pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0087513**
Facility Type	**Municipal**	APS ID	**1640**
Major / Minor	**Minor**	Authorization ID	**1300100**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Mapleton Borough Area Joint Municipal Authority Huntingdon County**	Facility Name	**Mapleton Area STP**
Applicant Address	13343 Smith Valley Road, PO Box 415 Mapleton Depot, PA 17052-0415	Facility Address	13343 Smith Valley Road Mapleton Depot, PA 17052
Applicant Contact	Bruce Richards	Facility Contact	Bruce Richards
Applicant Phone	(814) 543-0853	Facility Phone	(814) 543-0853
Client ID	81939	Site ID	459473
Ch 94 Load Status	Not Overloaded	Municipality	Union Township
Connection Status	No Limitations	County	Huntingdon
Date Application Received	December 13, 2019	EPA Waived?	Yes
Date Application Accepted	December 31, 2019	If No, Reason	
Purpose of Application	NPDES permit renewal.		

Summary of Review

Mapleton Area Joint Municipal Authority (MAJMA) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on February 20, 2015 and became effective on March 1, 2015. The permit expired on February 29, 2020.

The facility has an average annual design flow of 0.10 MGD that discharges to Hares Valley Creek about 1600 feet upstream from its confluence with Juniata River. The application states the following flow contribution sources: Mapleton Borough (70%), and Union Township (30%).

WQM Part II No. 3197403 original was issued on December 30, 1997. WQM Part II No. 3197403 A-1 amendment was issued on December 10, 2014 to replace OD impellers in both pumps at pump station No. 1; and for installing new fine screen, bar screen, and two identical new UV units. WQM Part II permit No. 3197403 A-2 amendment was issued on March 3, 2017 to upgrade the clarifier to handle an average flow of 0.05 MGD & a peak hour flow of 0.125 MGD with a recirculation flow of 0.05 MGD, and a Duplex Return Activated Sludge/Waste Activated Sludge (RAS/WAS) pumps which are each rated at 40 gpm @10 TDH.

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		Hilary H. Le / Environmental Engineering Specialist	April 07, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E./ Clean Water Program Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.1
Latitude	40º 23' 52.23"	Longitude	-77º 56' 43.53"
Quad Name	Mount Union	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Hares Valley Creek (TSF)	Stream Code	13270
NHD Com ID	66209991	RMI	0.3 mile
Drainage Area	13.1 mi.^{2}	Yield (cfs/mi^2)	0.03
Q_{7-10} Flow (cfs)	0.39	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	573.41	Slope (ft/ft)	
Watershed No.	12-C	Chapter 93 Class.	TSF
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	Mifflintown Municipal Authority, Juniata County		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	34.39 miles	Distance from Outfall (mi)	Approximate 51 miles

Changes Since Last Permit Issuance:

Drainage Area:
The discharge is to Little Juniata River at RMI 0.3 mile. A drainage area upstream of the discharge is estimated to be 13.1 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow
According to USGS StreamStats, the point of first use at the confluence with Hares Valley Creek (Stream Code 12370) has a Q_{7-10} of 0.39 cfs and a drainage area of 13.1 mi.^{2}, which results in a Q_{7-10} low flow yield of 0.03 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} = 0.39 cfs
Low Flow Yield = 0.39 cfs / 13.1 mi.^{2} = 0.03 cfs/mi.^{2}
Q_{30-10} = 1.36 * 0.39 cfs = 0.53 cfs
Q_{1-10} = 0.64 * 0.39 cfs = 0.25 cfs

The resulting Q_{7-10} dilution ratio is: Q_{stream} / $Q_{discharge}$ = 0.39 cfs / [0.1 MGD * (1.55 cfs/MGD)] = 2.52:1

Hares Valley Creek
25 Pa. Code § 93.9n classifies Hares Valley Creek as Trout Stocking Fishes (TSF) surface water. Based on the 2018 Integrated Report, Hares Valley Creek, assessment unit ID 9867, 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 Mifflintown Municipal Authority, Juniata 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: Mapleton Area STP

WQM Permit No.	Issuance Date
3197403	12/30/1997
3197403 A-1	12/10/2014
3197403 A-2	3/03/2017

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary with Ammonia Reduction	Extended Aeration	Ultraviolet	0.1

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.1	200	Not Overloaded	Dewatering	Landfill

Changes Since Last Permit Issuance: none

The existing WWTP train is as follows:

Comminutor (1) ⇒ Bar Screen (1) ⇒ Equalization Tanks (3) ⇒ Aeration Tanks (12) ⇒ Clarifiers (4) ⇒ Ultraviolet Disinfection Units (2) ⇒ Sludge Holding units (3) ⇒ Sludge Bagger (1) ⇒ Discharge (outfall 001)

Ultraviolet is used for disinfection.

Sodium bicarbonate is used for alkalinity adjustment.

Compliance History	
Summary of DMRs:	DMRs reported last 12 months from February 1, 2019 to January 30, 2020 are summarized in the Table below (Pages 5 & 6).
Summary of Inspections:	1/30/2020: Mr. Clark, DEP WQS, conducted compliance evaluation inspection. There was a recommendation to investigate the cause of the floating sludge in the clarifier. The effluent was clear. The field test results were within permit limits. There were no violations noted during inspection. Liquid sludge is hauled out about every 3 months, and the last (most recent) hauled was 2,400 gallons on 1/2/2020. 5/30/2018: Mr. Clark, DEP WQS, conducted routine partial inspection due to facility recently added an additional clarifier to the treatment system. The outfall area was clear. The last two rounds of effluent tests results were within the permit limits. There were no violations noted during inspection. 12/27/2017: Mr. Clark, DEP WQS, conducted compliance evaluation inspection. The construction of new circular clarifier started last month and is expected to be completed around the end of March 2018. The field test results were within permit limits. There were no violations noted during inspection. Sludge is hauled to Spring Creek STP.
Other Comments:	There are three open violations associated with the permittee or the facility.

Other Comments:

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

Influent Testing Results			*Effluent Testing Results*		
Parameter	**Min/Max Value**	**Average Value**	**Parameter**	**Min/Max Value**	**Average Value**
BOD_5 (mg/L)	622 mg/L	261.43 mg/L	pH (minimum)	6.00 S.U.	
BOD_5 (lbs/day)	129.06 lbs/day	63.09 lbs/day	pH (maximum)	7.03 S.U.	
TSS (mg/L)	836 mg/L	156.59 mg/L	D.O (minimum)	5.00 mg/L	7.91 mg/L
TSS (lbs/day)	173.47 lbs/day	38.18 lbs/day	TRC	N/A mg/L	N/A mg/L
TN (mg/L)	<27.32 mg/L	<27.32 mg/L	Fecal Coliform	9678.4 No./100mL	< 366.83 No./100 mL
TN (lbs/day)	<4.284 lbs/day	<4.284 lbs/day	$CBOD_5$	44.4 mg/L	< 4.80 mg/L
TP (mg/L)	6.51 mg/L	6.51 mg/L	TSS	143 mg/L	< 8.41 mg/L
TP (lbs/day)	1.021 lbs/day	1.021 lbs/day	NH_3-N	41.04 mg/L	< 2.27 mg/L
NH_3-N (mg/L)	9.297 mg/L	9.279 mg/L	TN	<34.71 mg/L	<16.98 mg/L
NH_3-N (lbs/day)	1.458 lbs/day	1.458 lbs/day	TP	8.13 mg/L	4.06 mg/L
TDS (mg/L)	356 mg/L	356 mg/L	Temp	50 F	50 F
TDS (lbs/day)	55.818 lbs/day	55.818 lbs/day	TKN	32.78 mg/L	<5.64 mg/L
TKN	26.12 mg/L	26.12 mg/L	NO_2-N + NO_3-N	32.71 mg/L	<11.21 mg/L
NO_2-N + NO_3-N	< 1.2 mg/L	< 1.2 mg/L	TDS	330 mg/L	330 mg/L
			Chloride	41.2 mg/L	41.2 mg/L
			Bromide	< 0.4 mg/L	< 0.4 mg/L
			Sulfate	41.5 mg/L	41.5 mg/L
			Oil and Grease	< 12.5 mg/L	< 12.5 mg/L
			Total Copper	0.021 mg/L	0.021 mg/L
			Total Lead	< 0.008 mg/L	< 0.008 mg/L
			Total Zinc	0.095 mg/L	0.095 mg/L

Compliance History

DMR Data for Outfall 001 (from February 1, 2019 to January 31, 2020)

Parameter	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19
Flow (MGD) Average Monthly	0.03503	0.031355	0.02553	0.022108	0.023336	0.025152	0.029836	0.025647	0.034116	0.029185	0.043972	0.044083
Flow (MGD) Daily Maximum	0.10489	0.04807	0.03881	0.04287	0.03703	0.03797	0.046	0.03486	0.10388	0.04891	0.111116	0.107817
pH (S.U.) Minimum	6.17	6.45	6.12	6.27	6.47	6.3	6.42	6.56	6.65	6.64	6.84	6.02
pH (S.U.) Maximum	7.65	7.23	7.75	7.88	7.36	7.29	8.06	7.59	7.71	7.44	7.32	7.42
DO (mg/L) Minimum	6.04	6.04	7.21	5.09	5.34	5.09	5.05	5.2	5.01	5.68	5.53	7.39
CBOD5 (lbs/day) Average Monthly	< 1	< 1	< 0.7	< 0.7	< 0.7	< 0.6	< 1	< 1	< 1.0	< 4.0	3.0	< 1
CBOD5 (lbs/day) Weekly Average	1	1	1	< 1	< 0.9	< 0.7	1	2	< 2.0	10	6	< 2
CBOD5 (mg/L) Average Monthly	< 3	< 4	< 4	< 3	< 3	< 3	< 4	< 5	< 4.0	< 16	7.0	< 3
CBOD5 (mg/L) Weekly Average	5	5	5	< 3	< 3	< 3	5	7	6.0	44	9	3
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	75	81	54	43	51	80	71	45	55	68	67	60
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	81	98	70	52	68	129	86	49	90	80	74	68
BOD5 (mg/L) Raw Sewage Influent Average Monthly	301	300	267	288	292	399	296	206	249	266	224	177
TSS (lbs/day) Average Monthly	1	< 1	1	< 0.5	0.9	< 1	1	1	2.0	13	10	2
TSS (lbs/day) Raw Sewage Influent Average Monthly	54	25	24	17	17	74	45	29	36	40	35	35
TSS (lbs/day) Raw Sewage Influent Daily Maximum	172	51	28	23	23	173	77	42	82	67	38	45
TSS (lbs/day) Weekly Average	2	3	2	0.9	2	2	2	3	3.0	34	21	3
TSS (mg/L) Average Monthly	4	< 5	6	< 2	3	< 5	6	6	6.0	59	23	5

TSS (mg/L) Raw Sewage Influent Average Monthly	214	84	120	119	95	362	192	131	158	155	115	103
TSS (mg/L) Weekly Average	2	9	9	5	7	8	8	10	7.0	143	34	8
Fecal Coliform (CFU/100 ml) Geometric Mean	< 4	< 4	< 5	< 4	< 4	< 43	< 36	< 23	< 23	< 20	< 4.0	< 4
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	4	< 4	< 10	< 4	4	3080.4	9208	560.4	4479.6	5446	839.2	< 4
UV Transmittance (%) Minimum	56	48	57.2	60.1	60.4	58.3	58.2	61.3	57.4	59.2	59.3	67.9
Nitrate-Nitrite (mg/L) Average Monthly	9.098	21.799	24.89	< 24.19	21.017	30.64	7.819	2.824	2.018	1.959	2.443	9.444
Total Nitrogen (mg/L) Average Monthly	< 11.66	< 22.476	< 25.94	< 25.19	< 22.802	< 32.12	18.28	12.83	8.67	19.83	6.47	< 10.85
Ammonia (lbs/day) Average Monthly	< 0.4	< 0.03	< 0.02	< 0.05	< 0.3	0.08	< 1.9	1.6	1.2	2.1	0.2	< 0.07
Ammonia (mg/L) Average Monthly	< 1.314	< 0.1	< 0.111	< 0.189	< 1.008	0.398	< 8.064	7.241	4.329	8.447	0.62	< 1.93
TKN (mg/L) Average Monthly	< 2.559	< 0.677	< 1	< 1	< 1.79	< 1.48	< 10.46	9.95	6.65	15.97	4.03	< 1.4
Total Phosphorus (mg/L) Average Monthly	4.09	4.2	4.75	5.39	6.05	6.26	4.5	4.02	2.51	2.661	2.61	3.85

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.1
Latitude 40º 23' 52.15" **Longitude** -77º 56' 43.55"
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

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing limits of 25 mg/L monthly average (AML), 40mg/l average weekly limit (AWL), and 50 mg/L instantaneous maximum will remain in the proposed permit as per guidance document 391-2000-014. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Average monthly mass limit: 25 mg/L x 0.1 MGD x 8.34 = 20.85 (21.0) lbs/day
Average weekly mass limit: 40 mg/L x 0.1 MGD x 8.34 = 33.36 (33.0) lbs/day

Total Suspended Solids (TSS):
The existing technology-based limits of 30 mg/L average monthly, 45 mg/L average weekly, and 60 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 these limits. Mass limits are calculated as follows:

Average monthly mass limit: 30 mg/L x 0.1 MGD x 8.34 = 25.0 lbs/day
Average weekly mass limit: 45 mg/L x 0.1 MGD x 8.34 = 37.5 (38.0) lbs/day

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.

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

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 1,000/100 ml and 25 Pa. Code § 92a.47.(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean and an instantaneous maximum not greater than 10,000/100 ml.

Ultraviolet (UV):
Since UV is used for disinfection, routine monitoring of UV light transmittance (%) will remain in the proposed permit.

Ammonia (NH_3-N):

NH_3N calculations are 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_3-N criteria used in the attached WQM 7.0 computer model of the stream:

*	Discharge pH	=	7.0	(Default)
*	Discharge Temperature	=	20°C	(Default)
*	Stream pH	=	7.0	(Default)
*	Stream Temperature	=	25°C	(Default)
*	Background NH_3-N	=	0 mg/L	(Default)

The model input data and results are attached. The printout of the WQM 7.0 output indicates that at a discharge of 0.1 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 7.87 mg/L NH_3-N as a monthly average and 15.74 mg/L NH_3-N instantaneous maximum are necessary to protect the aquatic life from toxicity effects.

The more stringent summer in existing limits of 5.0 mg/L monthly average & 10.0 mg/L IMAX will remain in the proposed permit due to anti-backsliding requirements. The winter effluent limit will be set at three-times the summer limits. Recent DMRs and inspection reports indicate that the facility has been consistently achieving these limits. Mass limits are calculated as follows:

Summer average monthly mass limit: 5.0 mg/L x 0.1 MGD x 8.34 = 4.17 (4.2) lbs/day
Winter average monthly mass limit: 4.2 lbs/day x 3 = 12.51 (12.5) lbs/day

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.

Stormwater:

There is no stormwater outfall associated with this facility.

Chesapeake Bay Strategy:

The Department formulated a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). Sewage discharges have been prioritized by Central Office based on their delivered TN loadings to the Bay. The highest priority (Phases I, II, and III) dischargers will receive annual loading caps based on their design flow on August 29, 2005 and concentrations of 6 mg/L TN and 0.8 mg/L TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. Phase IV (0.2 -0.4 MGD) will be required to monitor and report TN and TP during permit renewal monthly and Phase V (below 0.2 MGD) will monitor during current permit renewal once a year. However, any facility in Phases IV and V that undergoes expansion is subjected to cap load right away. This plant, classified as a phase V, will be required to monitor and report for Total Phosphorus, Nitrate-Nitrite as N, Total Kjeldahl Nitrogen, and Total Nitrogen. The weekly "Monitor & Report" requirements for TP, Nitrate-Nitrite as N, and Total Kjeldahl Nitrogen; and monthly calculation "Monitor & Report" for TN 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.

303d Listed Streams:

The discharge is not located on a 303d listed stream segment. The stream segment that receive the discharge is listed as attaining its used for aquatic life and fish consumption.

Class A Wild Trout Fisheries:

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

WQM 7.0 Data:

Node 1:	Outfall 001 on Hares Valley Creek (13270)	
	Elevation:	573.41 ft (USGS National Map Viewer)
	Drainage Area:	13.1 $mi.^2$ (USGS PA StreamStats)
	River Mile Index:	0.3 (PA DEP eMapPA)
	Q_{7-10} Low Flow Yield:	0.030 $cfs/mi.^2$
	Discharge Flow:	0.10 MGD (NPDES permit)
Node 2:	Just before confluence Hares Valley Creek to Juniata River	
	Elevation:	562.64 ft (USGS National Map Viewer)
	Drainage Area:	2030 $mi.^2$ (USGS PA StreamStats)
	River Mile Index:	0.001 (PA DEP eMapPA)
	Q_{7-10} Low Flow Yield:	0.030 $cfs/mi.^2$
	Discharge Flow:	0.000 MGD

WQM7.0 data is attached.

Mapleton Area
WQM7.0 data.pdf

Permit No. PA0087513

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	Daily 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 Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
$CBOD_5$	21.0	33.0 Wkly Avg	XXX	25.0	40.0	50.0	1/week	24-Hr Composite
TSS	25.0	38.0 Wkly Avg	XXX	30.0	45.0	60.0	1/week	24-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-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	4.2	XXX	XXX	5.0	XXX	10.0	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	12.5	XXX	XXX	15.0	XXX	30.0	1/week	24-Hr Composite
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation

Compliance Sampling Location:

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	Daily 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 Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
$CBOD_5$	21.0	33.0 Wkly Avg	XXX	25.0	40.0	50.0	1/week	24-Hr Composite
TSS	25.0	38.0 Wkly Avg	XXX	30.0	45.0	60.0	1/week	24-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-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	4.2	XXX	XXX	5.0	XXX	10.0	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	12.5	XXX	XXX	15.0	XXX	30.0	1/week	24-Hr Composite
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation

Compliance Sampling Location:

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis 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, Waste Load 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.
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☐	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 Waste Load 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: