pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0021202**
Facility Type	**Municipal**	APS ID	**276422**
Major / Minor	**Minor**	Authorization ID	**1326841**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**East Berlin Borough Municipal Authority Adams County**	Facility Name	**East Berlin Borough STP**
Applicant Address	PO Box 37	Facility Address	128 Water Street
	East Berlin, PA 17316-0037		East Berlin, PA 17316-8637
Applicant Contact	Charles Krall	Facility Contact	Nathan Boyer
Applicant Phone	(717) 676-1472	Facility Phone	(717) 465-4529
Client ID	75222	Site ID	250969
Ch 94 Load Status	Not Overloaded	Municipality	East Berlin Borough
Connection Status	No Limitations	County	Adams
Date Application Received	September 9, 2020	EPA Waived?	No
Date Application Accepted	September 14, 2020	If No, Reason	DEP Discretion
Purpose of Application	NPDES permit renewal.		

Summary of Review

East Berlin Area Joint Authority has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on March 31, 2016 and became effective on May 1, 2016. The existing permit expiration date is April 30, 2021.

The discharge design flow is 0.243 MGD. This facility is owned and operated by East Berlin Borough WWTP and serves East Berlin Borough (100%).

WQM Part II No. 0107406 original was issued on 03/06/2008.

Sludge use and disposal description and location(s): N/A due to the liquid sludge is hauled to Kline's Services, LLC.

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml.

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	February 26, 2021
		Daniel W. Martin, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.243
Latitude	39º 56' 34.68"	Longitude	-76º 58' 39.72"
Quad Name	Abbottstown	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Conewago Creek (WWF)	Stream Code	08303
NHD Com ID	57470175	RMI	38.60 miles
Drainage Area	220 sq. mi.	Yield (cfs/mi^2)	0.066
Q_{7-10} Flow (cfs)	14.6	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	385.4	Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Wrightsville Water Supply Co., York County		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	29 miles	Distance from Outfall (mi)	Approximate 51 miles

Changes Since Last Permit Issuance: none

Drainage Area:
The discharge is to Gardner Run at RMI 38.6 mile. A drainage area upstream of the discharge is estimated to be 220 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow:
According to USGS StreamStats, the discharge point has a Q_{7-10} of 14.6 cfs and a drainage area of 220 mi.^{2}, which results in a Q_{7-10} low flow yield of 0.066 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} = 14.6 cfs
Low Flow Yield = 14.6 cfs / 220 mi.^{2} = 0.066 cfs/mi.^{2}
Q_{30-10} = 1.36 * 14.6 cfs = 19.9 cfs
Q_{1-10} = 0.64 * 14.6 cfs = 9.34 cfs

The resulting Q_{7-10} dilution ratio is: Q_{stream} / $Q_{discharge}$ = 14.6 cfs / [0.243 MGD * (1.547 cfs/MGD)] = 38.5:1

Conewago Creek:
25 Pa. Code § 93.9o classifies Conewago Creek as Warm-Water Fishes (WWF) surface water. Based on the 2018 Integrated Report, Conewago Creek, assessment unit ID 18584, is not impaired. A TMDL currently does not exist for this stream segment, therefore, no TMDL has been taken into consideration during this review.

Public Water Supply:
The closest water supply intake is located downstream from the discharge in the Wrightsville Water Supply Co., York County approximately 51.0 miles from the point of discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: East Berlin Area Joint Authority - STP				
WQM Permit No.	**Issuance Date**			
0107406	3/06/2008			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.243
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.243	580	Not Overloaded	Dewatering	Land Application

Changes Since Last Permit Issuance: none

The existing WWTP train is as follows:

Fine Screen (1) ⇒ Bar Screen (1) ⇒ Sequencing Batch Reactors (2) ⇒ Ultraviolet Disinfection Unit (1) ⇒ Post Aeration Cascade (1) ⇒ Discharge

The system incorporates the addition of ferric chloride (for phosphorus removal). Two sludge digesters are on-site.

Compliance History	
Summary of DMRs:	The eDMRs reported from January 1, 2020 to December 31, 2020 is summarized in the Table below (Pages # 4, 5, & 6).
Summary of Inspections:	1/27/2021: Mr. Bettinger, DEP WQ Environmental Trainee, conducted an administrative review of the facility Chesapeake Bay nutrient monitoring for compliance year 2019-2020. There were no violations noted during inspection. The facility's TN & TP annual net mass load were 647 lbs & 285 lbs which were well below their permit TN & TP cap limits of 7,306 lbs TN & 913 lbs TP. 3/10/2020: Mr. Bettinger, DEP WQ Environmental Trainee, conducted compliance evaluation inspection. The treatment facility was well maintained and organized. There were no violations noted during inspection. The field test results were within permit limits. 11/6/2017: Mr. Bowen, DEP WQS, conducted compliance evaluation inspection. There was a recommendation to submit annual Chesapeake Bay supplemental for water year 2016-2017, calibrate D.O. meter (probes) daily as recommended by manufacturer and log calibrations, have the UV intensity/dosage sensor/readout checked for accuracy. Field test results were within permitted limits. Plant effluent appeared clear. There were no violations noted during inspection.
Other Comments:	There are currently no open violations associated to the permittee or the facility.

Other Comments:

Compliance History

DMR Data for Outfall 001 (from January 1, 2020 to December 31, 2020)

Parameter	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20
Flow (MGD) Average Monthly	0.166	0.105	0.092	0.087	0.119	0.103	0.096	0.143	0.131	0.135	0.149	0.179
Flow (MGD) Daily Maximum	0.601	0.235	0.196	0.133	0.377	0.172	0.172	0.380	0.354	0.279	0.277	0.409
pH (S.U.) Minimum	7.1	7.2	7.3	7.4	7.2	7.0	7.1	7.0	7.2	7.1	7.0	7.2
pH (S.U.) Maximum	7.4	7.5	7.6	7.8	7.8	7.5	7.4	7.3	7.4	7.3	7.3	7.4
DO (mg/L) Minimum	7.9	7.4	6.9	6.6	6.7	6.7	7.0	7.4	8.3	8.3	8.4	8.2
CBOD5 (lbs/day) Average Monthly	3.6	2.5	2.8	2.5	3.5	3.5	2.9	4.4	4.5	4.9	4.1	4
CBOD5 (lbs/day) Weekly Average	4.8	3.3	4.4	3.3	4.6	5.6	3.2	7	5.7	5.6	5.2	4.6
CBOD5 (mg/L) Average Monthly	3	3	3.6	3	3.5	3.8	3.5	4.3	4	4.5	3.5	3
CBOD5 (mg/L) Weekly Average	3	3	5	3	4	4	4	5	5	6	5	3
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	196	189	207	206	171	208	185	221	246	322	256	240
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	236	220	264	253	205	322	251	323	372	432	286	290
BOD5 (mg/L) Raw Sewage Influent Average Monthly	171	231	264	254	187	231	215	224	229	286	230	183
TSS (lbs/day) Average Monthly	4.2	2.7	2.2	3.7	4.7	4.8	1.7	2.0	3.3	2.9	2.9	2.4
TSS (lbs/day) Raw Sewage Influent Average Monthly	86	74	92	115	102	102	103	69	103	144	171	145
TSS (lbs/day) Raw Sewage Influent Daily Maximum	132	99	141	167	158	135	219	92	197	201	272	174
TSS (lbs/day) Weekly Average	5.1	3.3	4.4	9.3	6.2	9.8	2.7	2.8	5.3	4.2	6.0	4.6
TSS (mg/L) Average Monthly	3.6	3.3	2.6	4.5	4.8	5	2	2.0	3.2	2.5	2.3	1.8

TSS (mg/L) Raw Sewage Influent Average Monthly	74	89	115	147	115	116	113	68	96	128	156	112
TSS (mg/L) Weekly Average	5	4	4	11	6	10	3	3	5	3	4	3
Fecal Coliform (CFU/100 ml) Geometric Mean	10	28	52	53	22	91	68	38	11	17	11	4
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	23	72	179	67	27	921	93	75	24	32	17	12
UV Intensity (mW/cm²) Minimum	24.15	24.17	24.20	24.23	24.26	24.02	24.05	24.08	24.11	24.14	24.17	24.20
UV Intensity (mW/cm²) Average Monthly	24.16	24.19	24.22	24.25	23.46	24.02	24.07	24.10	24.12	24.15	24.18	24.21
Nitrate-Nitrite (mg/L) Average Monthly	0.8	0.9	1.2	1.0	0.8	0.6	0.8	0.9	0.7	0.6	1.0	0.7
Nitrate-Nitrite (lbs) Total Monthly	24.8	24	27.9	24	24.8	18.6	21	31	21	21.7	37.7	27.9
Total Nitrogen (mg/L) Average Monthly	1.6	1.8	2.2	2.0	2.0	2.5	2.2	1.7	1.7	1.6	1.7	1.2
Total Nitrogen (lbs) Effluent Net Total Monthly	49.6	42	55.8	48	65.1	68.2	60	52.7	54	55.8	60.9	49.6
Total Nitrogen (lbs) Total Monthly	49.6	42	55.8	48	65.1	68.2	60	52.7	54	55.8	60.9	49.6
Total Nitrogen (lbs) Effluent Net Total Annual				647								
Total Nitrogen (lbs) Total Annual				647								
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ammonia (lbs) Total Monthly	3.1	3	3.1	3	3.1	9.3	3	3.1	3	3.1	2.9	3.1
Ammonia (lbs) Total Annual				45								
TKN (mg/L) Average Monthly	0.8	0.9	1.1	1.1	1.2	1.8	1.5	1.0	1.0	1.0	0.7	0.5
TKN (lbs) Total Monthly	24.8	21	24.8	27	40.3	49.6	39	31	33	37.2	23.2	21.7
Total Phosphorus (lbs/day) Average Monthly	0.2	0.2	0.5	1.0	1.1	1.3	1.3	0.9	0.6	0.2	0.2	0.7

Total Phosphorus (mg/L) Average Monthly	0.1	0.3	0.6	1.2	1.0	1.2	1.5	0.8	0.6	0.2	0.2	0.6
Total Phosphorus (lbs) Effluent Net Total Monthly	3.1	6	15.5	30	34.1	40.3	39	27.9	18	6.2	5.8	21.7
Total Phosphorus (lbs) Total Monthly	3.1	6	15.5	30	34.1	40.3	39	27.9	18	6.2	5.8	21.7
Total Phosphorus (lbs) Effluent Net Total Annual				285								
Total Phosphorus (lbs) Total Annual				285								

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.243
Latitude 39º 56' 34.81" **Longitude** -76º 58' 39.66"
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)

Comments:

Water Quality-Based Limitations

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model indicates that an average monthly limit of 25 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. Due to anti-backsliding policy, the existing year-round average monthly limit (AML) of 25 mg/L, average weekly limit (AWL) of 40 mg/L and IMAX of 50 mg/L will remain in the proposed permit. Recent DMRs and inspection reports show that the facility has been consistently achieving concentrations below this limit. Mass limits are calculated as follows:

Average monthly mass limit: 25 mg/L x 0.243 MGD x 8.34 = 51.0 lbs/day
Average weekly mass limit: 40 mg/L x 0.243 MGD x 8.34 = 81.0 lbs/day

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

- Discharge pH 7.0 (Default per 391-2000-007)
- Discharge Temperature 25°C (Default per 391-2000-007)
- Stream pH 7.0 (Default per 391-2000-006)
- Stream Temperature 25°C (Default for WWF per 391-2000-003)
- Background NH_3-N 0 mg/L (Assumed since no upstream WWTPs)

The detailed model results are attached. The above method indicates that at a discharge of 0.243 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 25 mg/L NH_3-N as a monthly average (AML) and 50 mg/L NH_3-N instantaneous maximum (IMAX) are necessary to protect the aquatic life from toxicity effects. However, the model results will not be applied as the permit limits since the dilution provided by the stream is large (dilution ratio = 39:1). Per 391-2000-013, since both the toxicity-based and DO-based ammonia effluent limitations are greater than 15 mg/L, no NH_3-N limitations are needed for this facility. The existing monitoring requirements will remain in the proposed permit.

pH:
The effluent discharge pH should remain above 6 and below 9 standard units according to 25 Pa. Code § 95.2(1).

Dissolved Oxygen (D.O.):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit and current Department criteria.

Total Suspended Solids (TSS):
The existing limits of 30 mg/L average monthly, 45 mg/L average weekly, and 60 mg/L instantaneous maximum will remain in the proposed 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 below these limits. Mass limits are calculated as follows:

Average monthly mass limit: 30 mg/L x 0.243 MGD x 8.34 = 61.0 lbs/day
Average weekly mass limit: 45 mg/L x 0.243 MGD x 8.34 = 91.0 lbs/day

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.

UV Monitoring:
No TRC limits are needed since the facility utilizes ultraviolet disinfection. Per recently implemented Department guidelines, a monitoring requirement for the effectiveness of the UV intensity (mW/cm^2) will be remained in the proposed permit.

Influent BOD_5 and TSS Monitoring:
The permit will include influent BOD_5 and TSS monitoring at the same frequency as is done for effluent in order to implement 25 Pa. Code § 94.12 and assess percent removal requirements, per DEP policy.

Total Phosphorus:
The existing permit has phosphorus limitations of 2.0 mg/L average monthly and 4.0 mg/L instantaneous maximum. The most recent 12 months of DMR data indicate consistent compliance with the existing limits, which will remain in the proposed permit. Mass limit is calculated as follows:

Average monthly mass limit: 2.0 mg/L x 0.243 MGD x 8.34 = 4.1 lbs/day

Stormwater:
There is no stormwater outfall associated with this facility.

Chesapeake Bay Strategy:
In the Phase 2 WIP Wastewater Supplement revised on December 17, 2019, Attachment C Non-Significant Discharges with Cap Loads in NPDES Permits of this document shows that East Berlin Joint Authority - STP has been allocated 7,306 lbs/year of TN and 974 lbs/year of TP. This approach is consistent with the Chesapeake Bay TMDL and 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 existing limitations and monitoring requirements will remain in the proposed permit.

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 facility does not discharge to a 303(d) listed stream segment.

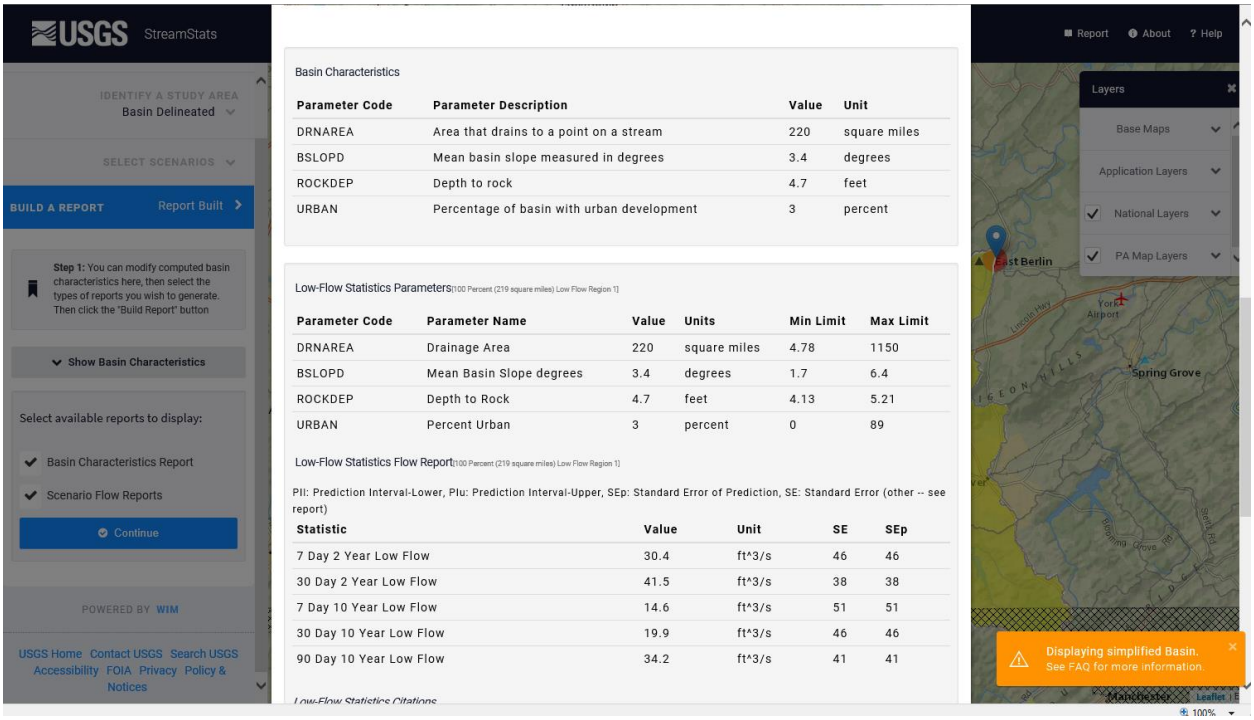
Class A Wild Trout Fisheries:
No Class A Wild Trout Fisheries are impacted by this discharge.

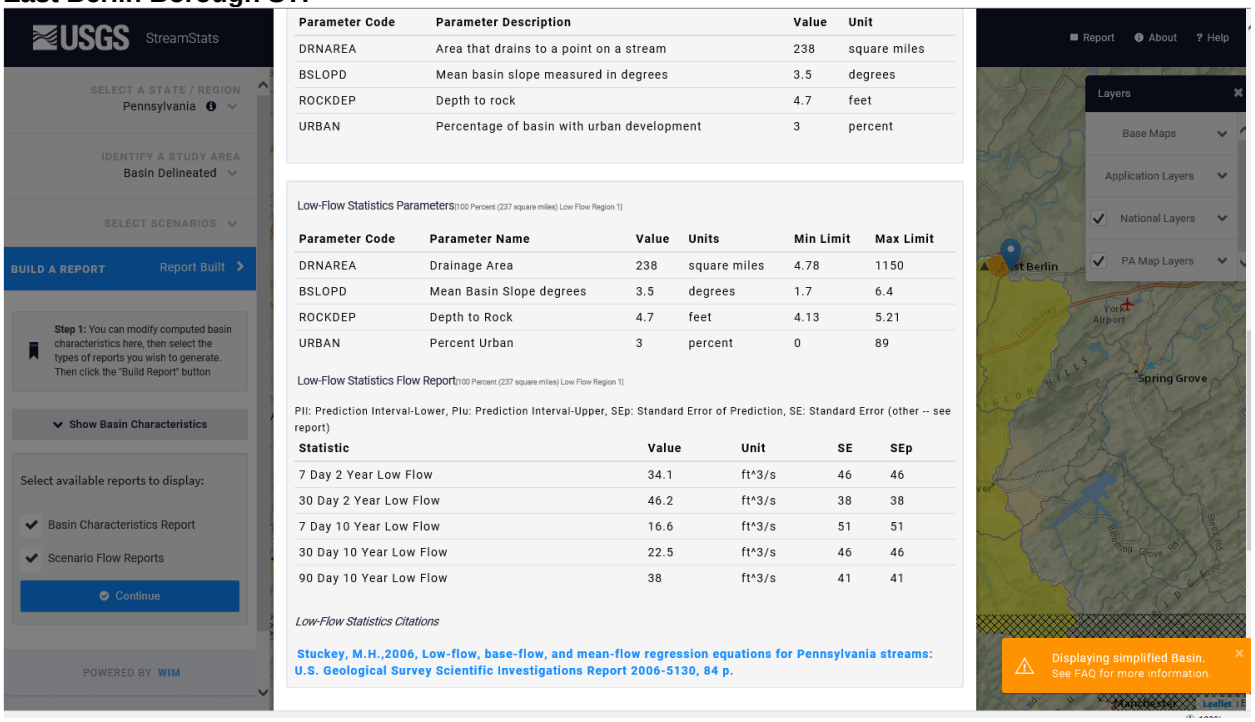
Node 1: East Berlin Borough WWTP Outfall 001 (Stream Code 08303)

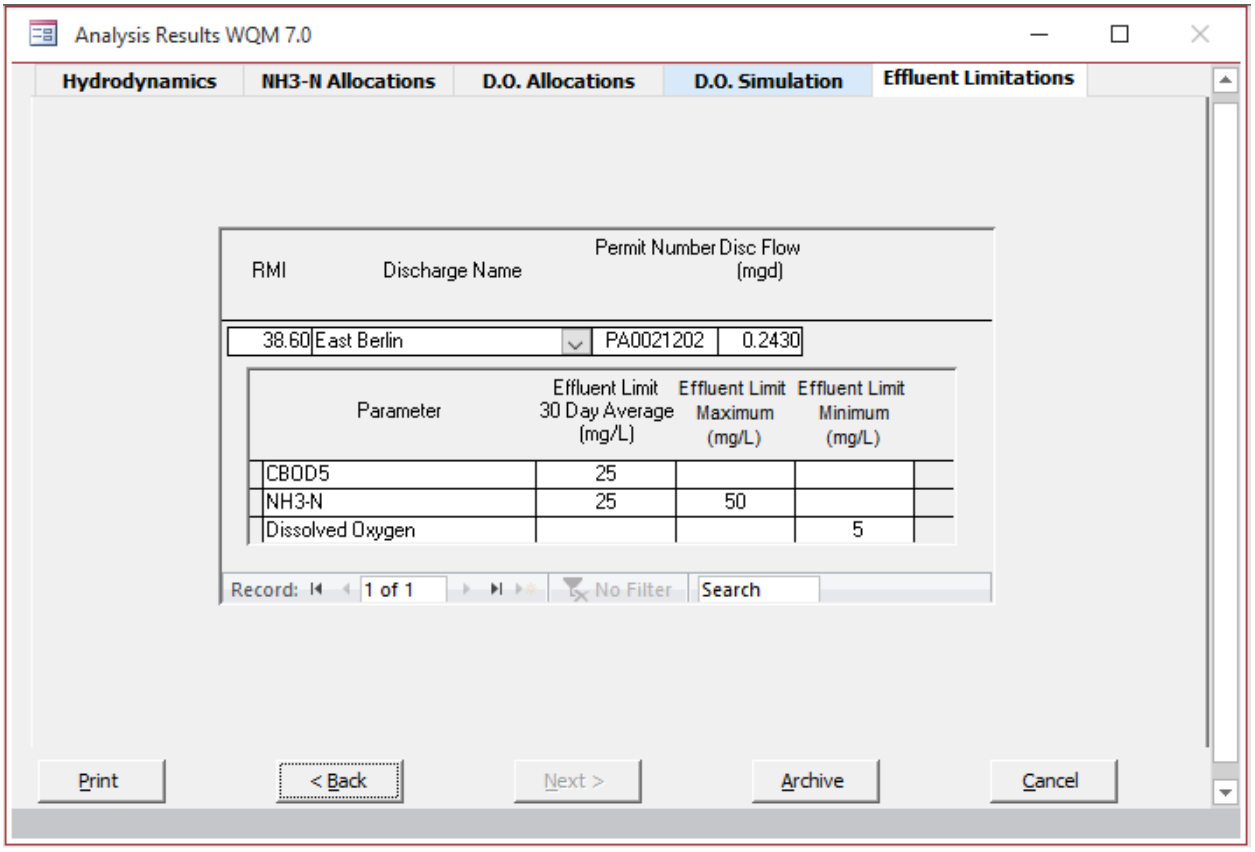
Elevation:	385.4 ft (USGS National Map Viewer)
Drainage Area:	220 mi^2 (USGS PA StreamStats)
River Mile Index:	38.60 (PA DEP eMapPA)
Low Flow Yield:	0.066 cfs/mi^2
Discharge Flow:	0.243 MGD (NPDES permit)

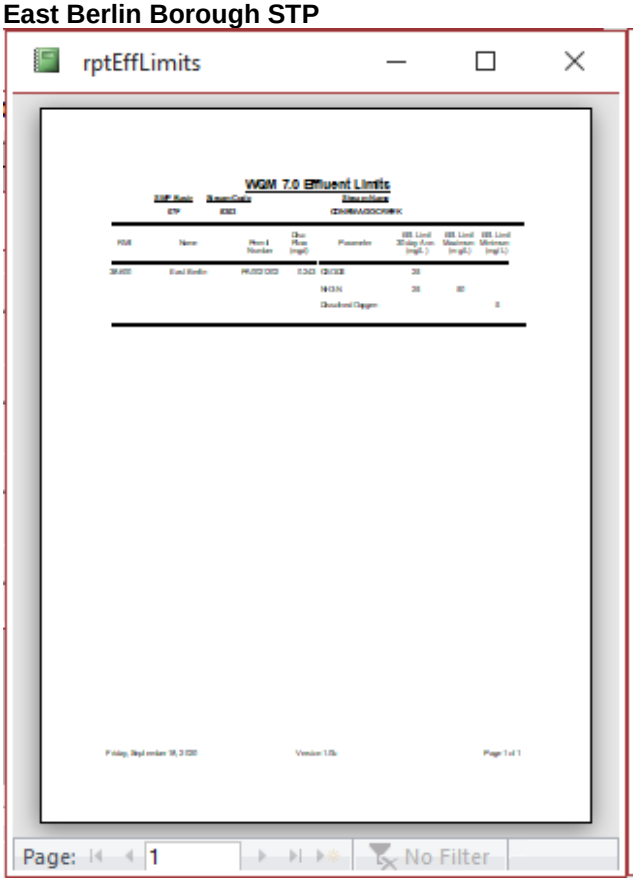
Node 2: Just before confluence of Conewago Creek with Beaver Creek

Elevation:	384.5 ft (USGS National Map Viewer)
Drainage Area:	238 mi^2 (USGS PA StreamStats)
River Mile Index:	37.97 (PA DEP eMapPA)
Low Flow Yield:	0.066 cfs/mi^2
Discharge Flow:	0.000 MGD




USGS StreamStats
SELECT A STATE / REGION
Pennsylvania
IDENTIFY A STUDY AREA
Basin Delineated
SELECT SCENARIOS
BUILD A REPORT
Report Built
Step 1: You can modify computed basin characteristics here, then select the types of reports you wish to generate. Then click the "Build Report" button
Show Basin Characteristics
Select available reports to display:
Basin Characteristics Report
Scenario Flow Reports
Continue
POWERED BY WIM
Parameter Code | Parameter Description | Value | Unit
DRNAREA | Area that drains to a point on a stream | 238 | square miles
BSLOPD | Mean basin slope measured in degrees | 3.5 | degrees
ROCKDEP | Depth to rock | 4.7 | feet
URBAN | Percentage of basin with urban development | 3 | percent
Low-Flow Statistics Parameters
Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit
DRNAREA | Drainage Area | 238 | square miles | 4.78 | 1150
BSLOPD | Mean Basin Slope degrees | 3.5 | degrees | 1.7 | 6.4
ROCKDEP | Depth to Rock | 4.7 | feet | 4.13 | 5.21
URBAN | Percent Urban | 3 | percent | 0 | 89
Low-Flow Statistics Flow Report
PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)
Statistic | Value | Unit | SE | SEp
7 Day 2 Year Low Flow | 34.1 | ft^3/s | 46 | 46
30 Day 2 Year Low Flow | 46.2 | ft^3/s | 38 | 38
7 Day 10 Year Low Flow | 16.6 | ft^3/s | 51 | 51
30 Day 10 Year Low Flow | 22.5 | ft^3/s | 46 | 46
90 Day 10 Year Low Flow | 38 | ft^3/s | 41 | 41
Low-Flow Statistics Citations
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p.
Report
About
Help
Layers
Base Maps
Application Layers
National Layers
PA Map Layers
Spring Grove
Displaying simplified Basin.
See FAQ for more information.


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)
38.60
East Berlin
PA0021202
0.2430
Parameter
Effluent Limit 30 Day Average (mg/L)
Effluent Limit Maximum (mg/L)
Effluent Limit Minimum (mg/L)
CBOD5
25
NH3-N
25
50
Dissolved Oxygen
5
Record: 1 of 1
No Filter
Search
Print
< Back
Next >
Archive
Cancel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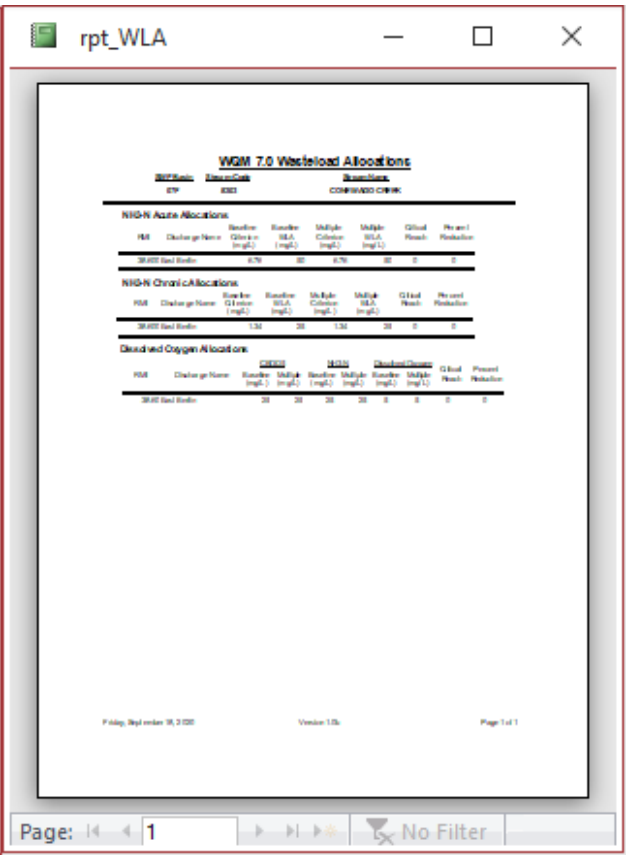
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WQM 7.0 Wasteload Allocations
NH3-N Acute Allocations
NH3-N Chronic Allocations
Dissolved Oxygen Allocations
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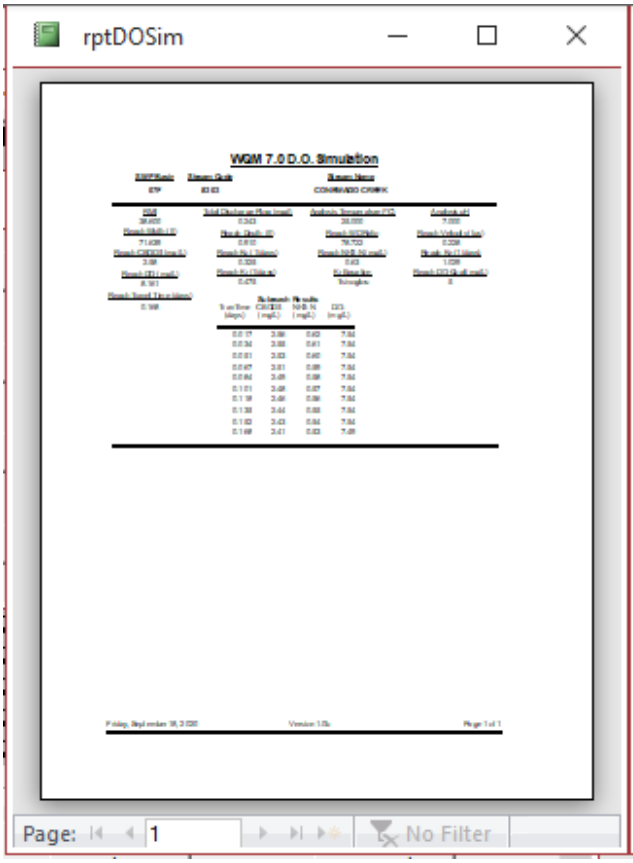
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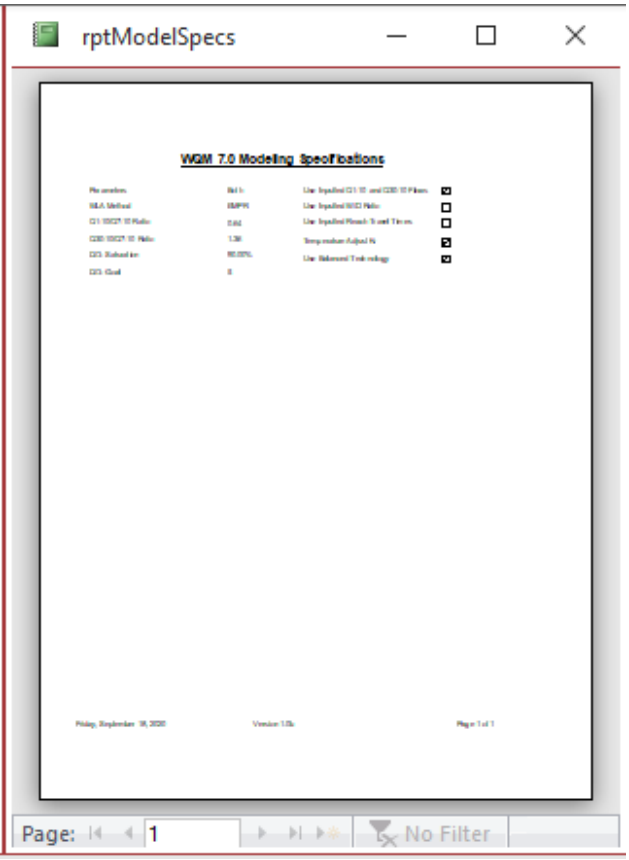
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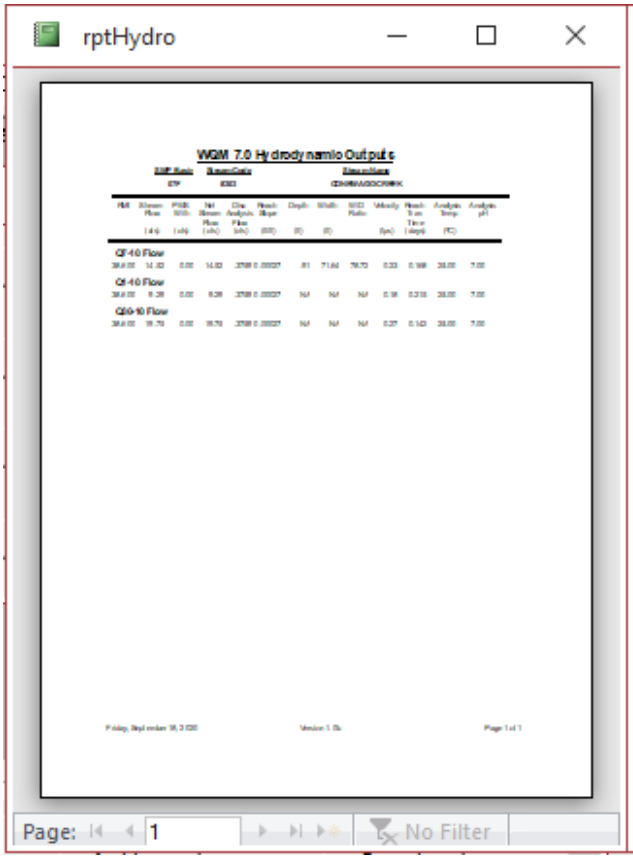
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WQM 7.0 Hydrodynamic Outputs
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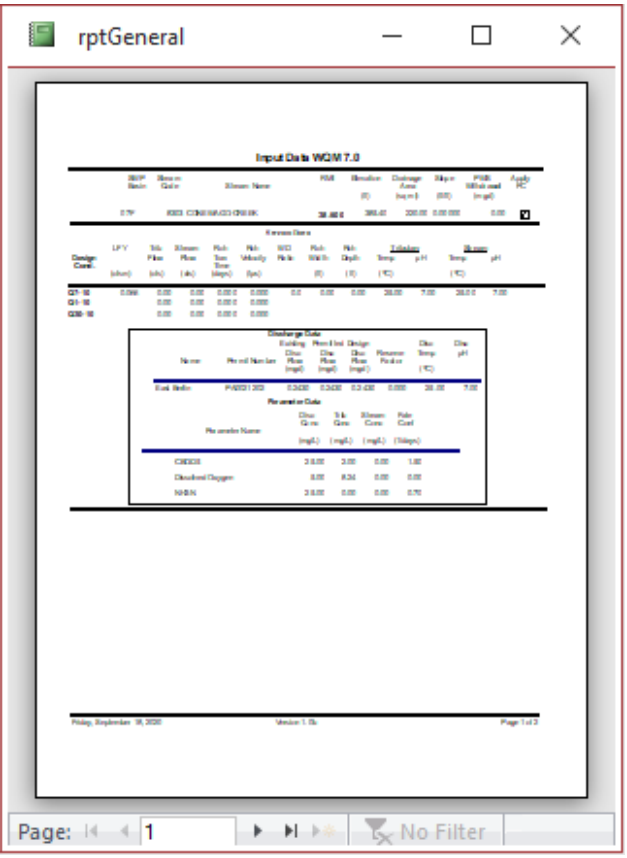
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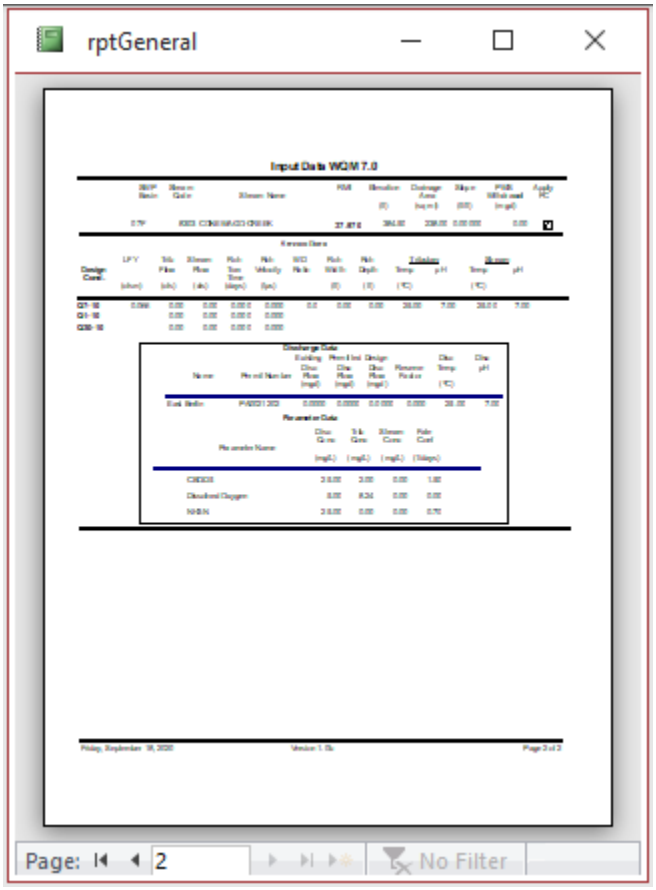
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Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum 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
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm^2)	XXX	XXX	Report	Report	XXX	XXX	1/day	Recorded
$CBOD_5$	51	81 Wkly Avg	XXX	25	40	50	1/week	8-Hr Composite
Total Suspended Solids	61	91 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
Total Suspended Solids Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Phosphorus	4.1	XXX	XXX	2.0	XXX	4.0	1/week	8-Hr Composite

Existing Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum		
Ammonia---N	Report	Report	XXX	Report	XXX	1/week	8-Hr Composite
Kjeldahl---N	Report	XXX	XXX	Report	XXX	1/week	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	1/week	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	1/week	8-Hr Composite
Net Total Nitrogen	Report	7,306	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	913	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
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm²)	XXX	XXX	Report	Report	XXX	XXX	1/day	Recorded
$CBOD_5$	51	81 Wkly Avg	XXX	25	40	50	1/week	8-Hr Composite
TSS	61	91 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	XXX	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Phosphorus	4.1	XXX	XXX	2.0	XXX	4.0	1/week	8-Hr Composite

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	1/week	8-hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	1/week	8-hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	1/week	8-hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	1/week	8-hr Composite
Net Total Nitrogen	Report	7,306	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	913	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: