	-0.109						
10		366	(Butler Mill - Chapel Br.)								
1	0000	-0.368	2	0000	-0.368	3	0000	-0.368	4	0000	-0.530
5	0000	-0.586	6	0000	-0.511	7	0000	-0.480	8	0000	-0.461
9	0000	-0.467	10	0000	-0.480	11	0000	-0.455	12	0000	-0.430
13	0000	-0.436	14	0000	-0.449	15	0000	-0.430	16	0000	-0.411
17	0000	-0.405	18	0000	-0.405	19	0000	-0.380	20	0000	-0.380
21	0000	-0.386	22	0000	-0.380	23	0000	-0.405	24	0000	-0.424
25	0000	-0.374	26	0000	-0.368	27	0000	-0.349	28	0000	-0.355
29	0000	-0.355	30	0000	-0.355	31	0000	-0.361	32	0000	-0.355
33	0000	-0.336	34	0000	-0.336	35	0000	-0.336	36	0000	-0.336
37	0000	-0.330	38	0000	-0.330	39	0000	-0.330	40	0000	-0.318
41	0000	-0.305	42	0000	-0.311	43	0000	-0.311	44	0000	-0.311
45	0000	-0.324	46	0000	-0.355	47	0000	-0.660	48	0000	-0.530
49	0000	-0.517	50	0000	-0.530	51	0000	-0.505	52	0000	-0.473
53	0000	-0.461	54	0000	-0.455	55	0000	-0.517	56	0000	-0.511
57	0000	-0.853	58	0000	-0.966	59	0000	-0.766	60	0000	-0.710
61	0000	-0.654	62	0000	-0.648	63	0000	-0.629	64	0000	-0.611
65	0000	-0.598	66	0000	-0.592	67	0000	-0.648	68	0000	-0.679
69	0000	-0.635	70	0000	-0.642	71	0000	-1.103	72	0000	-0.953
73	0000	-0.822	74	0000	-0.772	75	0000	-0.741	76	0000	-0.735
77	0000	-0.723	78	0000	-0.716	79	0000	-0.841	80	0000	-0.866
81	0000	-0.804	82	0000	-0.772	83	0000	-0.791	84	0000	-0.735
85	0000	-0.698	86	0000	-0.772	87	0000	-1.439	88	0000	-0.916
89	0000	-0.760	90	0000	-0.710	91	0000	-0.698	92	0000	-0.673
93	0000	-0.667	94	0000	-0.642	95	0000	-0.629	96	0000	-0.611
97	0000	-0.586	98	0000	-0.579	99	0000	-0.579	100	0000	-0.567

101 0000	-0.561	102 0000	-0.561	103 0000	-0.561	104 0000	-0.542
105 0000	-0.530	106 0000	-0.530	107 0000	-0.536	108 0000	-0.542
109 0000	-0.548	110 0000	-0.667	111 0000	-0.642	112 0000	-0.604
113 0000	-0.611	114 0000	-0.598	115 0000	-0.586	116 0000	-0.611
117 0000	-0.598	118 0000	-0.579	119 0000	-0.567	120 0000	-0.548
121 0000	-0.679	122 0000	-0.536	123 0000	-0.517	124 0000	-0.517
125 0000	-0.530	126 0000	-0.517	127 0000	-0.511	128 0000	-0.486
129 0000	-0.928	130 0000	-1.520	131 0000	-0.953	132 0000	-0.785
133 0000	-0.704	134 0000	-0.673	135 0000	-0.648	136 0000	-0.611
137 0000	-0.592	138 0000	-0.567	139 0000	-0.542	140 0000	-0.511
141 0000	-0.467	142 0000	-0.442	143 0000	-0.424	144 0000	-0.392
145 0000	-0.368	146 0000	-0.368	147 0000	-0.392	148 0000	-0.392
149 0000	-0.361	150 0000	-0.343	151 0000	-0.336	152 0000	-0.467
153 0000	-0.473	154 0000	-0.405	155 0000	-0.368	156 0000	-0.349
157 0000	-0.517	158 0000	-0.748	159 0000	-0.629	160 0000	-0.573
161 0000	-0.554	162 0000	-0.536	163 0000	-0.505	164 0000	-0.461
165 0000	-0.430	166 0000	-0.411	167 0000	-0.392	168 0000	-0.361
169 0000	-0.330	170 0000	-0.318	171 0000	-0.336	172 0000	-0.343
173 0000	-0.330	174 0000	-0.330	175 0000	-0.293	176 0000	-0.299
177 0000	-0.324	178 0000	-0.311	179 0000	-0.293	180 0000	-0.268
181 0000	-0.249	182 0000	-0.212	183 0000	-0.218	184 0000	-0.224
185 0000	-0.218	186 0000	-0.237	187 0000	-0.243	188 0000	-0.243
189 0000	-0.218	190 0000	-0.212	191 0000	-0.199	192 0000	-0.181
193 0000	-0.174	194 0000	-0.181	195 0000	-0.156	196 0000	-0.156
197 0000	-0.156	198 0000	-0.150	199 0000	-0.162	200 0000	-0.156
201 0000	-0.168	202 0000	-0.156	203 0000	-0.162	204 0000	-0.206
205 0000	-0.206	206 0000	-0.212	207 0000	-0.224	208 0000	-0.206
209 0000	-0.199	210 0000	-0.193	211 0000	-0.181	212 0000	-0.174
213 0000	-0.218	214 0000	-0.255	215 0000	-0.199	216 0000	-0.199
217 0000	-0.212	218 0000	-0.206	219 0000	-0.187	220 0000	-0.174
221 0000	-0.168	222 0000	-0.168	223 0000	-0.162	224 0000	-0.156
225 0000	-0.187	226 0000	-0.187	227 0000	-0.230	228 0000	-0.411
229 0000	-0.486	230 0000	-0.611	231 0000	-1.209	232 0000	-0.617
233 0000	-0.467	234 0000	-0.405	235 0000	-0.368	236 0000	-0.349
237 0000	-0.330	238 0000	-0.311	239 0000	-0.299	240 0000	-0.274
241 0000	-0.287	242 0000	-0.311	243 0000	-0.280	244 0000	-0.268
245 0000	-0.255	246 0000	-0.224	247 0000	-0.224	248 0000	-0.237
249 0000	-0.243	250 0000	-0.262	251 0000	-0.268	252 0000	-0.249
253 0000	-0.237	254 0000	-0.255	255 0000	-0.305	256 0000	-0.249
257 0000	-0.230	258 0000	-0.224	259 0000	-0.224	260 0000	-0.218
261 0000	-0.212	262 0000	-0.199	263 0000	-0.212	264 0000	-0.212
265 0000	-0.199	266 0000	-0.206	267 0000	-0.212	268 0000	-0.199
269 0000	-0.293	270 0000	-0.642	271 0000	-0.461	272 0000	-0.374
273 0000	-0.336	274 0000	-0.311	275 0000	-0.299	276 0000	-0.287
277 0000	-0.280	278 0000	-0.280	279 0000	-0.287	280 0000	-0.268
281 0000	-0.255	282 0000	-0.249	283 0000	-0.249	284 0000	-0.268
285 0000	-0.255	286 0000	-0.255	287 0000	-0.249	288 0000	-0.237
289 0000	-0.230	290 0000	-0.230	291 0000	-0.230	292 0000	-0.230
293 0000	-0.243	294 0000	-0.237	295 0000	-0.230	296 0000	-0.230
297 0000	-0.230	298 0000	-0.230	299 0000	-0.262	300 0000	-0.243
301 0000	-0.237	302 0000	-0.230	303 0000	-0.230	304 0000	-0.230
305 0000	-0.280	306 0000	-0.243	307 0000	-0.218	308 0000	-0.361
309 0000	-0.299	310 0000	-0.318	311 0000	-0.336	312 0000	-0.293
313 0000	-0.280	314 0000	-0.268	315 0000	-0.262	316 0000	-0.262
317 0000	-0.274	318 0000	-0.299	319 0000	-0.280	320 0000	-0.268
321 0000	-0.262	322 0000	-0.262	323 0000	-0.268	324 0000	-0.262
325 0000	-0.255	326 0000	-0.255	327 0000	-0.262	328 0000	-0.274
329 0000	-0.262	330 0000	-0.262	331 0000	-0.287	332 0000	-0.280
333 0000	-0.268	334 0000	-0.262	335 0000	-0.255	336 0000	-0.262
337 0000	-0.268	338 0000	-0.262	339 0000	-0.249	340 0000	-0.255
341 0000	-0.249	342 0000	-0.243	343 0000	-0.243	344 0000	-0.237
345 0000	-0.268	346 0000	-0.567	347 0000	-0.517	348 0000	-0.442
349 0000	-0.411	350 0000	-0.399	351 0000	-0.386	352 0000	-0.405
353 0000	-0.449	354 0000	-0.411	355 0000	-0.461	356 0000	-0.486
357 0000	-0.461	358 0000	-0.467	359 0000	-0.455	360 0000	-0.430
361 0000	-0.430	362 0000	-0.405	363 0000	-0.411	364 0000	-0.417
365 0000	-0.430	366 0000	-0.430				

9 366 (Gum Br. + Turtle Br.)

1 0000	-0.296	2 0000	-0.296	3 0000	-0.296	4 0000	-0.426
5 0000	-0.471	6 0000	-0.411	7 0000	-0.386	8 0000	-0.371
9 0000	-0.376	10 0000	-0.386	11 0000	-0.366	12 0000	-0.346
13 0000	-0.351	14 0000	-0.361	15 0000	-0.346	16 0000	-0.331
17 0000	-0.326	18 0000	-0.326	19 0000	-0.306	20 0000	-0.306
21 0000	-0.311	22 0000	-0.306	23 0000	-0.326	24 0000	-0.341
25 0000	-0.301	26 0000	-0.296	27 0000	-0.281	28 0000	-0.286
29 0000	-0.286	30 0000	-0.286	31 0000	-0.291	32 0000	-0.286
33 0000	-0.271	34 0000	-0.271	35 0000	-0.271	36 0000	-0.271
37 0000	-0.266	38 0000	-0.266	39 0000	-0.266	40 0000	-0.256
41 0000	-0.246	42 0000	-0.251	43 0000	-0.251	44 0000	-0.251
45 0000	-0.261	46 0000	-0.286	47 0000	-0.531	48 0000	-0.426
49 0000	-0.416	50 0000	-0.426	51 0000	-0.406	52 0000	-0.381
53 0000	-0.371	54 0000	-0.366	55 0000	-0.416	56 0000	-0.411
57 0000	-0.687	58 0000	-0.777	59 0000	-0.616	60 0000	-0.571
61 0000	-0.526	62 0000	-0.521	63 0000	-0.506	64 0000	-0.491
65 0000	-0.481	66 0000	-0.476	67 0000	-0.521	68 0000	-0.546

69 0000	-0.511	70 0000	-0.516	71 0000	-0.887	72 0000	-0.767
73 0000	-0.662	74 0000	-0.621	75 0000	-0.596	76 0000	-0.591
77 0000	-0.581	78 0000	-0.576	79 0000	-0.677	80 0000	-0.697
81 0000	-0.647	82 0000	-0.621	83 0000	-0.637	84 0000	-0.591
85 0000	-0.561	86 0000	-0.621	87 0000	-1.158	88 0000	-0.737
89 0000	-0.611	90 0000	-0.571	91 0000	-0.561	92 0000	-0.541
93 0000	-0.536	94 0000	-0.516	95 0000	-0.506	96 0000	-0.491
97 0000	-0.471	98 0000	-0.466	99 0000	-0.466	100 0000	-0.456
101 0000	-0.451	102 0000	-0.451	103 0000	-0.451	104 0000	-0.436
105 0000	-0.426	106 0000	-0.426	107 0000	-0.431	108 0000	-0.436
109 0000	-0.441	110 0000	-0.536	111 0000	-0.516	112 0000	-0.486
113 0000	-0.491	114 0000	-0.481	115 0000	-0.471	116 0000	-0.491
117 0000	-0.481	118 0000	-0.466	119 0000	-0.456	120 0000	-0.441
121 0000	-0.546	122 0000	-0.431	123 0000	-0.416	124 0000	-0.416
125 0000	-0.426	126 0000	-0.416	127 0000	-0.411	128 0000	-0.391
129 0000	-0.747	130 0000	-1.223	131 0000	-0.767	132 0000	-0.632
133 0000	-0.566	134 0000	-0.541	135 0000	-0.521	136 0000	-0.491
137 0000	-0.476	138 0000	-0.456	139 0000	-0.436	140 0000	-0.411
141 0000	-0.376	142 0000	-0.356	143 0000	-0.341	144 0000	-0.316
145 0000	-0.296	146 0000	-0.296	147 0000	-0.316	148 0000	-0.316
149 0000	-0.291	150 0000	-0.276	151 0000	-0.271	152 0000	-0.376
153 0000	-0.381	154 0000	-0.326	155 0000	-0.296	156 0000	-0.281
157 0000	-0.416	158 0000	-0.601	159 0000	-0.506	160 0000	-0.461
161 0000	-0.446	162 0000	-0.431	163 0000	-0.406	164 0000	-0.371
165 0000	-0.346	166 0000	-0.331	167 0000	-0.316	168 0000	-0.291
169 0000	-0.266	170 0000	-0.256	171 0000	-0.271	172 0000	-0.276
173 0000	-0.266	174 0000	-0.266	175 0000	-0.236	176 0000	-0.241
177 0000	-0.261	178 0000	-0.251	179 0000	-0.236	180 0000	-0.216
181 0000	-0.200	182 0000	-0.170	183 0000	-0.175	184 0000	-0.180
185 0000	-0.175	186 0000	-0.190	187 0000	-0.195	188 0000	-0.195
189 0000	-0.175	190 0000	-0.170	191 0000	-0.160	192 0000	-0.145
193 0000	-0.140	194 0000	-0.145	195 0000	-0.125	196 0000	-0.125
197 0000	-0.125	198 0000	-0.120	199 0000	-0.130	200 0000	-0.125
201 0000	-0.135	202 0000	-0.125	203 0000	-0.130	204 0000	-0.165
205 0000	-0.165	206 0000	-0.170	207 0000	-0.180	208 0000	-0.165
209 0000	-0.160	210 0000	-0.155	211 0000	-0.145	212 0000	-0.140
213 0000	-0.175	214 0000	-0.205	215 0000	-0.160	216 0000	-0.160
217 0000	-0.170	218 0000	-0.165	219 0000	-0.150	220 0000	-0.140
221 0000	-0.135	222 0000	-0.135	223 0000	-0.130	224 0000	-0.125
225 0000	-0.150	226 0000	-0.150	227 0000	-0.185	228 0000	-0.331
229 0000	-0.391	230 0000	-0.491	231 0000	-0.972	232 0000	-0.496
233 0000	-0.376	234 0000	-0.326	235 0000	-0.296	236 0000	-0.281
237 0000	-0.266	238 0000	-0.251	239 0000	-0.241	240 0000	-0.221
241 0000	-0.231	242 0000	-0.251	243 0000	-0.226	244 0000	-0.216
245 0000	-0.205	246 0000	-0.180	247 0000	-0.180	248 0000	-0.190
249 0000	-0.195	250 0000	-0.211	251 0000	-0.216	252 0000	-0.200
253 0000	-0.190	254 0000	-0.205	255 0000	-0.246	256 0000	-0.200
257 0000	-0.185	258 0000	-0.180	259 0000	-0.180	260 0000	-0.175
261 0000	-0.170	262 0000	-0.160	263 0000	-0.170	264 0000	-0.170
265 0000	-0.160	266 0000	-0.165	267 0000	-0.170	268 0000	-0.160
269 0000	-0.236	270 0000	-0.516	271 0000	-0.371	272 0000	-0.301
273 0000	-0.271	274 0000	-0.251	275 0000	-0.241	276 0000	-0.231
277 0000	-0.226	278 0000	-0.226	279 0000	-0.231	280 0000	-0.216
281 0000	-0.205	282 0000	-0.200	283 0000	-0.200	284 0000	-0.216
285 0000	-0.205	286 0000	-0.205	287 0000	-0.200	288 0000	-0.190
289 0000	-0.185	290 0000	-0.185	291 0000	-0.185	292 0000	-0.185
293 0000	-0.195	294 0000	-0.190	295 0000	-0.185	296 0000	-0.185
297 0000	-0.185	298 0000	-0.185	299 0000	-0.211	300 0000	-0.195
301 0000	-0.190	302 0000	-0.185	303 0000	-0.185	304 0000	-0.185
305 0000	-0.226	306 0000	-0.195	307 0000	-0.175	308 0000	-0.291
309 0000	-0.241	310 0000	-0.256	311 0000	-0.271	312 0000	-0.236
313 0000	-0.226	314 0000	-0.216	315 0000	-0.211	316 0000	-0.211
317 0000	-0.221	318 0000	-0.241	319 0000	-0.226	320 0000	-0.216
321 0000	-0.211	322 0000	-0.211	323 0000	-0.216	324 0000	-0.211
325 0000	-0.205	326 0000	-0.205	327 0000	-0.211	328 0000	-0.221
329 0000	-0.211	330 0000	-0.211	331 0000	-0.231	332 0000	-0.226
333 0000	-0.216	334 0000	-0.211	335 0000	-0.205	336 0000	-0.211
337 0000	-0.216	338 0000	-0.211	339 0000	-0.200	340 0000	-0.205
341 0000	-0.200	342 0000	-0.195	343 0000	-0.195	344 0000	-0.190
345 0000	-0.216	346 0000	-0.456	347 0000	-0.416	348 0000	-0.356
349 0000	-0.331	350 0000	-0.321	351 0000	-0.311	352 0000	-0.326
353 0000	-0.361	354 0000	-0.331	355 0000	-0.371	356 0000	-0.391
357 0000	-0.371	358 0000	-0.376	359 0000	-0.366	360 0000	-0.346
361 0000	-0.346	362 0000	-0.326	363 0000	-0.331	364 0000	-0.336
365 0000	-0.346	366 0000	-0.346				

5 366 (Beaver Dam Br.)

1 0000	-0.057	2 0000	-0.057	3 0000	-0.057	4 0000	-0.082
5 0000	-0.091	6 0000	-0.079	7 0000	-0.074	8 0000	-0.071
9 0000	-0.072	10 0000	-0.074	11 0000	-0.070	12 0000	-0.066
13 0000	-0.067	14 0000	-0.069	15 0000	-0.066	16 0000	-0.064
17 0000	-0.063	18 0000	-0.063	19 0000	-0.059	20 0000	-0.059
21 0000	-0.060	22 0000	-0.059	23 0000	-0.063	24 0000	-0.065
25 0000	-0.058	26 0000	-0.057	27 0000	-0.054	28 0000	-0.055
29 0000	-0.055	30 0000	-0.055	31 0000	-0.056	32 0000	-0.055
33 0000	-0.052	34 0000	-0.052	35 0000	-0.052	36 0000	-0.052

```
 37 0000    -0.051   38 0000    -0.051   39 0000    -0.051   40 0000    -0.049
 41 0000    -0.047   42 0000    -0.048   43 0000    -0.048   44 0000    -0.048
 45 0000    -0.050   46 0000    -0.055   47 0000    -0.102   48 0000    -0.082
 49 0000    -0.080   50 0000    -0.082   51 0000    -0.078   52 0000    -0.073
 53 0000    -0.071   54 0000    -0.070   55 0000    -0.080   56 0000    -0.079
 57 0000    -0.132   58 0000    -0.149   59 0000    -0.118   60 0000    -0.110
 61 0000    -0.101   62 0000    -0.100   63 0000    -0.097   64 0000    -0.094
 65 0000    -0.092   66 0000    -0.091   67 0000    -0.100   68 0000    -0.105
 69 0000    -0.098   70 0000    -0.099   71 0000    -0.170   72 0000    -0.147
 73 0000    -0.127   74 0000    -0.119   75 0000    -0.115   76 0000    -0.114
 77 0000    -0.112   78 0000    -0.111   79 0000    -0.130   80 0000    -0.134
 81 0000    -0.124   82 0000    -0.119   83 0000    -0.122   84 0000    -0.114
 85 0000    -0.108   86 0000    -0.119   87 0000    -0.222   88 0000    -0.142
 89 0000    -0.117   90 0000    -0.110   91 0000    -0.108   92 0000    -0.104
 93 0000    -0.103   94 0000    -0.099   95 0000    -0.097   96 0000    -0.094
 97 0000    -0.091   98 0000    -0.090   99 0000    -0.090  100 0000    -0.088
101 0000    -0.087  102 0000    -0.087  103 0000    -0.087  104 0000    -0.084
105 0000    -0.082  106 0000    -0.082  107 0000    -0.083  108 0000    -0.084
109 0000    -0.085  110 0000    -0.103  111 0000    -0.099  112 0000    -0.093
113 0000    -0.094  114 0000    -0.092  115 0000    -0.091  116 0000    -0.094
117 0000    -0.092  118 0000    -0.090  119 0000    -0.088  120 0000    -0.085
121 0000    -0.105  122 0000    -0.083  123 0000    -0.080  124 0000    -0.080
125 0000    -0.082  126 0000    -0.080  127 0000    -0.079  128 0000    -0.075
129 0000    -0.143  130 0000    -0.235  131 0000    -0.147  132 0000    -0.121
133 0000    -0.109  134 0000    -0.104  135 0000    -0.100  136 0000    -0.094
137 0000    -0.091  138 0000    -0.088  139 0000    -0.084  140 0000    -0.079
141 0000    -0.072  142 0000    -0.068  143 0000    -0.065  144 0000    -0.061
145 0000    -0.057  146 0000    -0.057  147 0000    -0.061  148 0000    -0.061
149 0000    -0.056  150 0000    -0.053  151 0000    -0.052  152 0000    -0.072
153 0000    -0.073  154 0000    -0.063  155 0000    -0.057  156 0000    -0.054
157 0000    -0.080  158 0000    -0.116  159 0000    -0.097  160 0000    -0.089
161 0000    -0.086  162 0000    -0.083  163 0000    -0.078  164 0000    -0.071
165 0000    -0.066  166 0000    -0.064  167 0000    -0.061  168 0000    -0.056
169 0000    -0.051  170 0000    -0.049  171 0000    -0.052  172 0000    -0.053
173 0000    -0.051  174 0000    -0.051  175 0000    -0.045  176 0000    -0.046
177 0000    -0.050  178 0000    -0.048  179 0000    -0.045  180 0000    -0.041
181 0000    -0.039  182 0000    -0.033  183 0000    -0.034  184 0000    -0.035
185 0000    -0.034  186 0000    -0.037  187 0000    -0.038  188 0000    -0.038
189 0000    -0.034  190 0000    -0.033  191 0000    -0.031  192 0000    -0.028
193 0000    -0.027  194 0000    -0.028  195 0000    -0.024  196 0000    -0.024
197 0000    -0.024  198 0000    -0.023  199 0000    -0.025  200 0000    -0.024
201 0000    -0.026  202 0000    -0.024  203 0000    -0.025  204 0000    -0.032
205 0000    -0.032  206 0000    -0.033  207 0000    -0.035  208 0000    -0.032
209 0000    -0.031  210 0000    -0.030  211 0000    -0.028  212 0000    -0.027
213 0000    -0.034  214 0000    -0.039  215 0000    -0.031  216 0000    -0.031
217 0000    -0.033  218 0000    -0.032  219 0000    -0.029  220 0000    -0.027
221 0000    -0.026  222 0000    -0.026  223 0000    -0.025  224 0000    -0.024
225 0000    -0.029  226 0000    -0.029  227 0000    -0.036  228 0000    -0.064
229 0000    -0.075  230 0000    -0.094  231 0000    -0.187  232 0000    -0.095
233 0000    -0.072  234 0000    -0.063  235 0000    -0.057  236 0000    -0.054
237 0000    -0.051  238 0000    -0.048  239 0000    -0.046  240 0000    -0.042
241 0000    -0.044  242 0000    -0.048  243 0000    -0.043  244 0000    -0.041
245 0000    -0.039  246 0000    -0.035  247 0000    -0.035  248 0000    -0.037
249 0000    -0.038  250 0000    -0.040  251 0000    -0.041  252 0000    -0.039
253 0000    -0.037  254 0000    -0.039  255 0000    -0.047  256 0000    -0.039
257 0000    -0.036  258 0000    -0.035  259 0000    -0.035  260 0000    -0.034
261 0000    -0.033  262 0000    -0.031  263 0000    -0.033  264 0000    -0.033
265 0000    -0.031  266 0000    -0.032  267 0000    -0.033  268 0000    -0.031
269 0000    -0.045  270 0000    -0.099  271 0000    -0.071  272 0000    -0.058
273 0000    -0.052  274 0000    -0.048  275 0000    -0.046  276 0000    -0.044
277 0000    -0.043  278 0000    -0.043  279 0000    -0.044  280 0000    -0.041
281 0000    -0.039  282 0000    -0.039  283 0000    -0.039  284 0000    -0.041
285 0000    -0.039  286 0000    -0.039  287 0000    -0.039  288 0000    -0.037
289 0000    -0.036  290 0000    -0.036  291 0000    -0.036  292 0000    -0.036
293 0000    -0.038  294 0000    -0.037  295 0000    -0.036  296 0000    -0.036
297 0000    -0.036  298 0000    -0.036  299 0000    -0.040  300 0000    -0.038
301 0000    -0.037  302 0000    -0.036  303 0000    -0.036  304 0000    -0.036
305 0000    -0.043  306 0000    -0.038  307 0000    -0.034  308 0000    -0.056
309 0000    -0.046  310 0000    -0.049  311 0000    -0.052  312 0000    -0.045
313 0000    -0.043  314 0000    -0.041  315 0000    -0.040  316 0000    -0.040
317 0000    -0.042  318 0000    -0.046  319 0000    -0.043  320 0000    -0.041
321 0000    -0.040  322 0000    -0.040  323 0000    -0.041  324 0000    -0.040
325 0000    -0.039  326 0000    -0.039  327 0000    -0.040  328 0000    -0.042
329 0000    -0.040  330 0000    -0.040  331 0000    -0.044  332 0000    -0.043
333 0000    -0.041  334 0000    -0.040  335 0000    -0.039  336 0000    -0.040
337 0000    -0.041  338 0000    -0.040  339 0000    -0.039  340 0000    -0.039
341 0000    -0.039  342 0000    -0.038  343 0000    -0.038  344 0000    -0.037
345 0000    -0.041  346 0000    -0.088  347 0000    -0.080  348 0000    -0.068
349 0000    -0.064  350 0000    -0.062  351 0000    -0.060  352 0000    -0.063
353 0000    -0.069  354 0000    -0.064  355 0000    -0.071  356 0000    -0.075
357 0000    -0.071  358 0000    -0.072  359 0000    -0.070  360 0000    -0.066
361 0000    -0.066  362 0000    -0.063  363 0000    -0.064  364 0000    -0.065
365 0000    -0.066  366 0000    -0.066
      4       366    (Wright Cr. + Cod Cr.)
  1 0000    -0.237    2 0000    -0.237    3 0000    -0.237    4 0000    -0.342
```



```
  5 0000    -0.378    6 0000    -0.330    7 0000    -0.310    8 0000    -0.298
  9 0000    -0.302   10 0000    -0.310   11 0000    -0.294   12 0000    -0.277
 13 0000    -0.281   14 0000    -0.290   15 0000    -0.277   16 0000    -0.265
 17 0000    -0.261   18 0000    -0.261   19 0000    -0.245   20 0000    -0.245
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 25 0000    -0.241   26 0000    -0.237   27 0000    -0.225   28 0000    -0.229
 29 0000    -0.229   30 0000    -0.229   31 0000    -0.233   32 0000    -0.229
 33 0000    -0.217   34 0000    -0.217   35 0000    -0.217   36 0000    -0.217
 37 0000    -0.213   38 0000    -0.213   39 0000    -0.213   40 0000    -0.205
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249 0000    -0.157  250 0000    -0.169  251 0000    -0.173  252 0000    -0.161
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365 0000	-0.277	366 0000	-0.277					333 0000	-0.173	334 0000	-0.169	335 0000	-0.165	336 0000	-0.169
3	366	(Gales Cr.)						337 0000	-0.173	338 0000	-0.169	339 0000	-0.161	340 0000	-0.165
1 0000	-0.237	2 0000	-0.237	3 0000	-0.237	4 0000	-0.342	341 0000	-0.161	342 0000	-0.157	343 0000	-0.157	344 0000	-0.153
5 0000	-0.378	6 0000	-0.330	7 0000	-0.310	8 0000	-0.298	345 0000	-0.173	346 0000	-0.366	347 0000	-0.334	348 0000	-0.285
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21 0000	-0.249	22 0000	-0.245	23 0000	-0.261	24 0000	-0.273	361 0000	-0.277	362 0000	-0.261	363 0000	-0.265	364 0000	-0.269
25 0000	-0.241	26 0000	-0.237	27 0000	-0.225	28 0000	-0.229	365 0000	-0.277	366 0000	-0.277				
29 0000	-0.229	30 0000	-0.229	31 0000	-0.233	32 0000	-0.229	2	366	(Dennis Cr.)					
33 0000	-0.217	34 0000	-0.217	35 0000	-0.217	36 0000	-0.217	1 0000	-0.030	2 0000	-0.030	3 0000	-0.030	4 0000	-0.043
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305 0000	-0.181	306 0000	-0.157	307 0000	-0.141	308 0000	-0.233	273 0000	-0.028	274 0000	-0.025	275 0000	-0.024	276 0000	-0.023
309 0000	-0.193	310 0000	-0.205	311 0000	-0.217	312 0000	-0.189	277 0000	-0.023	278 0000	-0.023	279 0000	-0.023	280 0000	-0.022

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  281 0000    -0.021  282 0000    -0.020  283 0000    -0.020  284 0000    -0.022
  285 0000    -0.021  286 0000    -0.021  287 0000    -0.020  288 0000    -0.019
  289 0000    -0.019  290 0000    -0.019  291 0000    -0.019  292 0000    -0.019
  293 0000    -0.020  294 0000    -0.019  295 0000    -0.019  296 0000    -0.019
  297 0000    -0.019  298 0000    -0.019  299 0000    -0.021  300 0000    -0.020
  301 0000    -0.019  302 0000    -0.019  303 0000    -0.019  304 0000    -0.019
  305 0000    -0.023  306 0000    -0.020  307 0000    -0.018  308 0000    -0.030
  309 0000    -0.024  310 0000    -0.026  311 0000    -0.028  312 0000    -0.024
  313 0000    -0.023  314 0000    -0.022  315 0000    -0.021  316 0000    -0.021
  317 0000    -0.022  318 0000    -0.024  319 0000    -0.023  320 0000    -0.022
  321 0000    -0.021  322 0000    -0.021  323 0000    -0.022  324 0000    -0.021
  325 0000    -0.021  326 0000    -0.021  327 0000    -0.021  328 0000    -0.022
  329 0000    -0.021  330 0000    -0.021  331 0000    -0.023  332 0000    -0.023
  333 0000    -0.022  334 0000    -0.021  335 0000    -0.021  336 0000    -0.021
  337 0000    -0.022  338 0000    -0.021  339 0000    -0.020  340 0000    -0.021
  341 0000    -0.020  342 0000    -0.020  343 0000    -0.020  344 0000    -0.019
  345 0000    -0.022  346 0000    -0.046  347 0000    -0.042  348 0000    -0.036
  349 0000    -0.034  350 0000    -0.033  351 0000    -0.032  352 0000    -0.033
  353 0000    -0.037  354 0000    -0.034  355 0000    -0.038  356 0000    -0.040
  357 0000    -0.038  358 0000    -0.038  359 0000    -0.037  360 0000    -0.035
  361 0000    -0.035  362 0000    -0.033  363 0000    -0.034  364 0000    -0.034
  365 0000    -0.035  366 0000    -0.035
***** Data Group G: SEAWARD BOUNDARY DATA (ft MSL 1992) *********
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    3    1  784   15       0.0       0.0       0.0    0.3048    -0.900
    1 0000     0.000  121 1037     0.000  121 1630     0.812  121 2229     1.581
  122 0359     2.480  122 1100    -0.380  122 1545     1.800  122 2145    -0.810
  123 0515     2.370  123 1129     0.230  123 1644     2.110  123 2300    -0.290
  124 0515     2.190  124 1214    -1.280  124 1715     1.520  124 2300    -1.320
  125 0545     2.010  125 1245    -1.190  125 1800     1.500  126 0000    -1.290
  126 0645     2.050  126 1259    -0.680  126 1845     1.850  127 0045    -0.870
  127 0715     2.170  127 1400    -0.690  127 1944     1.760  128 0145    -0.630
  128 0815     1.990  128 1500    -0.720  128 2030     1.300  129 0244    -0.690
  129 0945     2.160  129 1545     0.290  129 2230     2.530  130 0414     0.350
  130 1045     2.610  130 1744     0.180  130 2315     2.110  131 0530    -0.520
  131 1059     1.860  131 1800    -1.360  132 0000     1.710  132 0615    -1.200
  132 1144     1.580  132 1829    -1.340  133 0114     1.880  133 0700    -0.310
  133 1345     2.140  133 1945    -0.170  134 0230     2.440  134 0900    -0.020
  134 1430     2.140  134 2044    -0.470  135 0329     2.430  135 1000    -0.270
  135 1515     1.950  135 2129    -0.980  136 0400     2.140  136 1030    -0.850
  136 1600     1.800  136 2214    -1.190  137 0445     2.040  137 1115    -1.000
  137 1645     1.810  137 2259    -1.100  138 0530     2.000  138 1144    -0.960
  138 1744     1.910  138 2344    -0.820  139 0629     2.180  139 1300    -0.500
  139 1815     1.790  140 0029    -1.090  140 0615     1.780  140 1300    -1.770
  140 1845     1.160  141 0045    -1.420  141 0730     1.850  141 1345    -0.780
  141 1945     1.740  142 0145    -0.810  142 0759     1.890  142 1444    -0.880
  142 2015     1.480  143 0230    -1.220  143 0830     1.570  143 1500    -1.310
  143 2115     1.540  144 0315    -0.860  144 0929     1.740  144 1600    -0.890
  144 2214     1.720  145 0414    -0.700  145 1014     1.740  145 1614    -0.630
  145 2214     1.630  146 0459    -0.800  146 1144     1.650  146 1715    -0.100
  147 0015     2.140  147 0615     0.280  147 1229     2.190  147 1845     0.060
  148 0114     2.070  148 0700     0.140  148 1314     1.990  148 1900    -0.140
  149 0159     2.310  149 0830    -0.200  149 1330     1.580  149 1945    -0.830
  150 0230     2.040  150 0900    -0.690  150 1444     1.760  150 2044    -0.700
  151 0329     2.030  151 0945    -0.590  151 1545     2.060  151 2129     0.040
  152 0445     2.550  152 1130     0.820  152 1614     2.240  152 2245    -0.320
  153 0515     2.330  153 1200    -0.690  153 1659     1.770  153 2315    -1.060
  154 0544     2.100  154 1215    -0.900  154 1815     2.020  155 0000    -0.620
  155 0645     2.390  155 1330    -0.420  155 1900     2.060  156 0101    -0.550
  156 0732     2.230  156 1403    -0.520  156 1948     2.110  157 0204    -0.770
  157 0905     2.310  157 1450     0.100  157 2106     2.380  158 0306     0.050
  158 0937     2.500  158 1553     0.150  158 2208     2.450  159 0354     0.240
  159 1010     2.430  159 1640    -0.020  159 2241     2.260  160 0457    -0.050
  160 1042     2.120  160 1713    -0.570  160 2329     2.130  161 0600    -0.560
  161 1130     1.780  161 1801    -1.140  162 0031     2.010  162 0717    -0.990
  162 1248     1.660  162 1833    -1.000  163 0049     2.140  163 0650    -0.390
  163 1250     1.960  163 1836    -0.580  164 0137     2.310  164 0807    -0.230
  164 1353     2.030  164 1954    -0.350  165 0224     2.250  165 0855    -0.400
  165 1426     1.980  165 2041    -0.580  166 0312     2.210  166 0943    -0.490
  166 1513     1.930  166 2129    -0.640  167 0415     2.240  167 1030    -0.410
  167 1601     1.950  167 2217    -0.810  168 0417     2.050  168 1048    -0.740
  168 1704     2.060  168 2234    -0.030  169 0535     2.390  169 1206    -0.030
  169 1736     2.010  169 2337    -0.430  170 0623     2.110  170 1238    -0.170
  170 1824     1.970  171 0010    -0.130  171 0710     2.470  171 1311     0.720
  171 1326     0.740  171 1341     0.700  171 1927     2.290  172 0142     0.270
  172 0713     2.140  172 1359    -0.430  172 1944     1.900  173 0215    -0.790
  173 0816     1.720  173 1401    -0.570  173 2017     1.910  174 0248    -0.430
  174 0803     1.440  174 1404    -0.870  174 2049     1.750  175 0305    -0.550
  175 0921     1.810  175 1537    -0.390  175 2307     2.180  176 0453     0.850
  176 1054     2.150  176 1709     0.100  176 2325     2.110  177 0556    -0.200
  177 1126     1.740  177 1712    -0.440  178 0028     2.180  178 0643    -0.090
  178 1214     1.870  178 1800    -0.390  179 0100     2.250  179 0746    -0.100
  179 1317     1.950  179 1917    -0.510  180 0203     2.200  180 0849    -0.650
  180 1434     1.800  180 2020    -0.860  181 0321     2.210  181 0921    -0.400
  181 1522     2.060  181 2123    -0.550  182 0423     2.360  182 1039     0.000
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  182 1625     2.190  182 2225    -0.240  183 0511     2.470  183 1142    -0.130
  183 1712     2.120  183 2328    -0.750  184 0544     2.170  184 1214    -1.130
  184 1830     2.050  185 0016    -0.500  185 0716     2.530  185 1317     0.260
  185 1933     2.450  186 0118     0.660  186 0749     2.650  186 1435    -0.020
  186 2005     2.190  187 0221    -0.480  187 0822     2.130  187 1452    -0.600
  187 2123     2.340  188 0324     0.090  188 0924     2.260  188 1610    -0.380
  188 2226     2.240  189 0441    -0.300  189 1012     1.870  189 1643    -0.770
  189 2313     2.020  190 0544    -0.700  190 1130     1.780  190 1744    -0.670
  191 0130     2.400  191 0745     0.630  191 1229     1.970  191 1914    -0.730
  192 0145     2.050  192 0759    -0.750  192 1330     1.640  192 1930    -0.820
  193 0215     2.100  193 0900    -0.600  193 1415     1.640  193 2044    -1.050
  194 0300     1.980  194 0929    -0.830  194 1515     1.840  194 2129    -0.740
  195 0430     2.290  195 1045     0.310  195 1600     1.920  195 2245    -0.960
  196 0459     1.980  196 1059    -0.710  196 1659     1.880  196 2245    -0.530
  197 0600     2.360  197 1200     0.360  197 1800     2.250  198 0000    -0.060
  198 0615     2.220  198 1229    -0.510  198 1815     2.010  199 0015    -0.450
  199 0714     2.390  199 1314     0.610  199 1914     2.450  200 0114     0.630
  200 0745     2.450  200 1359     0.070  200 1930     1.980  201 0145    -0.460
  201 0745     2.050  201 1359    -0.300  201 2044     2.190  202 0244     0.010
  202 0815     1.990  202 1430    -0.510  202 2115     2.140  203 0300     0.030
  203 0900     2.070  203 1515    -0.290  203 2145     2.120  204 0414    -0.430
  204 0929     1.500  204 1529    -1.150  204 2230     1.800  205 0414    -0.350
  205 1059     2.030  205 1614     0.180  205 2344     2.240  206 0629    -0.280
  206 1115     1.390  206 1715    -0.780  207 0045     2.190  207 0700     0.100
  207 1229     1.970  207 1845    -0.350  208 0130     2.230  208 0745    -0.190
  208 1345     2.080  208 1930     0.030  209 0244     2.460  209 0929    -0.010
  209 1430     1.880  209 2100    -1.070  210 0315     2.190  210 1014    -1.060
  210 1529     1.730  210 2129    -1.070  211 0430     2.230  211 1045    -0.700
  211 1630     2.130  211 2245    -0.820  212 0530     2.380  212 1200    -0.540
  212 1715     2.110  212 2344    -0.970  213 0629     2.360  213 1215     0.150
  213 1829     2.640  214 0114    -0.080  214 0629     2.070  214 1330    -1.680
  214 1914     1.720  215 0130    -1.440  215 0714     1.870  215 1345    -1.240
  215 1959     2.090  216 0230    -0.830  216 0830     1.960  216 1444    -0.720
  216 2115     2.210  217 0329    -0.170  217 0929     2.120  217 1545    -0.540
  217 2214     2.150  218 0459    -0.730  218 1000     1.590  218 1614    -1.090
  218 2259     2.000  219 0530    -0.830  219 1045     1.500  219 1715    -1.170
  219 2344     1.830  220 0615    -0.920  220 1200     1.560  220 1815    -0.930
  221 0100     1.920  221 0714    -0.560  221 1314     1.810  221 1914    -0.580
  222 0244     2.200  222 0830     0.630  222 1415     2.120  222 2030    -0.240
  223 0244     2.050  223 0929    -0.730  223 1515     1.800  223 2115    -0.570
  224 0400     2.210  224 1014     0.010  224 1614     2.190  224 2230    -0.390
  225 0445     2.060  225 1045    -0.770  225 1614     1.720  225 2230    -1.200
  226 0459     1.940  226 1059    -0.740  226 1645     1.870  226 2315    -0.910
  227 0544     1.980  227 1144    -0.550  227 1800     2.080  228 0000    -0.350
  228 0544     2.030  228 1215     0.020  228 1829     2.310  229 0029     0.060
  229 0714     2.360  229 1245     0.580  229 1914     2.500  230 0130     0.460
  230 0714     2.260  230 1330    -0.040  230 1930     2.180  231 0145    -0.170
  231 0745     1.990  231 1359    -0.540  231 2015     2.120  232 0215    -0.190
  232 0815     2.050  232 1430    -0.410  232 2100     2.110  233 0329    -0.420
  233 0844     1.640  233 1500    -0.840  233 2200     2.050  234 0414    -0.330
  234 0945     1.770  234 1600    -0.670  234 2259     2.120  235 0515    -0.270
  235 1030     1.700  235 1659    -0.890  235 2344     1.950  236 0600    -0.680
  236 1144     1.670  236 1744    -0.880  237 0100     2.020  237 0714    -0.630
  237 1300     1.840  237 1914    -0.890  238 0215     2.170  238 0830    -0.220
  238 1415     2.080  238 2044    -0.780  239 0315     2.180  239 0929    -0.750
  239 1500     1.940  239 2129    -1.140  240 0400     2.180  240 1014    -0.750
  240 1630     2.270  240 2230    -0.460  241 0515     2.480  241 1059     0.360
  241 1829     2.860  242 0029     1.360  242 0544     2.440  242 1229    -0.390
  242 1800     2.300  243 0045    -0.860  243 0629     2.040  243 1229    -0.850
  243 1914     2.410  244 0130     0.050  244 0730     2.360  244 1359    -0.590
  244 1930     2.050  245 0215    -1.180  245 0730     1.670  245 1359    -1.350
  245 2015     1.960  246 0244    -0.870  246 0844     1.890  246 1500    -0.570
  246 2145     2.110  247 0329     0.160  247 1014     2.350  247 1659     0.140
  247 2245     2.100  248 0530    -0.500  248 1014     1.500  248 1645    -1.100
  248 2315     1.750  249 0544    -1.010  249 1130     1.530  249 1744    -0.900
  250 0029     1.870  250 0629    -0.140  250 1314     2.110  250 1914     0.060
  251 0159     2.290  251 0830     0.170  251 1330     1.870  251 1959    -0.600
  252 0230     2.010  252 0830    -0.410  252 1430     1.960  252 2044    -0.530
  253 0315     2.080  253 0929    -0.460  253 1529     1.980  253 2129    -0.570
  254 0400     2.110  254 0945     0.210  254 1614     2.260  254 2230    -0.100
  255 0414     2.070  255 1045    -0.730  255 1630     1.760  255 2259    -1.150
  256 0430     1.450  256 1044    -1.270  256 1700     1.830  256 2315    -0.790
  257 0529     1.950  257 1129    -0.580  257 1800     2.120  258 0014    -0.480
  258 0600     1.950  258 1214    -0.650  258 1845     2.100  259 0045    -0.480
  259 0630     1.900  259 1245    -0.790  259 1915     2.020  260 0130    -0.620
  260 0659     1.860  260 1315    -0.740  260 1944     2.060  261 0200    -0.540
  261 0800     1.910  261 1400    -0.560  261 2029     1.990  262 0300    -0.500
  262 0845     1.830  262 1445    -0.550  262 2130     2.150  263 0359     0.260
  263 0930     1.960  263 1630    -1.010  263 2159     1.570  264 0430    -1.250
  264 1030     1.520  264 1559    -0.540  264 2329     2.130  265 0529     0.000
  265 1145     2.190  265 1800    -0.110  266 0059     2.320  266 0659     0.170
  266 1315     2.290  266 1915     0.060  267 0144     2.420  267 0930    -1.170
  267 1400     0.880  267 1944    -1.610  268 0215     1.530  268 0914    -1.740
  268 1514     1.560  268 2100    -1.050  269 0359     2.160  269 0959    -0.150
  269 1630     2.310  269 2159     0.040  270 0444     3.010  270 1115     0.640
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 270 1715     2.650  270 2329     0.190  271 0529     2.590  271 1145     0.190
 271 1800     2.620  272 0030    -0.070  272 0600     2.250  272 1230    -0.860
 272 1845     2.210  273 0115    -0.760  273 0645     1.920  273 1259    -1.260
 273 1930     1.920  274 0215    -1.240  274 0730     1.420  274 1330    -1.170
 274 2000     1.830  275 0245    -0.970  275 0800     1.590  275 1415    -1.050
 275 2114     1.990  276 0330    -0.460  276 0914     1.890  276 1530    -0.500
 276 2244     2.140  277 0444    -0.020  277 1015     1.840  277 1700    -0.670
 277 2244     1.700  278 0529    -1.060  278 1100     1.270  278 1715    -1.270
 278 2300     1.280  279 0500    -1.020  279 1315     1.440  279 1330     1.420
 279 1344     1.430  279 1800     0.660  280 0215     2.600  280 0800     1.200
 280 1344     2.370  280 2000     0.600  281 0215     2.250  281 0815     0.170
 281 1415     2.020  281 2029    -0.370  282 0229     1.930  282 0845    -0.480
 282 1500     2.010  282 2100    -0.330  283 0330     2.080  283 0914    -0.110
 283 1615     2.390  283 2159     0.500  284 0415     2.370  284 1015     0.030
 284 1615     2.180  284 2230    -0.310  285 0444     2.170  285 1015    -0.040
 285 1700     2.540  285 1715     2.460  285 1729     2.550  285 2329     0.400
 286 0444     2.000  286 1115    -0.620  286 1745     2.130  286 2345    -0.320
 287 0545     2.140  287 1200    -0.370  287 1800     2.150  288 0030    -0.650
 288 0600     1.800  288 1214    -0.840  288 1845     2.190  289 0059    -0.150
 289 0645     1.960  289 1259    -0.520  289 1915     2.100  290 0200    -0.390
 290 0744     1.930  290 1330    -0.180  290 2029     2.270  291 0345    -0.260
 291 0829     1.090  291 1500    -1.570  291 2045     1.490  292 0314    -1.230
 292 0914     1.390  292 1514    -0.830  292 2145     2.030  293 0415    -0.300
 293 1015     1.990  293 1715    -0.760  293 2300     1.530  294 0529    -1.190
 294 1200     1.580  294 1715    -0.410  295 0130     2.430  295 0659     1.050
 295 1245     2.490  295 2000    -0.130  296 0059     1.690  296 0730    -1.370
 296 1330     1.510  296 2000    -1.200  297 0215     1.800  297 0829    -0.960
 297 1500     2.110  297 2114    -0.620  298 0330     2.120  298 0914    -0.110
 298 1615     2.490  298 2300    -0.170  299 0345     1.880  299 1100    -1.620
 299 1644     1.530  299 2300    -1.570  300 0444     1.580  300 1100    -1.250
 300 1745     2.210  301 0000    -0.480  301 0529     1.960  301 1214    -1.350
 301 1814     1.830  302 0030    -1.350  302 0614     1.620  302 1214    -1.120
 302 1859     2.040  303 0130    -0.770  303 0715     1.800  303 1315    -0.830
 303 1944     1.980  304 0215    -0.790  304 0800     1.730  304 1400    -0.820
 304 2029     1.940  305 0314    -0.740  305 0829     1.600  305 1429    -0.730
 305 2114     1.870  306 0345    -0.440  306 0959     1.810  306 1559    -0.460
 306 2230     1.860  307 0430    -0.410  307 1115     1.990  307 1700     0.290
 308 0014     2.340  308 0529     1.530  308 1129     2.550  308 1845     0.320
 309 0014     1.910  309 0600    -0.170  309 1315     2.100  309 1845     0.560
 310 0130     2.440  310 0800     0.430  310 1245     1.840  310 1930    -0.580
 311 0059     1.390  311 0815    -1.140  311 1400     1.290  311 2015    -0.920
 312 0229     1.630  312 0829    -0.690  312 1445     1.920  312 2130    -0.840
 313 0314     1.560  313 0900    -0.890  313 1530     1.810  313 2159    -0.830
 314 0345     1.490  314 0945    -0.930  314 1615     1.900  314 2244    -0.800
 315 0430     1.790  315 1030    -0.830  315 1715     2.070  315 2329    -0.610
 316 0529     1.890  316 1100    -0.440  316 1745     2.230  317 0030    -0.530
 317 0545     1.700  317 1145    -0.970  317 1845     2.060  317 2300     0.890
 318 0515     2.380  318 0529     2.370  318 0545     2.380  318 1330    -0.640
 318 1859     1.790  319 0115    -0.930  319 0645     1.480  319 1315    -1.390
 319 1930     1.770  320 0229    -1.290  320 0744     1.360  320 1400    -1.230
 320 2015     1.730  321 0330    -1.260  321 0845     1.040  321 1500    -1.360
***** Data Group H: WIND DATA ******************************
    0
***** Data Group I: PRECIPITATION OR EVAPORATION DATA ******
    0
***** Data Group J: JUNCTION GEOMETRY DATA *****************
    0
***** Data Group K: CHANNEL GEOMETRY DATA ******************
    0
***** Data Group L: MAP TO WASP *****************************
    0  41
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   40  39
   41  40
```


2. WNR039.INP - Water quality model input file under 1992 pollutants loading condition.

```
WNR_039.INP: Nanticoke River WASP5 Model (uses HNR014.HYD, corrects Clear Brook)
Jun 1-Oct 1, 1992 Calibration (has Del Agra, Mobile Gardens, SC Johnson NPDES)
 NSEG NSYS ICFL MFLG JMAS NSLN INTY ADFC ZDAY hhmm TFLG
   41   11    0    0   10    0    0  0.0 152. 0000    0
    1    5   15   16   22   38
    1
0.00138889      274.
    1
1.00000000      275.
    0    0    0    0    0    0    0    0    0    0    0    0    1
    1                        DATA GROUP B: EXCHANGE COEFF(as m2/sec) (# Fields)
    2     1.000     1.000
    2                                          /Group #1- Water Column
     972.0    1424.0    0    1
     954.0    1322.0    1    2
    2
       1.0         1       1.0       366
   38                                          /Group #2- Water Column
     936.0    1630.0    2    3
     918.0    1282.0    3    4
     900.0    1316.0    4    5
     833.0    1230.0    5    6
     768.0    1471.0    6    7
     705.0    1813.0    7    8
     644.0    1846.0    8    9
     585.0    1887.0    9   10
     528.0    1486.0   10   11
     420.0    1139.0   11   12
     238.0    1983.0   12   13
      96.0    2000.0   13   14
      25.0    1691.0   14   15
      25.0    1954.0   15   16
      20.0    2365.0   16   17
      20.0    2104.0   17   18
      15.0    1576.0   18   19
      15.0    1401.0   19   20
      15.0    1321.0   20   21
      12.0    1880.0   21   22
      10.0    1870.0   22   26
      10.0    1532.0   23   24
       8.0    1152.0   24   25
       6.4    1456.0   25   33
       4.0    1898.0   26   27
       4.0    1813.0   27   28
     400.0     998.0    5   29
     270.0     900.0   29   30
     176.0    1078.0   30   31
     210.0    1002.0   31   32
     170.1     951.0   32   33
     135.0     913.0   33   34
     145.2    1185.0   34   35
     157.5    1206.0   35   36
     231.0    1597.0   36   37
     110.0     922.0   37   38
      80.0    1134.0   38   39
      54.0     978.0   39   40
    2
       1.0         1       1.0       366
    0    0    0    0    0    0    0    0    0    0    0    0    1
    1    0     5.00        DATA GROUP C: VOLUMES
 1.00E+00       1.
```

```
      1       41        1   1334556       1.0       0.0       1.0       0.0
      2       41        1   1408104       1.0       0.0       1.0       0.0
      3       41        1   1362816       1.0       0.0       1.0       0.0
      4       41        1   1192482       1.0       0.0       1.0       0.0
      5       41        1   1114950       1.0       0.0       1.0       0.0
      6       41        1   1088927       1.0       0.0       1.0       0.0
      7       41        1   1217544       1.0       0.0       1.0       0.0
      8       41        1   1246417       1.0       0.0       1.0       0.0
      9       41        1   1158625       1.0       0.0       1.0       0.0
     10       41        1    953168       1.0       0.0       1.0       0.0
     11       41        1    642884       1.0       0.0       1.0       0.0
     12       41        1    530691       1.0       0.0       1.0       0.0
     13       41        1    371977       1.0       0.0       1.0       0.0
     14       41        1    146731       1.0       0.0       1.0       0.0
     15       41        1     45563       1.0       0.0       1.0       0.0
     16       41        1     50075       1.0       0.0       1.0       0.0
     17       41        1     44690       1.0       0.0       1.0       0.0
     18       41        1     30860       1.0       0.0       1.0       0.0
     19       41        1     22328       1.0       0.0       1.0       0.0
     20       41        1     20415       1.0       0.0       1.0       0.0
     21       41        1     21188       1.0       0.0       1.0       0.0
     22       41        1     20630       1.0       0.0       1.0       0.0
     23       41        1     17010       1.0       0.0       1.0       0.0
     24       41        1     13420       1.0       0.0       1.0       0.0
     25       41        1      9267       1.0       0.0       1.0       0.0
     26       41        1      8455       1.0       0.0       1.0       0.0
     27       41        1      7422       1.0       0.0       1.0       0.0
     28       41        1     43546       1.0       0.0       1.0       0.0
     29       41        1    334600       1.0       0.0       1.0       0.0
     30       41        1    228222       1.0       0.0       1.0       0.0
     31       41        1    207088       1.0       0.0       1.0       0.0
     32       41        1    195081       1.0       0.0       1.0       0.0
     33       41        1    147442       1.0       0.0       1.0       0.0
     34       41        1    157328       1.0       0.0       1.0       0.0
     35       41        1    183216       1.0       0.0       1.0       0.0
     36       41        1    258741       1.0       0.0       1.0       0.0
     37       41        1    218988       1.0       0.0       1.0       0.0
     38       41        1     96180       1.0       0.0       1.0       0.0
     39       41        1     70446       1.0       0.0       1.0       0.0
     40       41        1     47638       1.0       0.0       1.0       0.0
     41        0        3  99999999       1.0       0.0       1.0       0.0      1000
 4    5HNR014.HYD      Data Group D: Flows   m3/sec DYNHYD5 Link
 0     1.000 1.157E-05 Data Block D.2 Pore Water Flows
 1     1.000 1.157E-05 Data Block D.3 Particulate Organics     (as m/day)
40                      F#3 --NOQS(3,ni) --> number of segment pairs
 247140    1   41    265680    2   41    262080    3   41    233820    4   41
 222990    5   41    222230    6   41    253655    7   41    265195    8   41
 251875    9   41    211815   10   41    146110   11   41    126355   12   41
 109405   13   41     61138   14   41     45563   15   41     50075   16   41
  44690   17   41     30860   18   41     22328   19   41     20415   20   41
  21188   21   41     20630   22   41     17010   23   41     13420   24   41
  11584   25   41     10569   26   41      9278   27   41     54433   28   41
  83650   29   41     63395   30   41     64715   31   41     65027   32   41
  54608   33   41     62931   34   41     83280   35   41    123210   36   41
 104280   37   41     48090   38   41     35223   39   41     23819   40   41
 2                     F# 3 :Particulate Organics     # Time Breaks
  0.300     1.000     0.300   366.000
 1     1.000 1.157E-05 Data Block D.4  Chl-a              (as m/day)
40                      F#4 --NOQS(4,ni) --> number of segment pairs
 247140    1   41    265680    2   41    262080    3   41    233820    4   41
 222990    5   41    222230    6   41    253655    7   41    265195    8   41
 251875    9   41    211815   10   41    146110   11   41    126355   12   41
 109405   13   41     61138   14   41     45563   15   41     50075   16   41
  44690   17   41     30860   18   41     22328   19   41     20415   20   41
  21188   21   41     20630   22   41     17010   23   41     13420   24   41
  11584   25   41     10569   26   41      9278   27   41     54433   28   41
  83650   29   41     63395   30   41     64715   31   41     65027   32   41
  54608   33   41     62931   34   41     83280   35   41    123210   36   41
 104280   37   41     48090   38   41     35223   39   41     23819   40   41
 2                      F# 4 :Chl-a               # Time Breaks
  0.090     1.000     0.090   366.000
 1     1.000 1.157E-05 Data Block D.5 :Inorganic Particles (as m/day)
40                      F#5 --NOQS(5,ni) --> number of segment pairs
 247140    1   41    265680    2   41    262080    3   41    233820    4   41
 222990    5   41    222230    6   41    253655    7   41    265195    8   41
 251875    9   41    211815   10   41    146110   11   41    126355   12   41
 109405   13   41     61138   14   41     45563   15   41     50075   16   41
  44690   17   41     30860   18   41     22328   19   41     20415   20   41
  21188   21   41     20630   22   41     17010   23   41     13420   24   41
  11584   25   41     10569   26   41      9278   27   41     54433   28   41
  83650   29   41     63395   30   41     64715   31   41     65027   32   41
  54608   33   41     62931   34   41     83280   35   41    123210   36   41
 104280   37   41     48090   38   41     35223   39   41     23819   40   41
 2                      F# 5 :Inorganic Particles     # Time Breaks
  0.300     1.000     0.300   366.000
```



```
    0    0    0    0    0    0    0    0    0    0    0    1    1
         1 Data Group E: BC(t)   WASP5 Sys # 1  NH3_N       (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
4.000E-02     15.50 4.000E-02     45.50 5.001E-03     75.50 5.001E-03    106.00
5.001E-03    136.50 5.000E-03    167.00 5.000E-03    197.50 2.300E-02    228.50
3.700E-02    259.00 4.000E-02    289.50 4.000E-02    320.00 4.000E-02    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 2  NO_N        (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
3.300E+00     15.50 4.000E+00     45.50 2.900E+00     75.50 3.100E+00    106.00
2.300E+00    136.50 1.800E+00    167.00 6.800E-01    197.50 1.900E-01    228.50
1.200E+00    259.00 1.000E-00    289.50 2.300E+00    320.00 2.800E+00    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 3  O_PO4_P     (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
2.000E-02     15.50 3.000E-02     45.50 4.000E-02     75.50 1.100E-01    106.00
1.000E-02    136.50 5.000E-03    167.00 5.000E-03    197.50 3.000E-02    228.50
3.000E-02    259.00 5.000E-03    289.50 5.000E-03    320.00 1.000E-02    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 4  CHL_A       (ug/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
1.289E+01     15.50 3.044E+01     45.50 3.401E+01     75.50 3.277E+01    106.00
3.833E+01    136.50 2.176E+01    167.00 6.295E+01    197.50 3.450E+01    228.50
3.698E+01    259.00 5.438E+01    289.50 1.071E+01    320.00 2.510E+00    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 5  CBOD        (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
2.400E+00     15.50 2.400E+00     45.50 4.200E+00     75.50 2.400E+00    106.00
4.000E+00    136.50 2.530E+00    167.00 2.400E+00    197.50 2.400E+00    228.50
3.400E+00    259.00 2.400E+00    289.50 2.400E+00    320.00 2.400E+00    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 6  OXYGEN      (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
1.035E+01     15.50 1.140E+01     45.50 1.110E+01     75.50 1.028E+01    106.00
9.800E+00    136.50 7.300E+00    167.00 8.070E+00    197.50 6.720E+00    228.50
8.150E+00    259.00 9.750E+00    289.50 8.070E+00    320.00 1.028E+01    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 7  TON         (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
0.885E+00     15.50 0.885E+00     45.50 0.885E+00     75.50 0.885E+00    106.00
0.885E+00    136.50 0.885E+00    167.00 0.885E+00    197.50 0.885E+00    228.50
0.885E+00    259.00 0.885E+00    289.50 0.885E+00    320.00 0.885E+00    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 8  TOP         (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
1.100E-01     15.50 2.200E-01     45.50 3.300E-01     75.50 1.800E-01    106.00
3.000E-02    136.50 5.500E-02    167.00 1.500E-02    197.50 2.750E-02    228.50
4.000E-02    259.00 8.500E-02    289.50 6.500E-02    320.00 8.750E-02    350.50
         1 Data Group E: BC(t)   WASP5 Sys # 9  SALINITY    (mg/L)
 1000.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
7.330E-02     15.50 8.000E-02     45.50 8.780E-02     75.50 5.890E-02    106.00
1.294E-01    136.50 1.005E-01    167.00 3.540E-02    197.50 5.234E-01    228.50
1.113E-01    259.00 3.787E-01    289.50 2.667E-01    320.00 1.000E-01    350.50
         1 Data Group E: BC(t)   WASP5 Sys #10  TSS         (mg/L)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
6.325E+01     15.50 7.000E+01     45.50 3.000E+01     75.50 3.166E+01    106.00
3.466E+01    136.50 2.375E+01    167.00 2.375E+01    197.50 4.650E+01    228.50
2.566E+01    259.00 4.266E+01    289.50 3.075E+01    320.00 3.750E+01    350.50
         1 Data Group E: BC(t)   WASP5 Sys #11  TOT_COLI    (MPN/100ml)
     1.000     1.000 <-- scale, conversion factors
    1   12 <-- segment, # time breaks   [SEG01.BC]
2.000E+00     15.50 4.000E+00     45.50 6.000E+00     75.50 9.300E+01    106.00
2.800E+01    136.50 2.000E+01    167.00 2.001E+01    197.50 2.100E+01    228.50
9.000E+01    259.00 2.001E+01    289.50 1.060E+02    320.00 1.000E+02    350.50
         8 Data Group F: PS Loads  WASP5 Sys # 1  NH3_N      (kg/day)
     1.000     1.000 <-- scale, conversion factors
    10   12 <-- segment, # time breaks   [DUPONT10.PS]
-6.585E+01  31.50000-6.289E+01  60.50000-6.424E+01  91.50000-8.870E+01 121.50000
-6.800E+01 152.50000-7.768E+01 182.50000-9.219E+01 213.50000-1.003E+02 244.50000
-1.398E+02 274.50000-1.226E+02 305.50000-1.105E+02 335.50000-1.105E+02 366.50000
    10   12 <-- segment, # time breaks   [DUPONT11.PS]
 7.579E+01  31.50000 7.284E+01  60.50000 7.418E+01  91.50000 9.864E+01 121.50000
 7.794E+01 152.50000 8.762E+01 182.50000 1.021E+02 213.50000 1.102E+02 244.50000
 1.497E+02 274.50000 1.325E+02 305.50000 1.204E+02 335.50000 1.204E+02 366.50000
    10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
    11   12 <-- segment, # time breaks   [SEAFORD.PS]
 7.870E+01  31.50000 7.402E+01  60.50000 6.501E+01  91.50000 8.467E+01 121.50000
 5.237E+01 152.50000 5.575E+01 182.50000 5.638E+01 213.50000 1.342E+01 244.50000
 1.497E+01 274.50000 5.523E+01 305.50000 5.483E+01 335.50000 5.483E+01 366.50000
```

```
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 2.649E-02  31.50000 2.086E-02  60.50000 3.028E-02  91.50000 3.603E-02 121.50000
 4.551E-02 152.50000 5.878E-02 182.50000 4.930E-02 213.50000 6.447E-02 244.50000
 3.603E-02 274.50000 3.413E-02 305.50000 3.982E-02 335.50000 3.793E-02 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 3.060E+00  31.50000 2.948E+00  60.50000 3.321E+00  91.50000 2.967E+00 121.50000
 3.060E+00 152.50000 2.967E+00 182.50000 3.060E+00 213.50000 3.433E+00 244.50000
 2.874E+00 274.50000 2.631E+00 305.50000 2.911E+00 335.50000 2.911E+00 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 9.466E-02  31.50000 9.466E-02  60.50000 9.466E-02  91.50000 9.466E-02 121.50000
 9.466E-02 152.50000 9.466E-02 182.50000 9.466E-02 213.50000 9.466E-02 244.50000
 9.466E-02 274.50000 9.466E-02 305.50000 9.466E-02 335.50000 9.466E-02 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 3.827E+00  31.50000 3.204E+00  60.50000 3.147E+00  91.50000 3.232E+00 121.50000
 2.580E+00 152.50000 2.410E+00 182.50000 2.353E+00 213.50000 1.786E+00 244.50000
 2.098E+00 274.50000 3.430E+00 305.50000 7.654E+00 335.50000 7.654E+00 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 2  NO_N       (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
-3.533E+02  31.50000-3.375E+02  60.50000-3.447E+02  91.50000-4.759E+02 121.50000
-3.649E+02 152.50000-4.168E+02 182.50000-4.946E+02 213.50000-5.379E+02 244.50000
-7.499E+02 274.50000-6.576E+02 305.50000-5.927E+02 335.50000-5.927E+02 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 6.564E+02  31.50000 6.308E+02  60.50000 6.425E+02  91.50000 8.543E+02 121.50000
 6.751E+02 152.50000 7.589E+02 182.50000 8.846E+02 213.50000 9.544E+02 244.50000
 1.297E+03 274.50000 1.148E+03 305.50000 1.043E+03 335.50000 1.043E+03 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 1.467E+01  31.50000 1.795E+01  60.50000 2.797E+01  91.50000 1.329E+01 121.50000
 3.086E+01 152.50000 3.286E+01 182.50000 3.323E+01 213.50000 7.082E+01 244.50000
 7.052E+01 274.50000 3.218E+01 305.50000 2.360E+01 335.50000 2.360E+01 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 3.153E+00  31.50000 2.644E+00  60.50000 4.088E+00  91.50000 4.854E+00 121.50000
 6.132E+00 152.50000 7.920E+00 182.50000 6.643E+00 213.50000 8.687E+00 244.50000
 4.854E+00 274.50000 4.599E+00 305.50000 5.365E+00 335.50000 5.110E+00 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 1.873E+01  31.50000 1.805E+01  60.50000 2.033E+01  91.50000 1.816E+01 121.50000
 1.873E+01 152.50000 1.816E+01 182.50000 1.873E+01 213.50000 2.102E+01 244.50000
 1.759E+01 274.50000 1.611E+01 305.50000 1.782E+01 335.50000 1.782E+01 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 2.805E+00  31.50000 2.805E+00  60.50000 2.805E+00  91.50000 2.805E+00 121.50000
 2.805E+00 152.50000 2.805E+00 182.50000 2.805E+00 213.50000 2.805E+00 244.50000
 2.805E+00 274.50000 2.805E+00 305.50000 2.805E+00 335.50000 2.805E+00 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 7.051E-01  31.50000 5.902E-01  60.50000 5.798E-01  91.50000 5.955E-01 121.50000
 4.753E-01 152.50000 4.440E-01 182.50000 4.335E-01 213.50000 3.291E-01 244.50000
 3.865E-01 274.50000 6.320E-01 305.50000 1.410E+00 335.50000 1.410E+00 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 3  O_PO4_P    (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
-1.021E+01  31.50000-9.751E+00  60.50000-9.960E+00  91.50000-1.375E+01 121.50000
-1.054E+01 152.50000-1.204E+01 182.50000-1.429E+01 213.50000-1.554E+01 244.50000
-2.167E+01 274.50000-1.900E+01 305.50000-1.713E+01 335.50000-1.713E+01 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 1.175E+01  31.50000 1.129E+01  60.50000 1.150E+01  91.50000 1.529E+01 121.50000
 1.209E+01 152.50000 1.359E+01 182.50000 1.584E+01 213.50000 1.709E+01 244.50000
 2.321E+01 274.50000 2.054E+01 305.50000 1.867E+01 335.50000 1.867E+01 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 7.670E+00  31.50000 7.943E+00  60.50000 8.725E+00  91.50000 8.204E+00 121.50000
 8.733E+00 152.50000 9.298E+00 182.50000 9.404E+00 213.50000 1.026E+01 244.50000
 1.006E+01 274.50000 7.869E+00 305.50000 9.846E+00 335.50000 9.846E+00 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 2.649E-02  31.50000 2.086E-02  60.50000 3.028E-02  91.50000 3.603E-02 121.50000
 4.551E-02 152.50000 5.878E-02 182.50000 4.930E-02 213.50000 6.447E-02 244.50000
 3.603E-02 274.50000 3.413E-02 305.50000 3.982E-02 335.50000 3.793E-02 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 2.433E+00  31.50000 2.344E+00  60.50000 2.641E+00  91.50000 2.359E+00 121.50000
 2.433E+00 152.50000 2.359E+00 182.50000 2.433E+00 213.50000 2.730E+00 244.50000
 2.285E+00 274.50000 2.092E+00 305.50000 2.315E+00 335.50000 2.315E+00 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 1.896E-02  31.50000 1.896E-02  60.50000 1.896E-02  91.50000 1.896E-02 121.50000
 1.896E-02 152.50000 1.896E-02 182.50000 1.896E-02 213.50000 1.896E-02 244.50000
 1.896E-02 274.50000 1.896E-02 305.50000 1.896E-02 335.50000 1.896E-02 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 1.380E+00  31.50000 1.155E+00  60.50000 1.134E+00  91.50000 1.165E+00 121.50000
 9.300E-01 152.50000 8.687E-01 182.50000 8.482E-01 213.50000 6.438E-01 244.50000
 7.562E-01 274.50000 1.237E+00 305.50000 2.759E+00 335.50000 2.759E+00 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 4  CHL_A      (kg/day)
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    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 3.338E-03  31.50000 3.383E-03  60.50000 3.425E-03  91.50000 3.285E-03 121.50000
 3.455E-03 152.50000 3.679E-03 182.50000 3.721E-03 213.50000 3.952E-03 244.50000
 3.872E-03 274.50000 3.698E-03 305.50000 3.399E-03 335.50000 3.399E-03 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 6.214E-04  31.50000 5.986E-04  60.50000 6.744E-04  91.50000 6.024E-04 121.50000
 6.214E-04 152.50000 6.024E-04 182.50000 6.214E-04 213.50000 6.971E-04 244.50000
 5.835E-04 274.50000 5.342E-04 305.50000 5.911E-04 335.50000 5.911E-04 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 5.115E-04  31.50000 4.281E-04  60.50000 4.206E-04  91.50000 4.319E-04 121.50000
 3.448E-04 152.50000 3.220E-04 182.50000 3.145E-04 213.50000 2.387E-04 244.50000
 2.804E-04 274.50000 4.584E-04 305.50000 1.023E-03 335.50000 1.023E-03 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 5  CBOD       (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
-6.232E+02  31.50000-5.952E+02  60.50000-6.079E+02  91.50000-8.394E+02 121.50000
-6.435E+02 152.50000-1.041E+03 182.50000-1.127E+03 213.50000-1.225E+03 244.50000
-1.653E+03 274.50000-1.450E+03 305.50000-1.089E+03 335.50000-1.089E+03 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 7.173E+02  31.50000 6.893E+02  60.50000 7.020E+02  91.50000 9.335E+02 121.50000
 7.376E+02 152.50000 1.175E+03 182.50000 1.248E+03 213.50000 1.347E+03 244.50000
 1.771E+03 274.50000 1.567E+03 305.50000 1.187E+03 335.50000 1.187E+03 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 1.492E+00  31.50000 1.513E+00  60.50000 2.035E+00  91.50000 1.459E+00 121.50000
 2.035E+00 152.50000 2.374E+00 182.50000 1.261E+00 213.50000 1.712E+00 244.50000
 1.812E+00 274.50000 1.207E+00 305.50000 1.730E+00 335.50000 2.883E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 1.681E+02  31.50000 1.041E+02  60.50000 1.619E+02  91.50000 1.099E+02 121.50000
 9.453E+01 152.50000 1.811E+02 182.50000 5.953E+01 213.50000 5.350E+01 244.50000
 4.419E+01 274.50000 5.472E+01 305.50000 8.061E+01 335.50000 8.061E+01 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 3.561E+00  31.50000 2.798E+00  60.50000 4.070E+00  91.50000 4.833E+00 121.50000
 6.104E+00 152.50000 7.885E+00 182.50000 6.613E+00 213.50000 8.648E+00 244.50000
 4.833E+00 274.50000 4.578E+00 305.50000 5.341E+00 335.50000 5.087E+00 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 2.138E+01  31.50000 2.177E+01  60.50000 1.622E+01  91.50000 1.651E+01 121.50000
 2.642E+01 152.50000 2.140E+01 182.50000 2.068E+01 213.50000 2.945E+01 244.50000
 2.660E+01 274.50000 1.913E+01 305.50000 2.133E+01 335.50000 2.133E+01 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 3.179E+00  31.50000-7.229E-13  60.50000 2.545E+00  91.50000 2.545E+00 121.50000
 2.545E+00 152.50000 2.545E+00 182.50000 2.544E+00 213.50000 2.545E+00 244.50000
 2.545E+00 274.50000 2.544E+00 305.50000 2.410E-13 335.50000 0.000E+00 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 1.288E+01  31.50000 1.557E+01  60.50000 1.294E+01  91.50000 1.329E+01 121.50000
 1.254E+01 152.50000 7.207E+00 182.50000 1.231E+01 213.50000 4.006E+00 244.50000
 7.058E+00 274.50000 1.026E+01 305.50000 3.148E+01 335.50000 3.148E+01 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 6  OXYGEN     (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
-6.492E+02  31.50000-6.201E+02  60.50000-6.333E+02  91.50000-8.745E+02 121.50000
-6.704E+02 152.50000-7.658E+02 182.50000-9.089E+02 213.50000-9.884E+02 244.50000
-1.378E+03 274.50000-1.208E+03 305.50000-1.089E+03 335.50000-1.089E+03 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 7.473E+02  31.50000 7.181E+02  60.50000 7.314E+02  91.50000 9.725E+02 121.50000
 7.685E+02 152.50000 8.639E+02 182.50000 1.007E+03 213.50000 1.086E+03 244.50000
 1.476E+03 274.50000 1.306E+03 305.50000 1.187E+03 335.50000 1.187E+03 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 2.335E+01  31.50000 2.366E+01  60.50000 2.395E+01  91.50000 2.297E+01 121.50000
 2.417E+01 152.50000 2.573E+01 182.50000 2.602E+01 213.50000 2.764E+01 244.50000
 2.708E+01 274.50000 2.586E+01 305.50000 2.377E+01 335.50000 2.377E+01 366.50000
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   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 4.346E+00  31.50000 4.187E+00  60.50000 4.717E+00  91.50000 4.213E+00 121.50000
 4.346E+00 152.50000 4.213E+00 182.50000 4.346E+00 213.50000 4.876E+00 244.50000
 4.081E+00 274.50000 3.736E+00 305.50000 4.134E+00 335.50000 4.134E+00 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 3.577E+00  31.50000 2.994E+00  60.50000 2.941E+00  91.50000 3.021E+00 121.50000
 2.411E+00 152.50000 2.252E+00 182.50000 2.199E+00 213.50000 1.669E+00 244.50000
 1.961E+00 274.50000 3.206E+00 305.50000 7.155E+00 335.50000 7.155E+00 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 7  TON        (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
-2.227E+01  31.50000-2.127E+01  60.50000-2.172E+01  91.50000-2.999E+01 121.50000
-2.299E+01 152.50000-2.626E+01 182.50000-3.117E+01 213.50000-3.390E+01 244.50000
-4.726E+01 274.50000-4.144E+01 305.50000-3.735E+01 335.50000-3.735E+01 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 2.776E+01  31.50000 2.668E+01  60.50000 2.717E+01  91.50000 3.613E+01 121.50000
 2.855E+01 152.50000 3.209E+01 182.50000 3.741E+01 213.50000 4.036E+01 244.50000
 5.484E+01 274.50000 4.853E+01 305.50000 4.410E+01 335.50000 4.410E+01 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 6.703E+00  31.50000 6.794E+00  60.50000 6.877E+00  91.50000 6.596E+00 121.50000
 6.938E+00 152.50000 7.387E+00 182.50000 7.471E+00 213.50000 7.935E+00 244.50000
 7.775E+00 274.50000 7.425E+00 305.50000 6.824E+00 335.50000 6.824E+00 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 5.214E+00  31.50000 6.997E+00  60.50000 3.773E+00  91.50000 3.551E+00 121.50000
 4.159E+00 152.50000 2.046E+00 182.50000 2.173E+00 213.50000 3.482E+00 244.50000
 3.556E+00 274.50000 2.508E+00 305.50000 2.008E+00 335.50000 2.008E+00 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 3.789E-02  31.50000 3.789E-02  60.50000 3.789E-02  91.50000 3.789E-02 121.50000
 3.789E-02 152.50000 3.789E-02 182.50000 3.789E-02 213.50000 3.789E-02 244.50000
 3.789E-02 274.50000 3.789E-02 305.50000 3.789E-02 335.50000 3.789E-02 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 1.267E+00  31.50000 1.061E+00  60.50000 1.042E+00  91.50000 1.070E+00 121.50000
 8.542E-01 152.50000 7.979E-01 182.50000 7.791E-01 213.50000 5.914E-01 244.50000
 6.946E-01 274.50000 1.136E+00 305.50000 2.534E+00 335.50000 2.534E+00 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 8  TOP        (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
-4.646E+00  31.50000-4.437E+00  60.50000-4.532E+00  91.50000-6.258E+00 121.50000
-4.798E+00 152.50000-5.480E+00 182.50000-6.504E+00 213.50000-7.073E+00 244.50000
-9.861E+00 274.50000-8.647E+00 305.50000-7.794E+00 335.50000-7.794E+00 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 1.078E+00  31.50000 1.036E+00  60.50000 1.055E+00  91.50000 1.403E+00 121.50000
 1.109E+00 152.50000 1.246E+00 182.50000 1.453E+00 213.50000 1.567E+00 244.50000
 2.129E+00 274.50000 1.885E+00 305.50000 1.713E+00 335.50000 1.713E+00 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 3.335E-01  31.50000 1.014E+00  60.50000 8.554E-01  91.50000 4.922E-01 121.50000
 6.213E-01 152.50000 6.615E-01 182.50000 6.690E-01 213.50000 2.805E-14 244.50000
 1.934E-01 274.50000 8.127E-01 305.50000 8.488E-01 335.50000 8.488E-01 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 2.649E-02  31.50000 2.086E-02  60.50000 3.028E-02  91.50000 3.603E-02 121.50000
 4.551E-02 152.50000 5.878E-02 182.50000 4.930E-02 213.50000 6.447E-02 244.50000
 3.603E-02 274.50000 3.413E-02 305.50000 3.982E-02 335.50000 3.793E-02 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 1.862E-02  31.50000 1.794E-02  60.50000 2.021E-02  91.50000 1.805E-02 121.50000
 1.862E-02 152.50000 1.805E-02 182.50000 1.862E-02 213.50000 2.089E-02 244.50000
 1.749E-02 274.50000 1.601E-02 305.50000 1.771E-02 335.50000 1.771E-02 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 1.896E-02  31.50000 1.896E-02  60.50000 1.896E-02  91.50000 1.896E-02 121.50000
 1.896E-02 152.50000 1.896E-02 182.50000 1.896E-02 213.50000 1.896E-02 244.50000
 1.896E-02 274.50000 1.896E-02 305.50000 1.896E-02 335.50000 1.896E-02 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 7.665E-02  31.50000 6.416E-02  60.50000 6.302E-02  91.50000 6.472E-02 121.50000
 5.167E-02 152.50000 4.826E-02 182.50000 4.712E-02 213.50000 3.577E-02 244.50000
 4.201E-02 274.50000 6.870E-02 305.50000 1.533E-01 335.50000 1.533E-01 366.50000
        8 Data Group F: PS Loads  WASP5 Sys # 9  SALINITY   (kg/day)
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    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
        8 Data Group F: PS Loads  WASP5 Sys #10  TSS        (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
 0.000E+00  31.50000 0.000E+00  60.50000 0.000E+00  91.50000 0.000E+00 121.50000
 0.000E+00 152.50000 0.000E+00 182.50000 0.000E+00 213.50000 0.000E+00 244.50000
 0.000E+00 274.50000 0.000E+00 305.50000 0.000E+00 335.50000 0.000E+00 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 7.258E+02  31.50000 1.467E+03  60.50000 1.076E+03  91.50000 1.736E+03 121.50000
 1.646E+03 152.50000 1.604E+03 182.50000 1.582E+03 213.50000 2.607E+03 244.50000
 2.741E+03 274.50000 2.333E+03 305.50000 1.662E+03 335.50000 1.662E+03 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 2.180E-01  31.50000 1.287E-01  60.50000 4.845E-01  91.50000 4.568E-01 121.50000
 1.453E+00 152.50000 9.690E-01 182.50000 5.791E-01 213.50000 7.192E-01 244.50000
 3.815E-01 274.50000 7.721E-01 305.50000 1.223E+00 335.50000 1.030E+00 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 6.669E+00  31.50000 3.380E+01  60.50000 2.566E+01  91.50000 2.215E+01 121.50000
 2.313E+01 152.50000 1.194E+01 182.50000 3.159E+01 213.50000 1.776E+01 244.50000
 2.901E+01 274.50000 8.792E+00 305.50000 1.677E+01 335.50000 1.677E+01 366.50000
   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 5.299E-01  31.50000 4.163E-01  60.50000 3.028E-01  91.50000 3.596E-01 121.50000
 1.272E+00 152.50000 5.867E-01 182.50000 9.841E-01 213.50000 2.574E-01 244.50000
 3.596E-01 274.50000 6.813E-01 305.50000 3.974E-01 335.50000 7.570E-01 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 6.021E+00  31.50000 4.724E+00  60.50000 6.872E+00  91.50000 4.153E+00 121.50000
 5.276E+00 152.50000 3.551E+00 182.50000 3.166E+00 213.50000 3.900E+00 244.50000
 3.031E+00 274.50000 2.508E+00 305.50000 3.543E+00 335.50000 3.543E+00 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 1.892E-01  31.50000-4.303E-14  60.50000 0.000E+00  91.50000 4.164E-01 121.50000
 4.164E-01 152.50000 4.164E-01 182.50000 1.892E-01 213.50000 3.785E-01 244.50000
 3.785E-01 274.50000 3.785E-01 305.50000-3.012E-13 335.50000 0.000E+00 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 3.577E+00  31.50000 5.132E+00  60.50000 3.361E+00  91.50000 3.883E+00 121.50000
 8.611E+00 152.50000 4.504E+00 182.50000 7.854E+00 213.50000 3.815E+00 244.50000
 4.481E+00 274.50000 7.786E+00 305.50000 1.737E+01 335.50000 1.737E+01 366.50000
        8 Data Group F: PS Loads  WASP5 Sys #11  TOT_COLI   (kg/day)
    1.000     1.000 <-- scale, conversion factors
   10   12 <-- segment, # time breaks   [DUPONT10.PS]
-5.150E+04  31.50000-4.919E+04  60.50000-5.024E+04  91.50000-6.937E+04 121.50000
-5.319E+04 152.50000-6.075E+04 182.50000-7.211E+04 213.50000-7.841E+04 244.50000
-1.093E+05 274.50000-9.586E+04 305.50000-8.640E+04 335.50000-8.640E+04 366.50000
   10   12 <-- segment, # time breaks   [DUPONT11.PS]
 5.433E+04  31.50000 5.221E+04  60.50000 5.317E+04  91.50000 7.071E+04 121.50000
 5.587E+04 152.50000 6.281E+04 182.50000 7.321E+04 213.50000 7.899E+04 244.50000
 1.073E+05 274.50000 9.498E+04 305.50000 8.631E+04 335.50000 8.631E+04 366.50000
   10   12 <-- segment, # time breaks   [MOBILE.PS]
 6.056E+00  31.50000 6.434E+00  60.50000 6.056E+00  91.50000 6.434E+00 121.50000
 2.665E+02 152.50000 7.631E+01 182.50000 6.434E+00 213.50000 7.192E+00 244.50000
 8.516E+01 274.50000 1.268E+02 305.50000 2.574E+01 335.50000 3.217E+01 366.50000
   11   12 <-- segment, # time breaks   [SEAFORD.PS]
 2.001E+02  31.50000 7.605E+01  60.50000 3.764E+02  91.50000 3.347E+02 121.50000
 7.587E+02 152.50000 2.077E+02 182.50000 4.460E+01 213.50000 1.184E+02 244.50000
 1.160E+02 274.50000 1.201E+02 305.50000 4.414E+02 335.50000 4.414E+02 366.50000
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   12   12 <-- segment, # time breaks   [SCJOHNSN.PS]
 1.060E+01  31.50000 8.327E+00  60.50000 1.211E+01  91.50000 1.438E+01 121.50000
 1.817E+01 152.50000 2.347E+01 182.50000 1.968E+01 213.50000 2.574E+01 244.50000
 1.438E+01 274.50000 1.363E+01 305.50000 1.590E+01 335.50000 1.514E+01 366.50000
   22   12 <-- segment, # time breaks   [BRDGVILL.PS]
 3.104E+01  31.50000 2.165E+02  60.50000 5.053E+01  91.50000 5.416E+01 121.50000
 9.311E+01 152.50000 1.186E+03 182.50000 6.207E+01 213.50000 3.482E+01 244.50000
 6.412E+01 274.50000 2.668E+01 305.50000 5.314E+01 335.50000 5.314E+01 366.50000
   22   12 <-- segment, # time breaks   [DELAGRA.PS]
 4.542E+01  31.50000 4.542E+01  60.50000 4.542E+01  91.50000 4.542E+01 121.50000
 4.542E+01 152.50000 4.542E+01 182.50000 4.542E+01 213.50000 4.542E+01 244.50000
 4.542E+01 274.50000 4.542E+01 305.50000 4.542E+01 335.50000 4.542E+01 366.50000
   39   12 <-- segment, # time breaks   [LAUREL.PS]
 5.110E+01  31.50000 4.277E+01  60.50000 4.201E+01  91.50000 4.315E+01 121.50000
 3.444E+01 152.50000 3.217E+01 182.50000 3.142E+01 213.50000 2.385E+01 244.50000
 2.801E+01 274.50000 4.580E+01 305.50000 1.533E+02 335.50000 1.533E+02 366.50000
        1 NPSFIL-->NAN_92d.NPS
       12        41              Data Group G
VELFN    1        1.FNO3     2        1.TMPSG    3        1.TMPFN    4        1.
KESG     5        1.KEFN     6        1.FNH4     7      0.25FPO4     8      1.00
SOD1D    9     1.00SODTA   12        1.TOTLI   13        1.REARS   14        1.
        1  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     1.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        2  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     1.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        3  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        4  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        5  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        6  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        7  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        8  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
        9  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       10  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       11  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       12  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7    99.075FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       13  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7    99.075FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       14  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7    99.075FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       15  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     2.000
KESG     5    1.000KEFN     6     2.000FNH4     7    99.075FPO4     8    13.800
SOD1D    9    1.500SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       16  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     3.000FNH4     7    33.025FPO4     8     4.600
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
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       17  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     4.000FNH4     7    33.025FPO4     8     4.600
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       18  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       19  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       20  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       21  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       22  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       23  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       24  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       25  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       26  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       27  of    41  NANTICOKE RIVER
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       28  of    41  NANTICOKE RIVER / upstream extent
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     3.000
KESG     5    1.000KEFN     6     5.000FNH4     7    16.500FPO4     8     2.300
SOD1D    9    1.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       29  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     1.000REARS   14     0.000
       30  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       31  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       32  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     1.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       33  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       34  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       35  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       36  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       37  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1    1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5    1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9    2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
       38  of    41  NANTICOKE RIVER/Broad Creek
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VELFN    1     1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5     1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9     2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
        39  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1     1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5     1.000KEFN     6     2.000FNH4     7   132.100FPO4     8    18.400
SOD1D    9     2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
        40  of    41  NANTICOKE RIVER/Broad Creek
VELFN    1     1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     4.000
KESG     5     1.000KEFN     6     2.000FNH4     7    99.075FPO4     8    13.800
SOD1D    9     2.000SODTA   12     1.065TOTLI   13     0.700REARS   14     0.000
        41  of    41  NANTICOKE RIVER/Dummy Benthos
VELFN    1     1.000FNO3     2     0.000TMPSG    3     1.000TMPFN    4     1.000
KESG     5     0.000KEFN     6     0.000FNH4     7     0.000FPO4     8     0.000
SOD1D    9     0.000SODTA   12     1.000TOTLI   13     1.000REARS   14     0.000
WASP_H.DGH                   NoSys= 14     Data Group H
GLOBAL           1
 All Const      57
     WTYPE        1  2.000         K12C        11  0.100
      K12T       12  1.080         KNIT        13  1.500
      K20C       21  0.090         K20T        22  1.045
      KNO3       23  0.100          K1C        41  3.000
       K1T       42  1.068        LGHTS        43  1.000
     PHIMX       44  720.0          XKC        45  0.017
      CCHL       46   30.0          IS1        47  200.0
     KMNG1       48  0.020        KMPG1        49  0.001
      K1RC       50  0.100         K1RT        51  1.047
       K1D       52  0.020          K1G        53  0.000
    NUTLIM       54  0.000        KPZDC        55  0.000
     KPZDT       56  1.080        PCRB1        57  0.045
     NCRB1       58  0.315       KMPHYT        59  1.000
       KDC       71  0.200          KDT        72  1.047
      KDSC       73  0.035         KDST        74  1.100
      KBOD       75  0.500         OCRB        81  2.670
        K2       82 -1.250         K71C        91  0.050
      K71T       92  1.080        KONDC        93  0.020
     KONDT       94  1.080          FON        95  0.500
      K83C      100  0.220         K83T       101  1.080
     KOPDC      102  0.020        KOPDT       103  1.080
       FOP      104  0.500      ATM_NH3       111  0.398
   ATM_NO3      112  0.980      ATM_PO4       113  0.0337
    ATM_ON      114  0.337       ATM_OP       115  0.0276
   ATM_BOD      116  5.314       EXTSEC       117  1.70
     BACSW      118  1.00        FNH4TA       127  1.079
    FPO4TA      128  1.079       FNO3TA       129  1.040
      K1GT      131  1.080         fPAR       132  0.43
    SALcvt      133  0.001
NH3-N            0
NO3+NO2-N        0
O-PO4            0
Phyt#1           0
CBOD             0
Diss O2          0
Org-N            0
Org-P            0
Salinity         0
TSS#1            0
Bact#1           0
        23 FF(t) WASP Data Group I FF(t)      WIL_001.I04    09/06/94
TEM#1   14    1   FT#01-Temp #1            Lower Nanticoke River 1992 Temp degC
 6.200E+00     1.00 6.029E+00    15.50 6.820E+00    45.50 1.030E+01    75.50
 1.625E+01   106.00 1.758E+01   136.50 2.434E+01   167.00 2.647E+01   197.50
 2.704E+01   228.50 2.417E+01   259.00 1.720E+01   289.50 1.110E+01   320.00
 6.660E+00   350.50 6.200E+00   366.00
TEM#2   14    2   FT#02-Temp #2            Middle Nanticoke R. Temp degC
 4.000E+00     1.00 3.000E+00    15.50 4.000E+00    45.50 5.000E+00    75.50
 1.800E+01   106.00 2.050E+01   136.50 2.550E+01   167.00 2.900E+01   197.50
 2.550E+01   228.50 2.350E+01   259.00 1.550E+01   289.50 1.400E+01   320.00
 6.500E+00   350.50 4.000E+00   366.00
TEM#3   14    3   FT#03-Temp #3            Riverine Nanticoke R. Temp degC
 4.000E+00     1.00 3.000E+00    15.50 7.000E+00    45.50 3.000E+00    75.50
 1.600E+01   106.00 1.450E+01   136.50 2.150E+01   167.00 2.350E+01   197.50
 2.250E+01   228.50 2.050E+01   259.00 1.150E+01   289.50 1.700E+01   320.00
 8.000E+00   350.50 4.000E+00   366.00
TEM#4   14    4   FT#04-Temp #4            Broad Creek Temp degC
 7.000E+00     1.00 1.250E+01    15.50 1.250E+01    45.50 1.300E+01    75.50
 1.500E+01   106.00 1.800E+01   136.50 2.300E+01   167.00 2.450E+01   197.50
 2.300E+01   228.50 2.200E+01   259.00 1.700E+01   289.50 1.300E+01   320.00
 1.000E+01   350.50 7.000E+00   366.00
SOLAR   14    5   FT#05-Solar Radiation    WIL_I_01.SOL    4 10 FF time # 5 Solar_Tot
 0.577E+02     1.000 0.577E+02    16.000 0.885E+02    45.500 0.142E+03    75.000
 0.211E+03   105.500 0.275E+03   136.000 0.308E+03   166.500 0.295E+03   197.000
 0.242E+03   228.000 0.172E+03   258.500 0.109E+03   289.000 0.669E+02   319.500
 0.501E+02   350.000 0.501E+02   366.000
PHOTO   14    6   FT#06-Photoperiod        WIL_I_01.SOL    5 10 FF time # 6 PhotoPer
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 0.393E+00     1.000 0.393E+00    16.000 0.430E+00    45.500 0.485E+00    75.000
 0.546E+00   105.500 0.594E+00   136.000 0.617E+00   166.500 0.608E+00   197.000
 0.570E+00   228.000 0.513E+00   258.500 0.452E+00   289.000 0.405E+00   319.500
 0.383E+00   350.000 0.383E+00   366.000
WIND    14    7   FT#07-Wind Velocity                      FF time # 7 Wind vel
 0.300E+01     1.000 0.300E+01    16.000 0.300E+01    45.500 0.300E+01    75.000
 0.300E+01   105.500 0.300E+01   136.000 0.300E+01   166.500 0.300E+01   197.000
 0.300E+01   228.000 0.300E+01   258.500 0.300E+01   289.000 0.300E+01   319.500
 0.300E+01   350.000 0.300E+01   366.000
KE#01   14    8   FT#08-Ke #1                                  FF time # 8 Ke #1
 2.000E+00     1.000 2.000E+00    16.000 2.000E+00    45.500 2.000E+00    75.000
 2.000E+00   105.500 2.000E+00   136.000 2.000E+00   166.500 2.000E+00   197.000
 2.000E+00   228.000 2.000E+00   258.500 2.000E+00   289.000 2.000E+00   319.500
 2.000E+00   350.000 2.000E+00   366.000
KE#02   14    9   FT#09-Ke #2                                  FF time # 9 Ke #2
 1.500E+00     1.000 1.500E+00    16.000 1.500E+00    45.500 1.500E+00    75.000
 1.500E+00   105.500 1.500E+00   136.000 1.500E+00   166.500 1.500E+00   197.000
 1.500E+00   228.000 1.500E+00   258.500 1.500E+00   289.000 1.500E+00   319.500
 1.500E+00   350.000 1.500E+00   366.000
KE#03   14   10   FT#10-Ke #3                                  FF time #10 Ke #3
 1.000E+00     1.000 1.000E+00    16.000 1.000E+00    45.500 1.000E+00    75.000
 1.000E+00   105.500 1.000E+00   136.000 1.000E+00   166.500 1.000E+00   197.000
 1.000E+00   228.000 1.000E+00   258.500 1.000E+00   289.000 1.000E+00   319.500
 1.000E+00   350.000 1.000E+00   366.000
KE#04   14   11   FT#11-Ke #4                                  FF time #11 Ke #4
 0.750E+00     1.000 0.750E+00    16.000 0.750E+00    45.500 0.750E+00    75.000
 0.750E+00   105.500 0.750E+00   136.000 0.750E+00   166.500 0.750E+00   197.000
 0.750E+00   228.000 0.750E+00   258.500 0.750E+00   289.000 0.750E+00   319.500
 0.750E+00   350.000 0.750E+00   366.000
KE#05   14   12   FT#12-Ke #5                                  FF time #12 Ke #5
 0.200E+00     1.000 0.200E+00    16.000 0.200E+00    45.500 0.200E+00    75.000
 0.200E+00   105.500 0.200E+00   136.000 0.200E+00   166.500 0.200E+00   197.000
 0.200E+00   228.000 0.200E+00   258.500 0.200E+00   289.000 0.200E+00   319.500
 0.200E+00   350.000 0.200E+00   366.000
TFNH4   14   13   FT#13-NH4 flux          (Not used)       FF time #13 NH4 flux
 0.270E+00     1.000 0.270E+00    16.000 0.285E+00    45.500 0.349E+00    75.000
 0.527E+00   105.500 0.749E+00   136.000 0.110E+01   166.500 0.146E+01   197.000
 0.145E+01   228.000 0.107E+01   258.500 0.682E+00   289.000 0.459E+00   319.500
 0.333E+00   350.000 0.333E+00   366.000
TFPO4   14   14   FT#14-PO4 flux          (Not used)       FF time #14 PO4 flux
 0.270E+00     1.000 0.270E+00    16.000 0.285E+00    45.500 0.349E+00    75.000
 0.527E+00   105.500 0.749E+00   136.000 0.110E+01   166.500 0.146E+01   197.000
 0.145E+01   228.000 0.107E+01   258.500 0.682E+00   289.000 0.459E+00   319.500
 0.333E+00   350.000 0.333E+00   366.000
VEL#1   14   15   FT#15-VELN(1)                                FF time #15 VELN(1)
 0.000E+00     1.000 0.000E+00    16.000 0.000E+00    45.500 0.000E+00    75.000
 0.000E+00   105.500 0.000E+00   136.000 0.000E+00   166.500 0.000E+00   197.000
 0.000E+00   228.000 0.000E+00   258.500 0.000E+00   289.000 0.000E+00   319.500
 0.000E+00   350.000 0.000E+00   366.000
VEL#2   14   16   FT#16-VELN(2)                                FF time #16 VELN(2)
 0.000E+00     1.000 0.000E+00    16.000 0.000E+00    45.500 0.000E+00    75.000
 0.000E+00   105.500 0.000E+00   136.000 0.000E+00   166.500 0.000E+00   197.000
 0.000E+00   228.000 0.000E+00   258.500 0.000E+00   289.000 0.000E+00   319.500
 0.000E+00   350.000 0.000E+00   366.000
VEL#3   14   17   FT#17-VELN(3)                                FF time #17 VELN(3)
 0.000E+00     1.000 0.000E+00    16.000 0.000E+00    45.500 0.000E+00    75.000
 0.000E+00   105.500 0.000E+00   136.000 0.000E+00   166.500 0.000E+00   197.000
 0.000E+00   228.000 0.000E+00   258.500 0.000E+00   289.000 0.000E+00   319.500
 0.000E+00   350.000 0.000E+00   366.000
VEL#4   14   18   FT#18-VELN(4)                                FF time #18 VELN(4)
 0.000E+00     1.000 0.000E+00    16.000 0.000E+00    45.500 0.000E+00    75.000
 0.000E+00   105.500 0.000E+00   136.000 0.000E+00   166.500 0.000E+00   197.000
 0.000E+00   228.000 0.000E+00   258.500 0.000E+00   289.000 0.000E+00   319.500
 0.000E+00   350.000 0.000E+00   366.000
ZOOPL   14   19   FT#19-Zoopl Biomass                          FF time #19 Zoopl
 1.000E+00     1.000 1.000E+00    16.000 1.000E+00    45.500 1.000E+00    75.000
 1.000E+00   105.500 1.000E+00   136.000 1.000E+00   166.500 1.000E+00   197.000
 1.000E+00   228.000 1.000E+00   258.500 1.000E+00   289.000 1.000E+00   319.500
 1.000E+00   350.000 1.000E+00   366.000
TFNO3   14   20   FT#20-NO3 Flux          (Not used)       FF time #20 NO3 Flux
 0.509E+00     1.000 0.509E+00    16.000 0.524E+00    45.500 0.581E+00    75.000
 0.719E+00   105.500 0.862E+00   136.000 0.105E+01   166.500 0.122E+01   197.000
 0.121E+01   228.000 0.104E+01   258.500 0.821E+00   289.000 0.669E+00   319.500
 0.567E+00   350.000 0.567E+00   366.000
AIRT    14   21   FT#21-Air Temperature    WIL_I_01.TEM    9 11 FF time #21 AIRT
 0.100E+00     1.000 0.100E+00    16.000 0.890E+00    45.500 0.460E+01    75.000
 0.105E+02   105.500 0.170E+02   136.000 0.222E+02   166.500 0.249E+02   197.000
 0.241E+02   228.000 0.202E+02   258.500 0.143E+02   289.000 0.783E+01   319.500
 0.265E+01   350.000 0.265E+01   366.000
ICEC    14   22   FT#22-ICECVR      (1.00 means no ice cover) FF time #22 ICECVR
 1.000E+00     1.000 1.000E+00    16.000 1.000E+00    45.500 1.000E+00    75.000
 1.000E+00   105.500 1.000E+00   136.000 1.000E+00   166.500 1.000E+00   197.000
 1.000E+00   228.000 1.000E+00   258.500 1.000E+00   289.000 1.000E+00   319.500
 1.000E+00   350.000 1.000E+00   366.000
REAR    14   23   FT#23-REAR              WIL_I_01.TEM    7  7 FF time #23 REAR
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 1.000E+00     1.000 1.000E+00    16.000 1.000E+00    45.500 1.000E+00    75.000
 1.000E+00   105.500 1.000E+00   136.000 1.000E+00   166.500 1.000E+00   197.000
 1.000E+00   228.000 1.000E+00   258.500 1.000E+00   289.000 1.000E+00   319.500
 1.000E+00   350.000 1.000E+00   366.000
NH3-N     mg/L      Sys#01               5  0.0    99999. Data Group J
SG01      0.005      1.00 SG02     0.005      1.00 SG03      0.005      1.00
SG04      0.005      1.00 SG05     0.005      1.00 SG06      0.005      1.00
SG07      0.005      1.00 SG08     0.005      1.00 SG09      0.005      1.00
SG10      0.005      1.00 SG11     0.005      1.00 SG12      0.005      1.00
SG13      0.005      1.00 SG14     0.005      1.00 SG15      0.005      1.00
SG16      0.005      1.00 SG17     0.005      1.00 SG18      0.005      1.00
SG19      0.005      1.00 SG20     0.005      1.00 SG21      0.005      1.00
SG22      0.005      1.00 SG23     0.005      1.00 SG24      0.005      1.00
SG25      0.005      1.00 SG26     0.005      1.00 SG27      0.005      1.00
SG28      0.005      1.00 SG29     0.005      1.00 SG30      0.005      1.00
SG31      0.005      1.00 SG32     0.005      1.00 SG33      0.005      1.00
SG34      0.005      1.00 SG35     0.005      1.00 SG36      0.005      1.00
SG37      0.005      1.00 SG38     0.005      1.00 SG39      0.005      1.00
SG40      0.005      1.00 SG41     0.000      1.00
NO3+NO2-N mg/L      Sys#02               5  0.0    99999. Data Group J
SG01        1.2      1.00 SG02       1.2      1.00 SG03        1.4      1.00
SG04        1.6      1.00 SG05       1.8      1.00 SG06        1.8      1.00
SG07        1.8      1.00 SG08       2.0      1.00 SG09        2.0      1.00
SG10        2.2      1.00 SG11       2.2      1.00 SG12        2.4      1.00
SG13        2.4      1.00 SG14       2.6      1.00 SG15        2.6      1.00
SG16        2.6      1.00 SG17       2.8      1.00 SG18        2.8      1.00
SG19        2.8      1.00 SG20       2.8      1.00 SG21        2.8      1.00
SG22        3.0      1.00 SG23       3.0      1.00 SG24        3.0      1.00
SG25        3.2      1.00 SG26       3.2      1.00 SG27        3.2      1.00
SG28        3.2      1.00 SG29       2.0      1.00 SG30        2.0      1.00
SG31        2.0      1.00 SG32       2.0      1.00 SG33        2.0      1.00
SG34        2.2      1.00 SG35       2.2      1.00 SG36        2.2      1.00
SG37        1.4      1.00 SG38       1.4      1.00 SG39        1.4      1.00
SG40        1.4      1.00 SG41       0.0      1.00
O-PO4     mg/L      Sys#03               5  0.0    99999. Data Group J
SG01      0.010      0.75 SG02     0.010      0.75 SG03      0.010      0.75
SG04      0.010      0.75 SG05     0.010      0.75 SG06      0.010      0.75
SG07      0.010      0.75 SG08     0.010      0.75 SG09      0.010      0.75
SG10      0.010      0.75 SG11     0.010      0.75 SG12      0.010      0.75
SG13      0.015      0.75 SG14     0.015      0.75 SG15      0.015      0.75
SG16      0.015      0.75 SG17     0.015      0.75 SG18      0.015      0.75
SG19      0.015      0.75 SG20     0.015      0.75 SG21      0.015      0.75
SG22      0.015      0.75 SG23     0.015      0.75 SG24      0.015      0.75
SG25      0.015      0.75 SG26     0.015      0.75 SG27      0.015      0.75
SG28      0.015      0.75 SG29     0.015      0.75 SG30      0.015      0.75
SG31      0.015      0.75 SG32     0.015      0.75 SG33      0.015      0.75
SG34      0.015      0.75 SG35     0.015      0.75 SG36      0.015      0.75
SG37      0.015      0.75 SG38     0.015      0.75 SG39      0.015      0.75
SG40      0.015      0.75 SG41     0.000      0.75
Phyt#1    ug chl/L  Sys#04               4 2.69    99999. Data Group J
SG01        20.0      0.00 SG02       20.0      0.00 SG03        20.0      0.00
SG04        20.0      0.00 SG05       20.0      0.00 SG06        20.0      0.00
SG07        20.0      0.00 SG08       20.0      0.00 SG09        20.0      0.00
SG10        20.0      0.00 SG11       20.0      0.00 SG12        20.0      0.00
SG13        20.0      0.00 SG14       20.0      0.00 SG15        20.0      0.00
SG16        12.0      0.00 SG17       12.0      0.00 SG18        12.0      0.00
SG19         8.0      0.00 SG20        8.0      0.00 SG21         8.0      0.00
SG22         8.0      0.00 SG23        4.0      0.00 SG24         4.0      0.00
SG25         4.0      0.00 SG26        4.0      0.00 SG27         4.0      0.00
SG28         4.0      0.00 SG29       20.0      0.00 SG30        20.0      0.00
SG31        20.0      0.00 SG32       20.0      0.00 SG33        20.0      0.00
SG34        12.0      0.00 SG35       12.0      0.00 SG36        12.0      0.00
SG37         8.0      0.00 SG38        8.0      0.00 SG39         8.0      0.00
SG40         8.0      0.00 SG41        0.0      0.00
CBOD-U    mg/L      Sys#05  3*CBOD_5     5 2.69    99999. Data Group J
SG01         4.0      0.50 SG02        4.0      0.50 SG03         4.0      0.50
SG04         4.0      0.50 SG05        4.0      0.50 SG06         4.0      0.50
SG07         4.0      0.50 SG08        4.0      0.50 SG09         4.0      0.50
SG10         4.0      0.50 SG11        4.0      0.50 SG12         4.0      0.50
SG13         4.0      0.50 SG14        4.0      0.50 SG15         4.0      0.50
SG16         4.0      0.50 SG17        4.0      0.50 SG18         4.0      0.50
SG19         4.0      0.50 SG20        4.0      0.50 SG21         4.0      0.50
SG22         4.0      0.50 SG23        4.0      0.50 SG24         4.0      0.50
SG25         4.0      0.50 SG26        4.0      0.50 SG27         4.0      0.50
SG28         4.0      0.50 SG29        4.0      0.50 SG30         4.0      0.50
SG31         4.0      0.50 SG32        4.0      0.50 SG33         4.0      0.50
SG34         4.0      0.50 SG35        4.0      0.50 SG36         4.0      0.50
SG37         4.0      0.50 SG38        4.0      0.50 SG39         4.0      0.50
SG40         4.0      0.50 SG41        0.0      0.50
Diss O2   mg/L      Sys#06               5  0.0      999. Data Group J
SG01         7.0      1.00 SG02        7.0      1.00 SG03         7.0      1.00
SG04         7.0      1.00 SG05        7.0      1.00 SG06         7.0      1.00
SG07         7.0      1.00 SG08        7.0      1.00 SG09         7.0      1.00
SG10         7.0      1.00 SG11        7.0      1.00 SG12         7.0      1.00
SG13         7.0      1.00 SG14        7.0      1.00 SG15         7.0      1.00
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SG16         7.0      1.00 SG17        7.0      1.00 SG18         7.0      1.00
SG19         7.0      1.00 SG20        7.0      1.00 SG21         7.0      1.00
SG22         7.0      1.00 SG23        7.0      1.00 SG24         7.0      1.00
SG25         7.0      1.00 SG26        7.0      1.00 SG27         7.0      1.00
SG28         7.0      1.00 SG29        7.0      1.00 SG30         7.0      1.00
SG31         7.0      1.00 SG32        7.0      1.00 SG33         7.0      1.00
SG34         7.0      1.00 SG35        7.0      1.00 SG36         7.0      1.00
SG37         7.0      1.00 SG38        7.0      1.00 SG39         7.0      1.00
SG40         7.0      1.00 SG41        0.0      1.00
Org-N     mg/L      Sys#07               3 2.69    99999. Data Group J
SG01         0.6      0.50 SG02        0.6      0.50 SG03         0.6      0.50
SG04         0.6      0.50 SG05        0.6      0.50 SG06         0.6      0.50
SG07         0.6      0.50 SG08        0.6      0.50 SG09         0.6      0.50
SG10         0.6      0.50 SG11        0.6      0.50 SG12         0.6      0.50
SG13         0.6      0.50 SG14        0.6      0.50 SG15         0.6      0.50
SG16         0.6      0.50 SG17        0.6      0.50 SG18         0.6      0.50
SG19         0.6      0.50 SG20        0.6      0.50 SG21         0.6      0.50
SG22         0.6      0.50 SG23        0.6      0.50 SG24         0.6      0.50
SG25         0.6      0.50 SG26        0.6      0.50 SG27         0.6      0.50
SG28         0.6      0.50 SG29        0.6      0.50 SG30         0.6      0.50
SG31         0.6      0.50 SG32        0.6      0.50 SG33         0.6      0.50
SG34         0.6      0.50 SG35        0.6      0.50 SG36         0.6      0.50
SG37         0.6      0.50 SG38        0.6      0.50 SG39         0.6      0.50
SG40         0.6      0.50 SG41        0.0      0.50
Org-P     mg/L      Sys#08               3 2.69    99999. Data Group J
SG01       0.055      0.20 SG02      0.055      0.20 SG03       0.055      0.20
SG04       0.055      0.20 SG05      0.055      0.20 SG06       0.055      0.20
SG07       0.055      0.20 SG08      0.055      0.20 SG09       0.055      0.20
SG10       0.055      0.20 SG11      0.055      0.20 SG12       0.055      0.20
SG13       0.055      0.20 SG14      0.055      0.20 SG15       0.055      0.20
SG16       0.055      0.20 SG17      0.055      0.20 SG18       0.055      0.20
SG19       0.055      0.20 SG20      0.055      0.20 SG21       0.055      0.20
SG22       0.055      0.20 SG23      0.055      0.20 SG24       0.055      0.20
SG25       0.055      0.20 SG26      0.055      0.20 SG27       0.055      0.20
SG28       0.055      0.20 SG29      0.055      0.20 SG30       0.100      0.20
SG31       0.100      0.20 SG32      0.100      0.20 SG33       0.100      0.20
SG34       0.100      0.20 SG35      0.100      0.20 SG36       0.100      0.20
SG37       0.100      0.20 SG38      0.100      0.20 SG39       0.100      0.20
SG40       0.100      0.20 SG41      0.000      0.50
Salinity   mg/L      Sys#09               5  0.0    99999. Data Group J
SG01       100.0      1.00 SG02      100.0      1.00 SG03       40.0      1.00
SG04        40.0      1.00 SG05       40.0      1.00 SG06       40.0      1.00
SG07        40.0      1.00 SG08       40.0      1.00 SG09       40.0      1.00
SG10        40.0      1.00 SG11       40.0      1.00 SG12       40.0      1.00
SG13        40.0      1.00 SG14       40.0      1.00 SG15       40.0      1.00
SG16        40.0      1.00 SG17       40.0      1.00 SG18       40.0      1.00
SG19        40.0      1.00 SG20       40.0      1.00 SG21       40.0      1.00
SG22        40.0      1.00 SG23       40.0      1.00 SG24       40.0      1.00
SG25        40.0      1.00 SG26       40.0      1.00 SG27       40.0      1.00
SG28        40.0      1.00 SG29       40.0      1.00 SG30       40.0      1.00
SG31        40.0      1.00 SG32       40.0      1.00 SG33       40.0      1.00
SG34        40.0      1.00 SG35       40.0      1.00 SG36       40.0      1.00
SG37        40.0      1.00 SG38       40.0      1.00 SG39       40.0      1.00
SG40        40.0      1.00 SG41        0.0      1.00
TSS       mg/L      Sys#10               4 2.69    99999. Data Group J
SG01        25.0      0.00 SG02       25.0      0.00 SG03       25.0      0.00
SG04        25.0      0.00 SG05       25.0      0.00 SG06       25.0      0.00
SG07        25.0      0.00 SG08       25.0      0.00 SG09       25.0      0.00
SG10        25.0      0.00 SG11       25.0      0.00 SG12       25.0      0.00
SG13        25.0      0.00 SG14       25.0      0.00 SG15       25.0      0.00
SG16        25.0      0.00 SG17       25.0      0.00 SG18        5.0      0.00
SG19         5.0      0.00 SG20        5.0      0.00 SG21        5.0      0.00
SG22         5.0      0.00 SG23        5.0      0.00 SG24        5.0      0.00
SG25         5.0      0.00 SG26        5.0      0.00 SG27        5.0      0.00
SG28         5.0      0.00 SG29        5.0      0.00 SG30       10.0      0.00
SG31        10.0      0.00 SG32       10.0      0.00 SG33       10.0      0.00
SG34        10.0      0.00 SG35       10.0      0.00 SG36       10.0      0.00
SG37        10.0      0.00 SG38       10.0      0.00 SG39       10.0      0.00
SG40        10.0      0.00 SG41        0.0      0.00
TOT_COLI (MPN/100ml)                   4 2.69 0.999E+08 DATA GROUP J
SG01        25.0      0.00 SG02       25.0      0.00 SG03       25.0      0.00
SG04        25.0      0.00 SG05       25.0      0.00 SG06       37.0      0.00
SG07        37.0      0.00 SG08       37.0      0.00 SG09       39.0      0.00
SG10        45.0      0.00 SG11      107.0      0.00 SG12      107.0      0.00
SG13        32.0      0.00 SG14       32.0      0.00 SG15       32.0      0.00
SG16        32.0      0.00 SG17       32.0      0.00 SG18       32.0      0.00
SG19        32.0      0.00 SG20       32.0      0.00 SG21       32.0      0.00
SG22        32.0      0.00 SG23       32.0      0.00 SG24       32.0      0.00
SG25        32.0      0.00 SG26       32.0      0.00 SG27       32.0      0.00
SG28        32.0      0.00 SG29       54.0      0.00 SG30       54.0      0.00
SG31        54.0      0.00 SG32       54.0      0.00 SG33       54.0      0.00
SG34        54.0      0.00 SG35       54.0      0.00 SG36       54.0      0.00
SG37        54.0      0.00 SG38       54.0      0.00 SG39       54.0      0.00
SG40        54.0      0.00 SG41        0.0      0.00
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