pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0020818**
Facility Type	**Municipal**	APS ID	**755**
Major / Minor	**Minor**	Authorization ID	**1316406**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Glen Rock Borough Sewer Authority** **York County**	Facility Name	**Glen Rock STP**
Applicant Address	PO Box 205 Glen Rock, PA 17327-0205	Facility Address	11714 N Main Street Ext Glen Rock, PA 17327-9424
Applicant Contact	Dale Getz	Facility Contact	Dale Getz
Applicant Phone	(717) 235-2082	Facility Phone	(717) 235-2082
Client ID	87472	Site ID	447424
Ch 94 Load Status	Not Overloaded	Municipality	Glen Rock Borough
Connection Status	No Limitations	County	York
Date Application Received	May 5, 2020	EPA Waived?	No
Date Application Accepted	July 10, 2020	If No, Reason	Significant CB Discharge
Purpose of Application	NPDES permit renewal.		

Summary of Review

C.S. Davidson, Inc., on behalf of the Glen Rock Sewer Authority, has applied to the Pennsylvania Department of Environmental Protection (DEP) for issuance of the NPDES permit. This is a new NPDES permit for the existing facility located at 11714 North Main Extension, Glen Rock, PA. The permit was reissued on October 21, 2015 and became effective on November 1, 2015. The permit expired on October 31, 2020 but the terms and conditions of the permit have been extended since that time.

This facility receives 82% of its flow from Glen Rock Borough and 18% from Shrewsbury Township. There are no industrial contributors. The facility has average annual design flow 0.6 MGD and hydraulic design capacity of 0.74 MGD.

The WQM Permit No. 6798405 was issued on May 26, 1998.

Sludge use and disposal description and location(s): N/A due to the sludge is hauled to Krone farms.

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml. The E. Coli. monitoring and report requirements will add to the proposed permit.

Based on the review outline in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

Approve	Deny	Signatures	Date
X		*Hilaryle* Hilary H. Le / Environmental Engineering Specialist	July 30, 2021
X		*Maria D. Bebenek for Daniel W. Martin* Daniel W. Martin, P.E. / Environmental Engineer Manager	August 9, 2021

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.6
Latitude	39º 47' 56.88"	Longitude	-76º 44' 13.18"
Quad Name	Glen Rock	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	South Branch Codorus Creek (WWF)	Stream Code	08093
NHD Com ID	57474123	RMI	16.25
Drainage Area	16.3 mi.^{2}	Yield (cfs/mi^2)	0.15
Q_{7-10} Flow (cfs)	2.51	Q_{7-10} Basis	USGSStreamStats
Elevation (ft)	530.38	Slope (ft/ft)	
Watershed No.	7-H	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	NUTRIENTS, TOTAL SUSPENDED SOLIDS (TSS)		
Source(s) of Impairment	AGRICULTURE		
TMDL Status	Final, 8/09/2003	Name	South Branch Codorus Creek
Nearest Downstream Public Water Supply Intake	York Water Company		
PWS Waters	South Branch Codorus Creek	Flow at Intake (cfs)	
PWS RMI	0.75	Distance from Outfall (mi)	Approximate 16 mile

Changes Since Last Permit Issuance: none

Drainage Area

The discharges are to South Branch Codorus Creek at RMI 16.25 miles. A drainage area upstream of the discharge is estimated to be 16.3 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

According to StreamStats, the discharge point in the receiving stream has a Q_{7-10} of 2.51 cfs and a drainage area of 16.3 mi^2, which results in a Q_{7-10} low flow yield of 0.15 cfs/mi^2. This information is used to obtain a chronic or 30-day (Q_{30-10}), and an acute or 1-day (Q_{1-10}) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

Q_{7-10} = 2.51 cfs
Low Flow Yield = 2.51 cfs / 16.3 mi^2 = 0.15 cfs/mi^2
Q_{30-10} = 1.36 * 2.51 cfs = 3.41 cfs
Q_{1-10} = 0.64 * 2.51 cfs = 1.61 cfs

The resulting Q_{7-10} dilution ratio is: Q_{stream} / $Q_{discharge}$ = 2.51 cfs / [0.6 MGD * (1.55 cfs/MGD)] = 2.7:1.

South Branch Codorus Creek

25 Pa. Code § 93.9f classifies South Branch Codorus Creek as Warm Water and Migratory Fishes (WWF & MF) surface water. Based on the 2020 Integrated Report, South Branch Codorus Creek, assessment unit ID 8, is impaired due to agriculture-nutrients/total suspended solids. The TMDL document was prepared on July 9, 2003 to address use impairments caused by siltation and nutrients. The document was approved by EPA on August 9, 2003. This TMDL currently contains the wasteload allocations (WLAs) for the Glen Rock STP which will be discussed later in this factsheet.

Public Water Supply

The nearest downstream public water supply intake is the York Water Co. on South Branch Codorus Creek in York County, approximately 16 miles downstream of this discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Glen Rock STP				
WQM Permit No.	**Issuance Date**			
6798405	5/26/1998			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Ultraviolet	0.6
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.74	2233	Not Overloaded	Aerobic Digestion	Combination of methods

Changes Since Last Permit Issuance: none

The WWTP train is as follows:

Fine screen → Mixing chamber → Anaerobic zones (2) → Anoxic zones (4) → Aeration zones (4) → Re-Aeration zones (2) → Diversion box → Clarifiers (2) → UV Disinfection units (2) → Sludge digesters (2) → Discharge.

The system incorporates the chemical addition of ferric chloride (for Phosphorus removal).

Compliance History	
Summary of DMRs:	The DMRs reported from June 1, 2020 to May 31, 2021 are summarized in the Table below (Pages # 5, 6, & 7).
Summary of Inspections:	05/12/2021: Heather Dock, DEP Water Quality Specialist, conducted an administrative review of Glen Rock STP's Chesapeake Bay nutrient data. There were no violations noted during inspection. The recommendations were to complete all sections of the Chesapeake Bay supplemental form at the top with as much information as is available to determine compliance, to revise compliance year 2021 DMRs to include nitrite non-detect sample results within 30 days of receipt of the report and include non-detect- sample results in future in future reports. The effluent was clear. 08/26/2019: Austen Randecker, DEP WQS, conducted a compliance evaluation inspection. There were no violations noted during inspection. The recommendations were to set up effluent composite sampler to be flow proportional, maintain a daily operations log and repair/maintenance log, remove vegetation/debris from surface of aeration and anoxic tanks, and update DEP 24 hours Emergency response number. The field test results were within permit limits. 5/11/2017: Sheena Ripple, DEP WQS, conducted a compliance evaluation inspection. There were no violations noted during inspection. The field test results were within permit limits.
Other Comments:	There are currently no open violations associated to the permittee or the facility.

Other Comments:

The table below summarizes the influent/effluent testing results submitted along with the application.

Influent Testing Results

Parameter	Min/Max Value	Average Value
BOD_5 (mg/L)	297 mg/L	202 mg/L
BOD_5 (lbs/day)	3037 lbs/day	793 lbs/day
TSS (mg/L)	545 mg/L	297 mg/L
TSS (lbs/day)	1103 lbs/day	6126 lbs/day
TN (mg/L)	17.62 mg/L	mg/L
TN (lbs/day)	57.01 lbs/day	lbs/day
TP (mg/L)	2.7 mg/L	mg/L
TP (lbs/day)	8.74 lbs/day	lbs/day
NH_3-N (mg/L)	14 mg/L	mg/L
NH_3-N (lbs/day)	45.3 lbs/day	lbs/day
TDS (mg/L)	344 mg/L	mg/L
TDS (lbs/day)	1113 lbs/day	lbs/day
TKN	mg/L	mg/L
NO_2-N + NO_3-N	mg/L	mg/L

Effluent Testing Results

Parameter	Min/Max Value	Average Value
pH (minimum)	6.1 S.U.	
pH (maximum)	7.8 S.U.	
D.O (minimum)	5.9 mg/L	7.69 mg/L
TRC	NA mg/L	NA mg/L
Fecal Coliform	241 No./100mL	16.1 No./100mL
$CBOD_5$	3.4 mg/L	16.1 mg/L
TSS	5.3 mg/L	3.1 mg/L
NH3-N	0.6 mg/L	0.12 mg/L
TN	10.8 mg/L	6.52 mg/L
TP	1.2 mg/L	0.44 mg/L
Temp	80.0 F	56.0 F
TKN	0.5 mg/L	mg/L
NO2-N + NO3-N	6.4 mg/L	mg/L
TDS	344 mg/L	mg/L
Chloride	96 mg/L	mg/L
Bromide	0.5 mg/L	mg/L
Sulfate	21 mg/L	mg/L
Oil and Grease	5.0 mg/L	mg/L
Total Copper	<0.005 mg/L	mg/L
Total Lead	< 0.001 mg/L	mg/L
Total Zinc	0.013 mg/L	mg/L

Compliance History

DMR Data for Outfall 001 (from June 1, 2020 to May 31, 2021)

Parameter	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20
Flow (MGD) Average Monthly	0.383	0.405	0.466	0.398	0.402	0.423	0.355	0.356	0.357	0.391	0.373	0.403
Flow (MGD) Daily Maximum	0.468	0.485	0.698	0.493	0.501	0.932	0.439	0.458	0.548	0.683	0.482	0.493
pH (S.U.) Minimum	6.6	6.3	6.3	6.8	6.7	6.7	6.8	6.7	6.4	6.5	6.8	6.7
pH (S.U.) Maximum	7.0	7.0	7.3	7.0	7.0	7.3	7.2	7.2	7.4	7.2	7.1	7.1
DO (mg/L) Minimum	7.4	8.1	8.7	9.4	9.5	8.2	8.3	6.9	7.0	6.8	6.7	7.0
CBOD5 (lbs/day) Average Monthly	1.0	8.1	9.4	9.1	9.6	9.4	8.9	8.5	8.6	11.5	9.3	10.1
CBOD5 (lbs/day) Weekly Average	8.0	8.5	10.7	10.3	10.6	10.8	10.6	8.7	9.4	17.8	11.1	10.8
CBOD5 (mg/L) Average Monthly	2.4	< 2.4	2.5	2.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0	3.0
CBOD5 (mg/L) Weekly Average	2.4	< 2.4	2.6	3.0	3.0	3.0	3.0	3.0	3.0	6.0	3.0	3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	56.3	603.9	981.9	590.6	569.4	817.7	708.8	941.4	614.2	465	280.6	367.9
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	681.8	1003.1	1603.3	919.4	915.1	1248.1	804.6	1844.0	1536.6	882.3	476.4	487.5
BOD5 (mg/L) Raw Sewage Influent Average Monthly	140	177	247	180	175	267	242	332	218	152	94	109
TSS (lbs/day) Average Monthly	1.0	9.4	11.5	6.5	8.6	13.6	10.7	11.4	9.3	13.9	12.1	15.8
TSS (lbs/day) Raw Sewage Influent Average Monthly	77.5	762.6	1405.5	612.5	650.6	1067.5	917.8	922.2	742.4	753.1	435.3	438.6
TSS (lbs/day) Raw Sewage Influent Daily Maximum	1019.6	1288.1	3135.3	926.5	1407.8	2204	1285.2	1735.4	1855.1	1444.8	694.8	520
TSS (lbs/day) Weekly Average	10.0	10.6	19.8	7.1	14.9	23.0	17.7	17.0	14.0	31.9	22.3	32.2
TSS (mg/L) Average Monthly	2.5	2.8	3.0	2.0	2.8	4.4	3.5	4.0	3.3	4.3	3.8	4.8

TSS (mg/L) Raw Sewage Influent Average Monthly	193.0	224.4	342.5	186.5	196.0	353.6	315	324.8	262.0	247.0	140.0	130.5
TSS (mg/L) Weekly Average	3.0	3.0	5.0	2.0	5.0	8.0	5.0	6.0	5.0	9.0	6.0	10.0
Fecal Coliform (CFU/100 ml) Geometric Mean	2	1	4	2	1	1	1	1	1	2	1	1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	4	1	21	37	1	3	1	1	4	5	1	1
UV Intensity (mW/cm²) Minimum	2.70	6.8	7.10	7.5	9.6	7.0	3.6	3.4	2.70	2.00	3.10	6.00
Nitrate-Nitrite (mg/L) Average Monthly	1.04	2.13	4.98	4.48	3.61	3.31	2.18	2.73	3.48	4.11	0.95	1.00
Nitrate-Nitrite (lbs) Total Monthly	101.7	212.7	627.9	436.0	368.6	343.6	198.4	244.3	322.5	397.5	91.2	102.0
Total Nitrogen (mg/L) Average Monthly	2.41	2.72	5.49	4.99	4.11	3.86	2.73	3.46	4.30	5.54	2.14	1.89
Total Nitrogen (lbs) Effluent Net Total Monthly	234.5	271.2	689.8	486.7	419.5	399.2	249.3	309.2	385.5	537.0	204.2	186.7
Total Nitrogen (lbs) Total Monthly	234.5	271.2	689.8	486.7	419.5	399.2	249.3	309.2	398.5	537.0	204.2	192.5
Total Nitrogen (lbs) Effluent Net Total Annual									10283			
Total Nitrogen (lbs) Total Annual									6222			
Ammonia (lbs/day) Average Monthly	0.3	0.5	1.4	0.3	0.4	0.3	0.5	0.4	0.6	2.1	0.9	0.8
Ammonia (mg/L) Average Monthly	0.4	0.2	0.4	0.1	0.1	0.1	0.2	0.1	0.2	0.7	0.3	0.2
Ammonia (lbs) Total Monthly	36.9	15.9	44.3	10.8	12.5	10.7	16.1	12.9	17.1	66.5	28.2	24.3
Ammonia (lbs) Total Annual									244			
TKN (mg/L) Average Monthly	1.37	0.59	0.51	0.52	0.50	0.55	0.56	0.73	0.82	1.43	1.18	0.89
TKN (lbs) Total Monthly	132.8	58.5	61.9	50.7	50.9	55.6	50.9	64.9	76.0	139.5	113.0	90.5
Total Phosphorus (lbs/day) Average Monthly	0.17	0.60	0.51	0.60	0.39	0.46	0.67	1.92	3.57	3.93	2.54	1.56

Total Phosphorus (mg/L) Average Monthly	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.7	1.2	1.2	0.8	0.5
Total Phosphorus (lbs) Effluent Net Total Monthly	20.01	18.0	15.67	18.54	12.09	14.26	20.91	59.65	107.1	121.69	78.86	46.89
Total Phosphorus (lbs) Total Monthly	20.01	18.0	15.67	18.4	12.09	14.26	20.91	59.65	110.63	121.69	78.86	48.35
Total Phosphorus (lbs) Effluent Net Total Annual									803			
Total Phosphorus (lbs) Total Annual									611			

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.6
Latitude 39º 47' 57.05" **Longitude** -76º 44' 13.09"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Water Quality-Based Limitations

Ammonia (NH_3-N):
NH_3-N calculations were first based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the in-stream NH_3N criteria used in the attached computer model of the stream:

- Discharge pH 7.0 (Default per 391-2000-007)
- Discharge Temperature 20°C (Default per 391-2000-007)
- Stream pH 7.0 (Default per 391-2000-006)
- Stream Temperature 25°C (Default per 391-2000-003)
- Background NH_3-N 0 mg/L (Assumed)

Regarding NH_3-N limits, the attached computer printout of the WQM 7.0 stream model (version 1.1) indicates that a limit of 8.06 mg/L as a monthly average and 16.12 mg/L IMAX are necessary to protect the aquatic life from toxicity effects at the point of discharge. However, the existing limits of 8.0 mg/L monthly average & 16.0 mg/L IMAX will remain in the proposed permit. The winter effluent limit will be set at three-times the summer limits. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Summer average monthly mass limit: 8.0 mg/L x 0.6 MGD x 8.34 = 40.0 lbs/day
Winter average monthly mass limit: 24.0 mg/L x 0.6 MGD x 8.34 = 120.0 lbs/day

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model (version 1.1) indicates that a monthly average limit of 25.0 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. The existing limits of 25.0 mg/L average monthly, 40.0 mg/L weekly average, and 50.0 mg/L instantaneous maximum will remain in the proposed permit. The facility has consistently achieved $CBOD_5$ levels well below these limits. Mass limits are calculated as follows:

Average monthly mass limit: 25.0 mg/L x 0.6 MGD x 8.34 = 125.1 (125.0) lbs/day
Average weekly mass limit: 40.0 mg/L x 0.6 MGD x 8.34 = 200.16 (200.0) lbs/day

pH:
The effluent discharge pH should remain above 6.0 and below 9.0 standard units according to 25 Pa Code § 95.2(1).

Total Suspended Solids (TSS):
The existing limits of 30.0 mg/L average monthly, 45.0 mg/L average weekly, and 60.0 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47. Recent DMRs and inspection reports show that the facility has been consistently achieving concentrations well below these limits. Mass limits are calculated as follows:

Average monthly mass limit: 30.0 mg/L x 0.6 MGD x 8.34 = 150.1 (150.0) lbs/day
Average weekly mass limit: 45.0 mg/L x 0.5=6 MGD x 8.34 = 225.18 (225.0) lbs/day

Dissolved Oxygen (D.O.):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. It is recommended that this limit be maintained in the proposed permit to ensure the protection of water quality standards. This approach is consistent with DEP's current Standard Operating Procedure (SOP) No. BPNPSM-PMT-033 and has been applied to other point source dischargers throughout the state.

Fecal Coliform:
The recent coliform guidance in 25 PA code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100ml and § 92a.47.(a)(5) requires a winter limit of 2,000/100ml as a geometric mean and an instantaneous maximum not greater than 10,000/100ml.

E. Coli:
As recommended by DEP's SOP No. BPNPSM-PMT-033, routine monitoring for E. Coli will be included in the proposed permit under 25 Pa Code §92a.61. This requirement applies to all sewage dischargers greater than 0.002 MGD in their new and reissued permits. A monitoring frequency of 1/week will be included in the permit to be consistent with the recommendation from this SOP.

UV:
The UV system monitor and report the UV intensity (mW/cm^2) after update to replace chlorine disinfection to UV disinfection system will remain in the proposed permit.

Toxics:
DEP utilizes a Toxics Management Spreadsheet (last modified on March 2021 ver. 1.3) to facilitate calculations necessary for completing a reasonable potential analysis and determining WQBELs for toxic pollutants. The worksheet output indicates that there are no toxic pollutants of concern. Additionally, there is no industrial or commercial user contributing industrial wastewater to the sewer system and no known environmental concern associated with any toxic pollutants within this watershed. Therefore, there are no monitoring & reporting requirements necessary.

Total Maximum Daily Load (TMDL):
The TMDL South Branch Codorus Creek Watershed York County was prepared by DEP on July 9, 2003 to address use impairments caused by siltation and nutrients (mainly total phosphorus) as a result of agricultural activities. While this TMDL was mainly focused on loadings for nonpoint sources, the TMDL still considers the following wasteload allocation for the Glen Rock STP which is summarized in the table below.

Table of the South Branch Codorus Creek TMDL

	Phosphorus Load (lbs/yr)	
Subbasin 1	Existing (Calculated from December 1999 thru June 1999 DMRs; Used in AVGWLF)	TMDL WLA (Used in EMPR Scenario)
Glen Rock PA0020818	1,754.00	3,650.00

The Total Phosphorus WLA of 3,650 lbs/yr was not included in the existing NPDES permit because the calculated Total Phosphorus "cap load" associated with the Chesapeake Bay TMDL was more stringent than the WLA associated with the South Branch Codorus Creek TMDL. This is a reasonable approach and should remain unchanged for this permit renewal.

Based on this information, the following condition will be included in Part C.I.C.2 of the draft permit: *"Glen Rock Sewer Authority is included on the South Branch Codorus Creek TMDL, which has a load allocation of 3,650 lbs/year for the facility. As indicated in Part A.I.B., the Chesapeake Bay Watershed Implementation Plan is requiring a more stringent Cap Load of 1,461 lbs/year. Therefore, Credits may be purchased for any phosphorus loading that is in excess of the Bay Cap Load – but only up to the TMDL annual load of 3,650 lbs/year, which is not to be exceeded (i.e., credits may only be purchased for up to 2,189 lbs/year of phosphorus loading)."*

It is noteworthy that credits purchased under the Bay TMDL should not be applied to the South Branch Codorus Creek TMDL.

Chesapeake Bay Strategy:
In the Phase 2 WIP Wastewater Supplement revised on December 17, 2019, Table 5 - Significant Chesapeake Bay Sewage NPDES Permits (pages # 6-14) of this document shows that Glen Rock Sewer Authority has been allocated 10,959 lbs/year of TN and 1,461 lbs/year of TP. This approach, consistent with the Chesapeake Bay TMDL, was based on the actual performance data previously evaluated by the Department. Since the permittee is easily capable of achieving compliance with these loads, the Department determines that no "compliance schedule" for the requirements associated with the Chesapeake Bay Strategy is necessary. Accordingly, the Chesapeake Bay nutrient (i.e., Ammonia-N, Kjeldahl-N, Nitrate-Nitrite as N, and Total Phosphorus) existing limitations and monitoring frequency (2/week) requirements will remain in the proposed permit.

Total Phosphorus:
Previous permit had average monthly concentration monitoring requirement 2.0 mg/L and instantaneous maximum limit of 4.0 mg/L with a minimum monitoring frequency of 2/week. Accordingly, existing TP limits will remain in the proposed permit. See the EPA guidance, Nutrient Criteria Technical Guidance Manual – Rivers and Streams, 07/2000 EPA-822-B-00-002, for more information about nutrient impacts on streams. Mass limits are calculated as follows:

Average monthly mass limit: 2.0 mg/L x 0.6 MGD x 8.34 = 10.0 lbs/day

Influent Monitoring:
As a result of negotiation with EPA, influent monitoring of TSS and BOD_5 are required for any POTWs; therefore, existing influent monitoring requirements will remain in the proposed permit. The sample type and monitoring frequency also remain unchanged in the draft permit.

Total Dissolved Solids (TDS):
Total Dissolved Solids and its major constituents including Bromide, Chloride, and Sulfate have become statewide pollutants of concern and threats to DEP's mission to prevent violations of water quality standards. The requirement to monitor these pollutants is necessary under the following DEP Central Office directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

- *Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.*
- *Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.*

The facility has no record of monitoring these pollutants. However, the application shows a maximum influent concentration of 344 mg/L for TDS. The effluent concentration is not expected to exceed 1,000 mg/L. No monitoring is necessary.

Antidegradation (93.4):
The effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303(d) Listed Streams:
The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is a recreational impairment for agriculture-nutrients/total suspended solids. The permit includes a limit for fecal coliform at outfall 001.

Class A Wild Trout Fisheries:
No Class A Wild Trout Fisheries are impacted by this discharge.

Anti-Backsliding Requirement:
All permit requirements proposed in this fact sheet are at least as stringent as the existing requirements per 40 CFR § 122.44(l)(1).

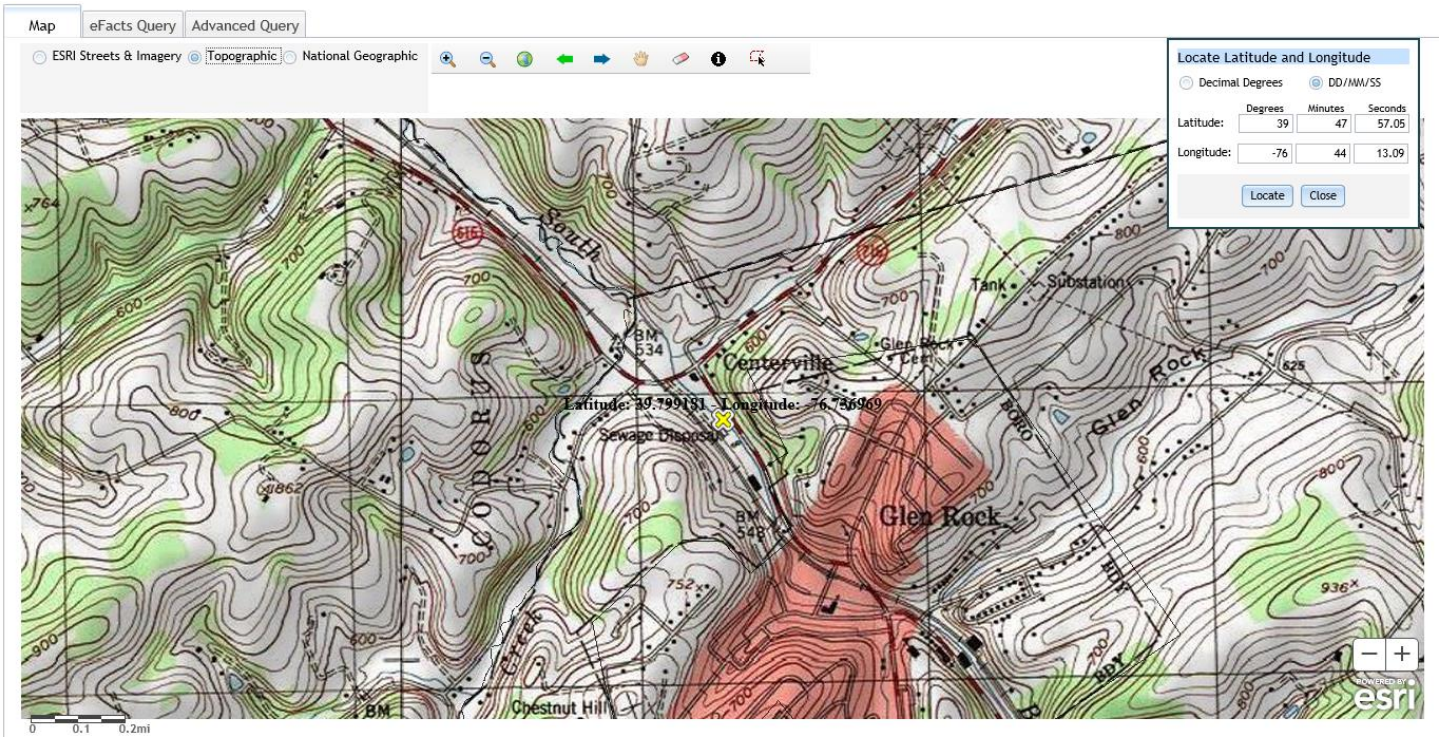
WQM 7.0:

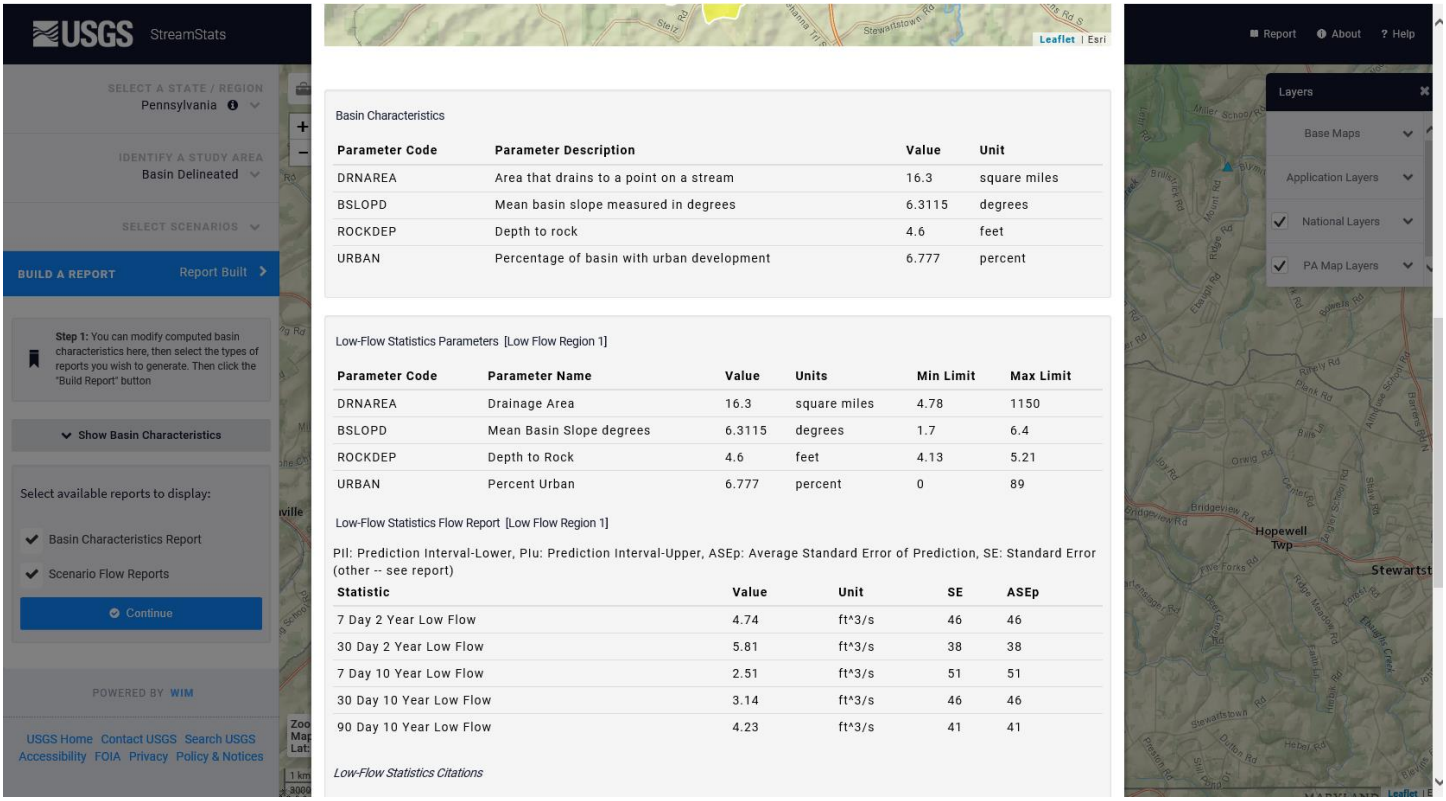
Node 1: Outfall 001 on South Branch Codorus Creek (08093)

Elevation:	530.38 ft (USGS National Map Viewer)
Drainage Area:	16.3 mi^2 (USGS PA StreamStats)
River Mile Index:	16.25 (PA DEP eMapPA)
Low Flow Yield:	0.15 cfs/mi^2
Discharge Flow:	0.6 MGD (NPDES Application)

Node 2: Just before confluence with UNT 08179

Elevation:	528.85 ft (USGS National Map Viewer)
Drainage Area:	18.1 mi^2 (USGS PA StreamStats)
River Mile Index:	16.03 (PA DEP eMapPA)
Low Flow Yield:	0.15 cfs/mi^2
Discharge Flow:	0.000 MGD





Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	16.3	square miles
BSLOPD	Mean basin slope measured in degrees	6.3115	degrees
ROCKDEP	Depth to rock	4.6	feet
URBAN	Percentage of basin with urban development	6.777	percent

Low-Flow Statistics Parameters [Low Flow Region 1]

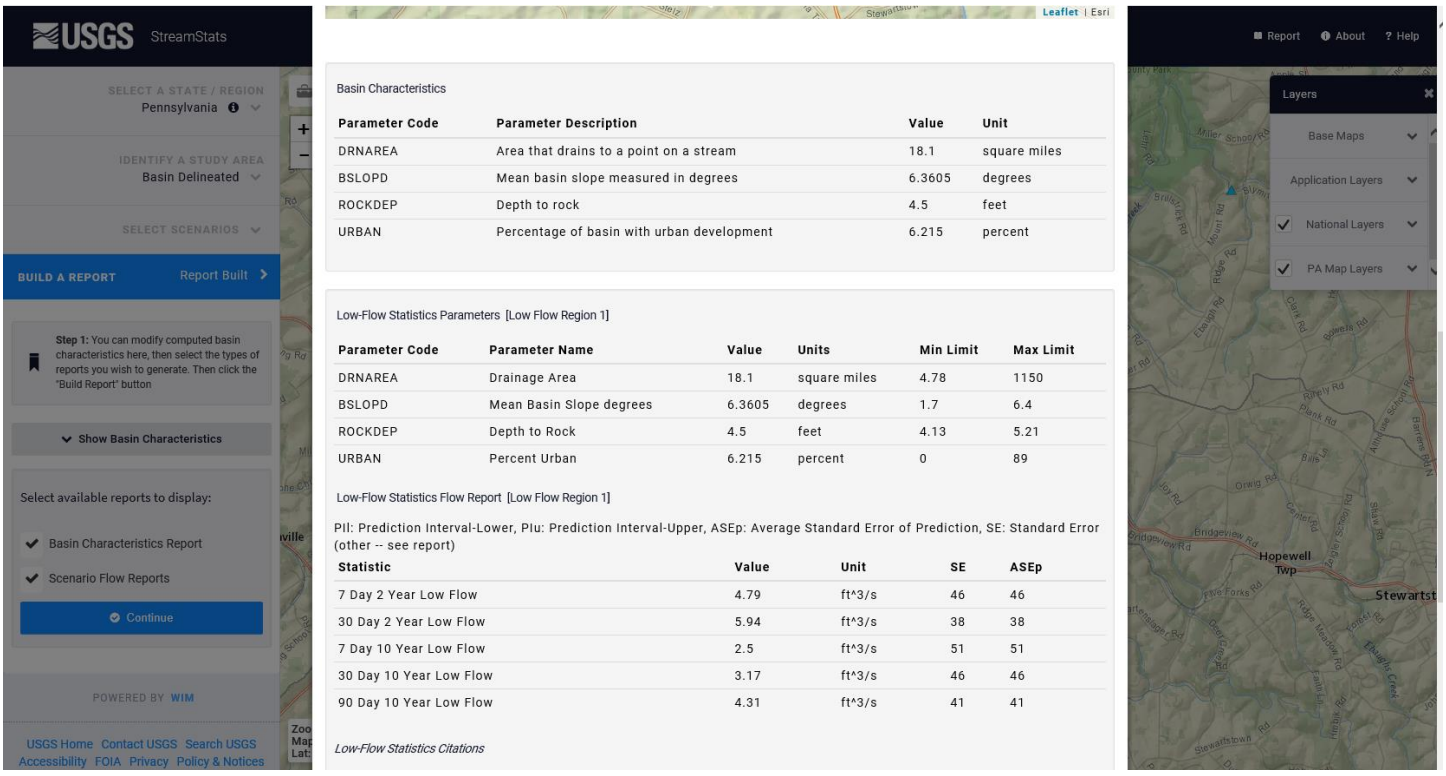
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	16.3	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	6.3115	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.6	feet	4.13	5.21
URBAN	Percent Urban	6.777	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	4.74	ft^3/s	46	46
30 Day 2 Year Low Flow	5.81	ft^3/s	38	38
7 Day 10 Year Low Flow	2.51	ft^3/s	51	51
30 Day 10 Year Low Flow	3.14	ft^3/s	46	46
90 Day 10 Year Low Flow	4.23	ft^3/s	41	41

Low-Flow Statistics Citations



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	18.1	square miles
BSLOPD	Mean basin slope measured in degrees	6.3605	degrees
ROCKDEP	Depth to rock	4.5	feet
URBAN	Percentage of basin with urban development	6.215	percent

Low-Flow Statistics Parameters [Low Flow Region 1]

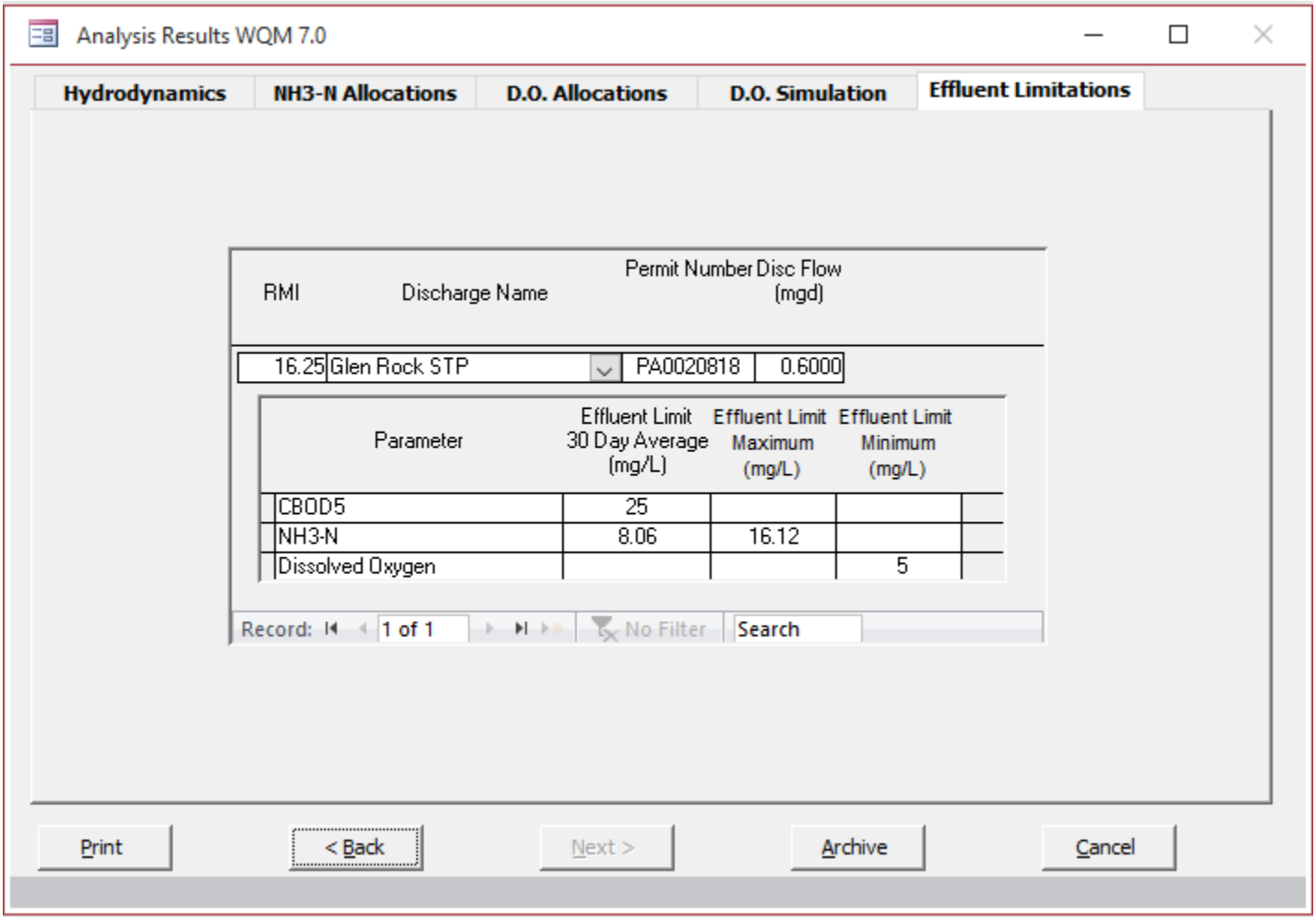
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	18.1	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	6.3605	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.5	feet	4.13	5.21
URBAN	Percent Urban	6.215	percent	0	89

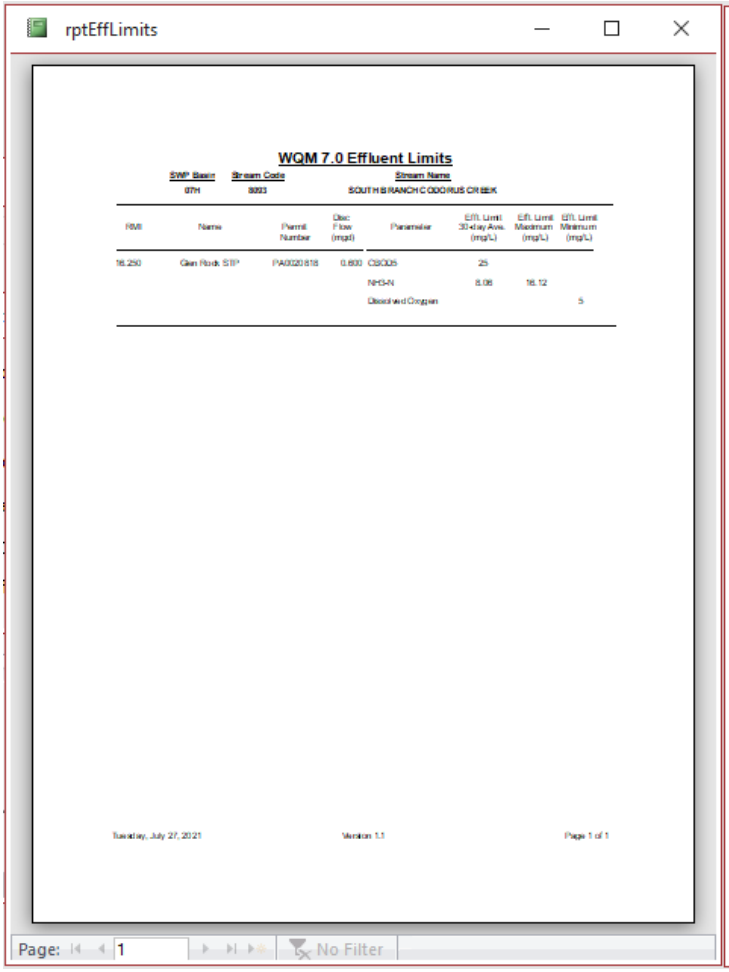
Low-Flow Statistics Flow Report [Low Flow Region 1]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	4.79	ft^3/s	46	46
30 Day 2 Year Low Flow	5.94	ft^3/s	38	38
7 Day 10 Year Low Flow	2.5	ft^3/s	51	51
30 Day 10 Year Low Flow	3.17	ft^3/s	46	46
90 Day 10 Year Low Flow	4.31	ft^3/s	41	41

Low-Flow Statistics Citations


Analysis Results WQM 7.0
Hydrodynamics
NH3-N Allocations
D.O. Allocations
D.O. Simulation
Effluent Limitations
RMI
Discharge Name
Permit Number
Disc Flow (mgd)
16.25
Glen Rock STP
PA0020818
0.6000
Parameter
Effluent Limit 30 Day Average (mg/L)
Effluent Limit Maximum (mg/L)
Effluent Limit Minimum (mg/L)
CBOD5
25
NH3-N
8.06
16.12
Dissolved Oxygen
5
Record: 1 of 1
No Filter
Search
Print
< Back
Next >
Archive
Cancel


rptEffLimits
WQM 7.0 Effluent Limits
SWP Basin
07H
Stream Code
8093
Stream Name
SOUTH BRANCH CODORUS CREEK
RMI
Name
Permit Number
Disc Flow (mgd)
Parameter
Effl. Limit 30-day Avg. (mg/L)
Effl. Limit Maximum (mg/L)
Effl. Limit Minimum (mg/L)
16.250
Glen Rock STP
PA0020818
0.600
CBOD5
25
NH3-N
8.06
16.12
Dissolved Oxygen
5
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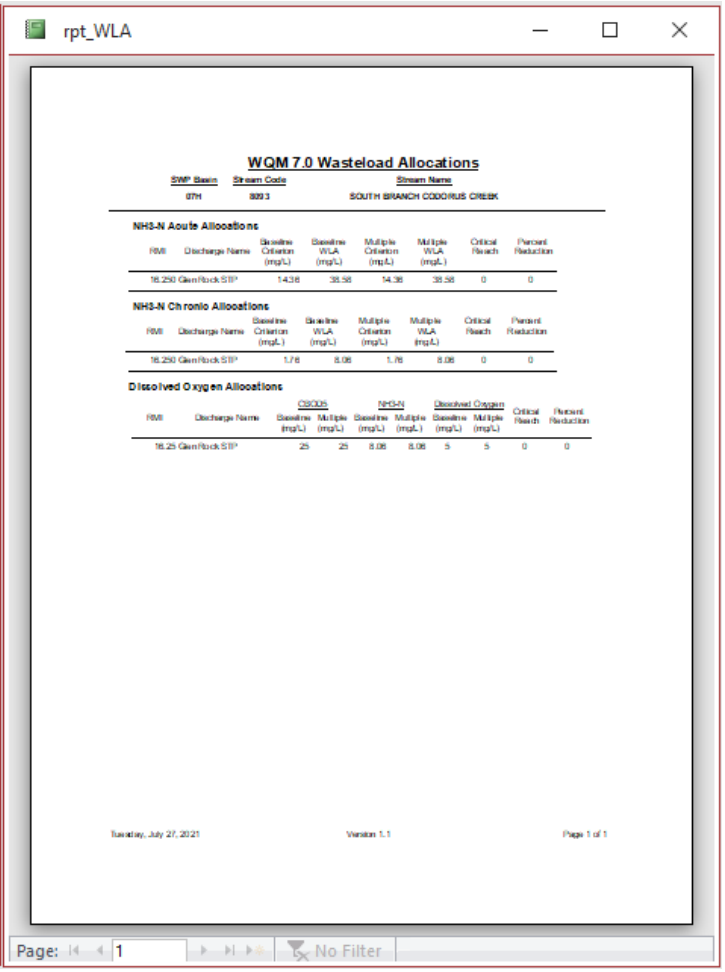
rpt_WLA
WQM 7.0 Wasteload Allocations
SWP Basin
07H
Stream Code
8093
Stream Name
SOUTH BRANCH CODORUS CREEK
NH3-N Acute Allocations
RMI
Discharge Name
Baseline Criterion (mg/L)
Baseline WLA (mg/L)
Multiple Criterion (mg/L)
Multiple WLA (mg/L)
Critical Reach
Percent Reduction
16.250 Glen Rock STP
14.38
38.58
14.38
38.58
0
0
NH3-N Chronic Allocations
RMI
Discharge Name
Baseline Criterion (mg/L)
Baseline WLA (mg/L)
Multiple Criterion (mg/L)
Multiple WLA (mg/L)
Critical Reach
Percent Reduction
16.250 Glen Rock STP
1.76
8.06
1.76
8.06
0
0
Dissolved Oxygen Allocations
CBOD5
NH3-N
Dissolved Oxygen
RMI
Discharge Name
Baseline (mg/L)
Multiple (mg/L)
Baseline (mg/L)
Multiple (mg/L)
Baseline (mg/L)
Multiple (mg/L)
Critical Reach
Percent Reduction
16.25 Glen Rock STP
25
25
8.06
8.06
5
5
0
0
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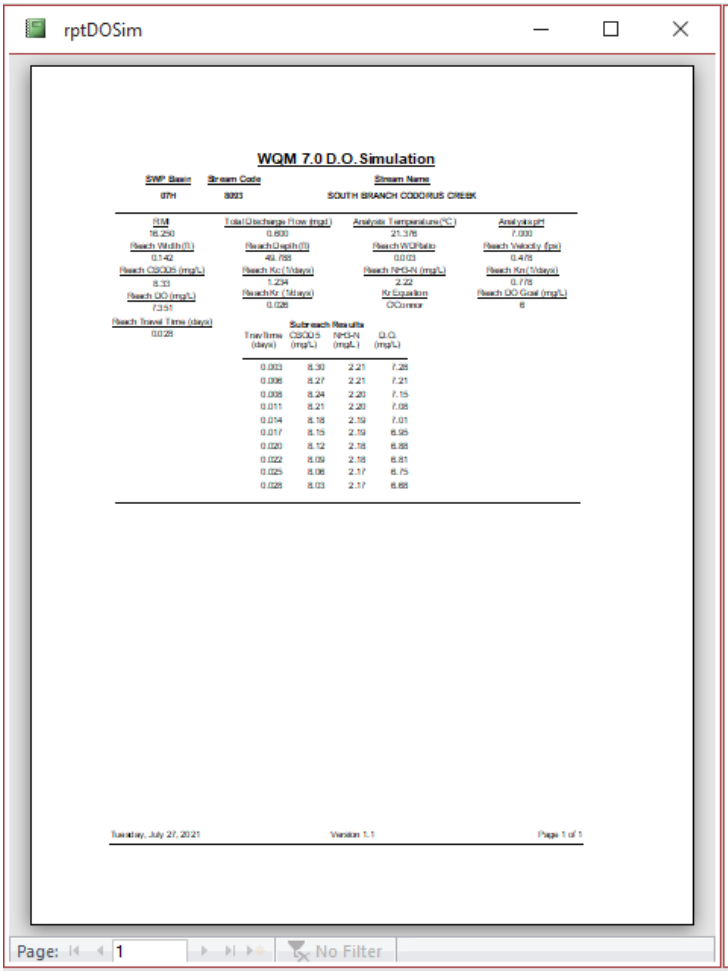
rptDOSim
WQM 7.0 D.O. Simulation
SWP Basin
07H
Stream Code
8093
Stream Name
SOUTH BRANCH CODORUS CREEK
RM
16.250
Total Discharge Flow (mgd)
0.600
Analysis Temperature (°C)
25.376
Analysis pH
7.000
Reach Width (ft)
0.142
Reach Depth (ft)
49.785
Reach WD Ratio
0.003
Reach Velocity (fps)
0.476
Reach CBOD5 (mg/L)
8.33
Reach Kc (1/days)
1.234
Reach NH3-N (mg/L)
2.22
Reach Kn (1/days)
0.778
Reach DO (mg/L)
7.351
Reach Kr (1/days)
0.026
Kr Equation
OConnor
Reach DO Goal (mg/L)
6
Reach Travel Time (days)
0.026
Subreach Results
Tray/Time (days)
CBOD5 (mg/L)
NH3-N (mg/L)
D.O. (mg/L)
0.003 8.30 2.21 7.28
0.006 8.27 2.21 7.21
0.008 8.24 2.20 7.15
0.011 8.21 2.20 7.08
0.014 8.18 2.19 7.01
0.017 8.15 2.19 6.95
0.020 8.12 2.18 6.88
0.022 8.09 2.18 6.81
0.025 8.06 2.17 6.75
0.028 8.03 2.17 6.68
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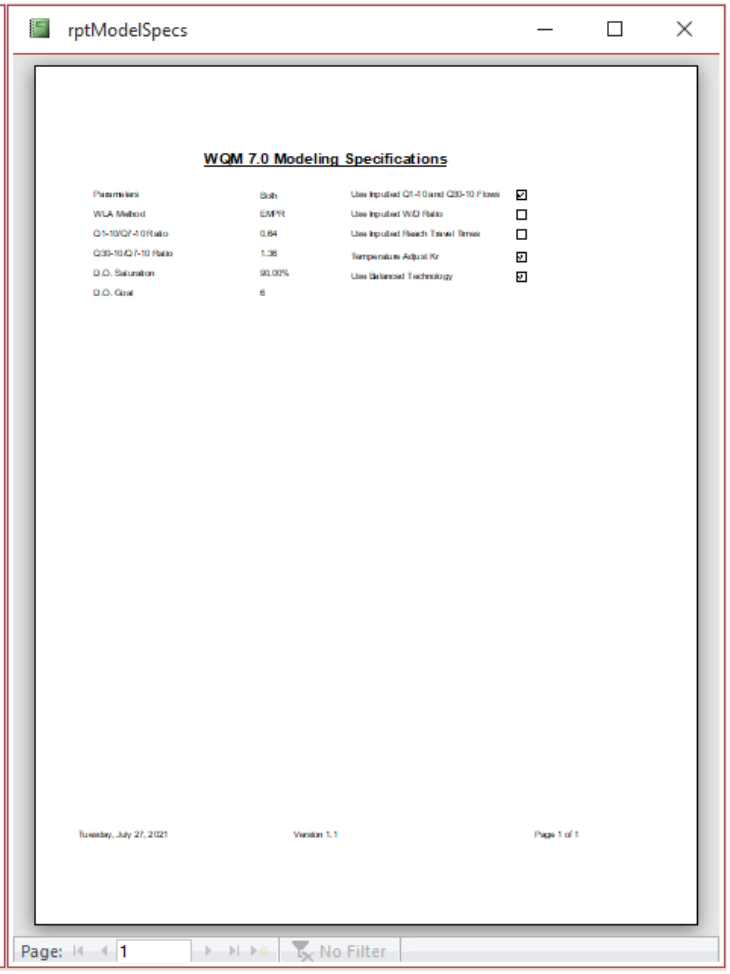
rptModelSpecs
WQM 7.0 Modeling Specifications
Parameters
Both
Use Inputted Q1-1 0 and Q30-10 Flows
WLA Method
EMPR
Use Inputted W/D Ratio
Q1-10/Q7-10 Ratio
0.64
Use Inputted Reach Travel Times
Q30-10/Q7-10 Ratio
1.36
Temperature Adjust Kr
D.O. Saturation
90.00%
Use Balanced Technology
D.O. Goal
6
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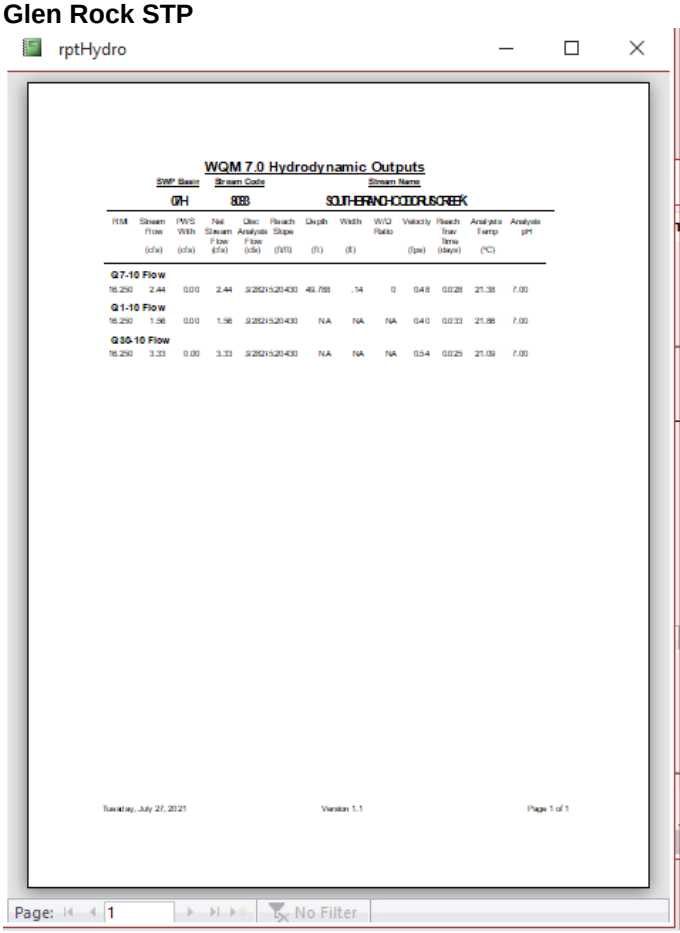
rptHydro
WQM 7.0 Hydrodynamic Outputs
SWP Basin
Stream Code
Stream Name
07H
8093
SOUTH BRANCH CODORUS CREEK
RMI
Stream Flow (cfs)
PWS With (cfs)
Net Stream Flow (cfs)
Disc Analysis Flow (cfs)
Reach Slope (ft/ft)
Depth (ft)
Width (ft)
W/D Ratio
Velocity (fps)
Reach Trav Time (days)
Analysis Temp (°C)
Analysis pH
Q7-10 Flow
16.250 2.44 0.00 2.44 .928215.20430 49.788 .14 0 0.48 0.028 21.38 7.00
Q1-10 Flow
16.250 1.56 0.00 1.56 .928215.20430 N/A N/A N/A 0.40 0.033 21.86 7.00
Q30-10 Flow
16.250 3.33 0.00 3.33 .928215.20430 N/A N/A N/A 0.54 0.025 21.09 7.00
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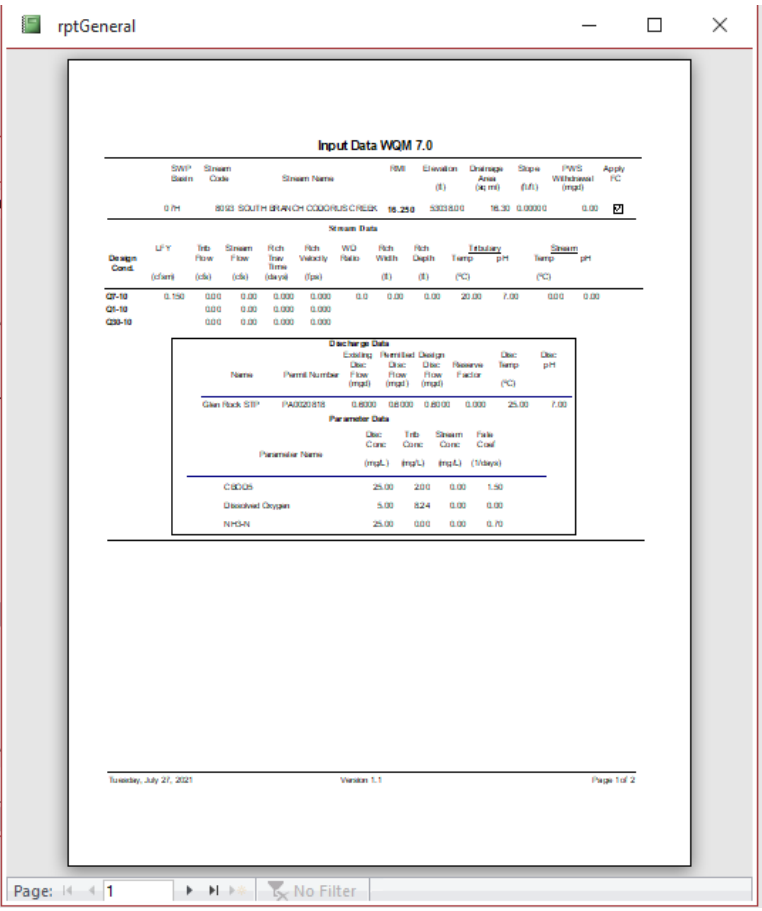
rptGeneral
Input Data WQM 7.0
SWP Basin
Stream Code
Stream Name
RMI
Elevation (ft)
Drainage Area (sq mi)
Slope (ft/ft)
PWS Withdrawal (mgd)
Apply FC
07H
8093
SOUTH BRANCH CODORUS CREEK
16.250
533.800
16.30
0.00000
0.00
Stream Data
Design Cond.
LFY (cfsm)
Trib Flow (cfs)
Stream Flow (cfs)
Rch Trav Time (days)
Rch Velocity (fps)
WD Ratio
Rch Width (ft)
Rch Depth (ft)
Tributary Temp (°C)
Tributary pH
Stream Temp (°C)
Stream pH
Q7-10 0.150 0.00 0.00 0.000 0.000 0.0 0.00 0.00 20.00 7.00 0.00 0.00
Q1-10 0.00 0.00 0.000 0.000
Q30-10 0.00 0.00 0.000 0.000
Discharge Data
Name
Permit Number
Existing Disc Flow (mgd)
Permitted Disc Flow (mgd)
Design Disc Flow (mgd)
Reserve Factor
Disc Temp (°C)
Disc pH
Glen Rock STP
PA0020818
0.8000 0.8000 0.8000 0.000 25.00 7.00
Parameter Data
Parameter Name
Disc Conc (mg/L)
Trib Conc (mg/L)
Stream Conc (mg/L)
Fate Coef (1/days)
CBOD5 25.00 2.00 0.00 1.50
Dissolved Oxygen 5.00 8.24 0.00 0.00
NH3-N 25.00 0.00 0.00 0.70
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rptGeneral

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
07H	8093	SOUTH BRANCH CODORUS CREEK	16.030	528.85	18.10	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.150	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Glen Rock STP	PA0020818	0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

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Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
$CBOD_5$	125	200 Wkly Avg	XXX	25	40	50	1/week	8-Hr Composite
TSS	150	225 Wkly Avg	XXX	30	45	60	1/week	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Ammonia May 1 - Oct 31	40	XXX	XXX	8.0	XXX	16	2/week	8-Hr Composite
Ammonia Nov 1 - Apr 30	120	XXX	XXX	24	XXX	48	2/week	8-Hr Composite
Total Phosphorus	10	XXX	XXX	2.0	XXX	4	2/week	8-Hr Composite

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Net Total Nitrogen	Report	10,959	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	1,461	XXX	XXX	XXX	XXX	1/month	Calculation

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
D.O.	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
$CBOD_5$	125.0	200.0 Wkly Avg	XXX	25.0	40.0	50.0	1/week	8-Hr Composite
TSS	150.0	225.0 Wkly Avg	XXX	30.0	45.0	60.0	1/week	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/week	Grab
Ammonia May 1 - Oct 31	40.0	XXX	XXX	8.0	XXX	16.0	2/week	8-Hr Composite
Ammonia Nov 1 - Apr 30	120.0	XXX	XXX	24.0	XXX	48.0	2/week	8-Hr Composite
Total Phosphorus	10.0	XXX	XXX	2.0	XXX	4.0	2/week	8-Hr Composite

Compliance Sampling Location:

Other Comments:

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Net Total Nitrogen	Report	10,959	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	1,461	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location:

Other Comments:

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☒	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other: