pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0043567**
Facility Type	**Municipal**	APS ID	**209**
Major / Minor	**Minor**	Authorization ID	**1311870**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**York Springs Municipal Authority** **Adams County**	Facility Name	**York Springs STP**
Applicant Address	311 Main Street	Facility Address	Pa Route 94 & Us Route 15 8455 Carlisle Pike
	York Springs, PA 17372-0222		York Springs, PA 17372
Applicant Contact	Kevin Beaverson	Facility Contact	Kevin Beaverson
Applicant Phone	(717) 528-7955	Facility Phone	(717) 528-7955
Client ID	191441	Site ID	251150
Ch 94 Load Status	Not Overloaded	Municipality	York Springs Borough
Connection Status	No Limitations	County	Adams
Date Application Received	April 14, 2020	EPA Waived?	Yes
Date Application Accepted	April 27, 2020	If No, Reason	

Purpose of Application: NPDES permit renewal.

Summary of Review

York Springs Municipal 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 September 14, 2015 and became effective on October 1, 2015. The existing permit expiration date is September 30, 2020.

The discharge design flow is 0.120 MGD. This facility is owned and operated by York Springs Borough and serves York Springs Borough (90%), Latimore Township (5%), and Huntingdon Township (5%).

WQM Part II No. 0186409 original was issued on 10/17/1986, and first amendment WQM Part II No. 0186409 A-1 was issued on July 13, 2020 to replace Chlorine disinfection with a UV disinfection system.

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml. A UV intensity in mW/cm^2 monitoring requirement was added to the 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	September 18, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.12
Latitude	40º 0' 7.98"	Longitude	-77º 6' 26.02"
Quad Name	Dillsburg	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Gardner Run (WWF)	Stream Code	08712
NHD Com ID	57468871	RMI	0.66 mile
Drainage Area	0.31 mi.^{2}	Yield (cfs/mi^2)	0.061
Q_{7-10} Flow (cfs)	0.019	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	575	Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Not Assessed		
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 54 mile

Changes Since Last Permit Issuance:

Drainage Area
The discharge is to Gardner Run at RMI 0.66 mile. A drainage area upstream of the discharge is estimated to be 0.31 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 0.019 cfs and a drainage area of 0.31 mi.^{2}, which results in a Q_{7-10} low flow yield of 0.061 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} = 0.019 cfs
Low Flow Yield = 0.019 cfs / 0.31 mi.^{2} = 0.061 cfs/mi.^{2}
Q_{30-10} = 1.36 * 0.019 cfs = 0.026 cfs
Q_{1-10} = 0.64 * 0.019 cfs = 0.012 cfs

The resulting Q_{7-10} dilution ratio is: Q_{stream} / $Q_{discharge}$ = 0.019 cfs / [0.120 MGD * (1.547 cfs/MGD)] = 0.10:1

Gardner Run
25 Pa. Code § 93.9o classifies Gardner Run as Warm-Water Fishes (WWF) surface water. Based on the 2018 Integrated Report, Gardner Run, assessment unit ID 18609, 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 54.0 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: York Springs STP				
WQM Permit No.	**Issuance Date**			
0186409	10/17/1986			
0186409 A-1	7/13/2020			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Chlorine With Dechlorination	0.12
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.12	250	Not Overloaded		

Changes Since Last Permit Issuance:

The facility is currently in the process of upgrading their WWTP. The existing WWTP train is as follows:

Fine Screen Press (1) ⇒ Bar Screen (1) ⇒ Aeration Tanks (2) ⇒ Clarifiers (2) ⇒ Chlorine Contact Tanks (with liquid feed) (2) ⇒ Dechlorination Unit (1) ⇒ Discharge

The new WWTP train will be as follows:

Fine Screen Press (1) ⇒ Bar Screen (1) ⇒ Aeration Tanks (2) ⇒ Clarifiers (2) ⇒ UV disinfection ⇒ Discharge

The system incorporates the chemical addition of sodium hypochlorite (for disinfection), sodium bisulfite (for dechlorination), alum (for phosphorus removal), and soda ash (for pH adjustment).

A two aerated sludge holding tanks are on-site.

Compliance History	
Summary of DMRs:	The DMRs reported from August 1, 2019 to July 31, 2020 is summarized in the Table below (Pages # 5 & 6).
Summary of Inspections:	12/8/2016: Mr. Haines, DEP WQS, conducted compliance evaluation inspection. There was a recommendation to submit annual nutrient report DMR for compliance year 2016 with November 2016 DMR. Field test results were within permitted limits. Plant effluent appeared clear. There were no violations noted during inspection. 1/8/2018: Mr. Bowen, DEP WQS, conducted compliance evaluation inspection. Field test results were within permitted limits. Plant effluent appeared clear. 5/19/2020: Mr. Bettinger, DEP Environmental Trainee, conducted ADMIN inspection due to Covid-19. There were no violations noted. All treatment units were operable.
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			*Effluent Testing Results*		
Parameter	**Min/Max Value**	**Average Value**	**Parameter**	**Min/Max Value**	**Average Value**
BOD_5 (mg/L)	313 mg/L	195 mg/L	pH (minimum)	6.4 S.U.	
BOD_5 (lbs/day)	167 lbs/day	121 lbs/day	pH (maximum)	7.9 S.U.	
TSS (mg/L)	188 mg/L	117 mg/L	D.O (minimum)	5.9 mg/L	7.5 mg/L
TSS (lbs/day)	102 lbs/day	72 lbs/day	TRC	0.01 mg/L	0.019 mg/L
TN (mg/L)	<60.3 mg/L	<60.3 mg/L	Fecal Coliform	82 No./100mL	13.5 No./100 mL
TN (lbs/day)	lbs/day	lbs/day	$CBOD_5$	7.0 mg/L	3.3 mg/L
TP (mg/L)	6.5 mg/L	6.5 mg/L	TSS	9.0 mg/L	4.3 mg/L
TP (lbs/day)	lbs/day	lbs/day	NH_3-N	2.5 mg/L	0.85 mg/L
NH_3-N (mg/L)	29 mg/L	29 mg/L	TN	33.9 mg/L	19.9 mg/L
NH_3-N (lbs/day)	lbs/day	lbs/day	TP	0.8 mg/L	0.5 mg/L
TDS (mg/L)	360 mg/L	360 mg/L	Temp	F	F
TDS (lbs/day)	lbs/day	lbs/day	TKN	4.8 mg/L	1.2 mg/L
TKN	59 mg/L	59 mg/L	NO_2-N + NO_3-N	33.4 mg/L	18.6 mg/L
NO_2-N + NO_3-N	< 1.34 mg/L	< 1.34 mg/L	TDS	412 mg/L	412 mg/L
			Chloride	56 mg/L	56 mg/L
			Bromide	< 0.5 mg/L	< 0.5 mg/L
			Sulfate	28 mg/L	28 mg/L
			Oil and Grease	< 5.0 mg/L	< 5.0 mg/L
			Total Copper	0.016 mg/L	0.016 mg/L
			Total Lead	< 0.001 mg/L	< 0.001 mg/L
			Total Zinc	0.052 mg/L	0.052 mg/L

Compliance History

DMR Data for Outfall 001 (from August 1, 2019 to July 31, 2020)

Parameter	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19
Flow (MGD) Average Monthly	0.054	0.063	0.071	0.074	0.069	0.067	0.070	0.072	0.057	0.068	0.048	0.055
Flow (MGD) Daily Maximum	0.076	0.108	0.128	0.235	0.164	0.175	0.201	0.159	0.132	0.302	0.065	0.085
pH (S.U.) Minimum	7.0	7.0	7.1	7.0	7.0	7.0	7.2	7.1	7.0	7.0	6.5	6.7
pH (S.U.) Maximum	7.3	7.3	7.4	7.4	7.5	7.5	7.5	7.7	7.9	7.4	7.4	7.5
DO (mg/L) Minimum	5.6	5.3	5.9	6.6	6.1	6.7	7.3	7.5	8.0	6.5	6.4	6.9
TRC (mg/L) Average Monthly	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	0.02	< 0.02	< 0.02	0.02
TRC (mg/L) Instantaneous Maximum	0.06	0.05	0.04	0.05	0.05	0.06	0.04	0.04	0.05	0.05	0.05	0.05
CBOD5 (lbs/day) Average Monthly	< 2	< 1	< 2	< 2	< 2	< 1	< 2	< 2	< 1	< 2	< 1	< 1
CBOD5 (lbs/day) Weekly Average	3	1	< 2	4	2	< 2	4	3	< 2	< 3	< 1	< 2
CBOD5 (mg/L) Average Monthly	< 4	< 3	< 3	< 4	< 3	< 3	< 4	< 3	< 3	< 3	< 3	< 3
CBOD5 (mg/L) Weekly Average	7	3	< 3	6	3	3	9	3	< 3	4	< 3	3
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	178	191	144	108	236	107	122	118	88	167	110	139
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	390	226	193	118	363	172	160	170	132	291	200	204
BOD5 (mg/L) Raw Sewage Influent Average Monthly	365	407	268	206	415	222	259	239	215	261	313	284
TSS (lbs/day) Average Monthly	2	2	3	3	3	3	2	2	3	3	3	2
TSS (lbs/day) Raw Sewage Influent Average Monthly	94	145	82	34	151	50	79	87	32	80	43	75

TSS (lbs/day) Raw Sewage Influent Daily Maximum	208	195	204	46	235	121	117	180	43	257	104	117
TSS (lbs/day) Weekly Average	3	3	8	4	5	9	3	4	6	10	4	4
TSS (mg/L) Average Monthly	3	4	6	5	6	6	4	3	8	5	9	5
TSS (mg/L) Raw Sewage Influent Average Monthly	190	315	166	66	268	100	170	188	85	106	125	154
TSS (mg/L) Weekly Average	6	7	13	9	12	17	8	4	18	10	12	7
Fecal Coliform (CFU/100 ml) Geometric Mean	< 2	< 1	< 2	< 1	< 1	< 3	< 16	< 1	3	6	4	8
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	3	4	6	3	5	7	2420	2	9	35	10	52
Nitrate-Nitrite (mg/L) Average Monthly	< 17.4	< 19.4	< 15.4	< 19.4	< 21.4	< 14.4	< 10.4	< 14.4	< 26.4	< 33.4	< 30.4	< 27.4
Nitrate-Nitrite (lbs) Total Monthly	< 252	< 286	< 299	< 262	< 393	< 171	< 164	< 194	< 390	< 354	< 373	< 446
Total Nitrogen (mg/L) Average Monthly	< 17.9	< 19.9	< 16.9	< 22.4	< 23.9	< 14.9	< 14.6	< 14.9	< 26.9	< 33.9	< 30.9	< 27.9
Total Nitrogen (lbs) Total Monthly	< 259	< 294	< 328	< 303	< 439	< 177	< 230	< 200	< 397	< 359	< 379	< 454
Total Nitrogen (lbs) Total Annual											< 4290.7	
Ammonia (lbs/day) Average Monthly	0.5	0.6	0.7	1.2	1.8	1.4	1.9	1.1	0.2	< 0.2	0.2	< 0.2
Ammonia (mg/L) Average Monthly	1.0	1.4	1.3	2.4	3.0	3.0	4.0	1.9	0.5	< 0.4	0.3	< 0.3
TKN (mg/L) Average Monthly	< 0.5	< 0.5	1.5	3.0	< 2.5	< 0.5	4.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TKN (lbs) Total Monthly	< 7	< 7	29	41	< 46	< 6	66	< 7	< 7	< 5	< 6	< 8
Total Phosphorus (mg/L) Average Monthly	1.5	1.1	0.4	0.5	0.4	0.7	0.5	0.5	0.7	0.8	0.6	0.8
Total Phosphorus (lbs) Total Monthly	22	15	6	8	6	10	7	9	9	15	7	12
Total Phosphorus (lbs) Total Annual											136.7	

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .12
Latitude 40º 0' 8.36" **Longitude** -77º 6' 25.74"
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 15 mg/L, average weekly limit (AWL) of 22 mg/L and IMAX of 30 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: 15 mg/L x 0.120 MGD x 8.34 = 15.0 lbs/day
Average weekly mass limit: 22 mg/L x 0.120 MGD x 8.34 = 22.0 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 0.120 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 1.5 mg/L NH_3-N as a monthly average (AML) and 3.0 mg/L NH_3-N instantaneous maximum (IMAX) are necessary to protect the aquatic life from toxicity effects. These limits are the same as those in the existing permit and will remain unchanged in the proposed permit. Recent DMR and inspection data indicate that the facility is consistently meeting these limits under proper operation. Mass limits are calculated as follows:

Summer average monthly mass limit: 1.5 mg/L x 0.120 MGD x 8.34 = 1.5 lbs/day
Winter average monthly mass limit: 4.5 mg/L x 0.120 MGD x 8.34 = 4.5 lbs/day

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 0.120 MGD x 8.34 = 30.0 lbs/day
Average weekly mass limit: 45 mg/L x 0.120 MGD x 8.34 = 45.0 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 25 Pa. Code § 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:
As part of York Springs STP upgrade, the existing chlorine disinfection system will be replaced with UV disinfection. DEP's SOP No. BPNPSM-PMT-033 recommends at a minimum, routine monitoring of UV transmittance, dosage, or intensity when the facility is utilizing a UV disinfection system. The monitoring should occur at the same frequency as would be used for TRC. This recommendation was implemented as a part of the proper operation and maintenance requirement specified in Part B of the NPDES permit, requesting permittees to demonstrate the effectiveness of UV disinfection system. This approach has been assigned to other facilities equipped with similar technology. Accordingly, a parameter for UV intensity will be included in the 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 0.120 MGD x 8.34 = 2.0 lbs/day

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 monthly "Monitor & Report" requirements for Nitrate-Nitrite as N, and Total Kjeldahl Nitrogen; and monthly calculation "Monitor & Report" for TN will remain in the proposed permit. The yearly calculation "Report" for TP & TN will remain in the proposed permit.

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 uses for aquatic life and fish consumption.

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.

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

WQM 7.0 Data:

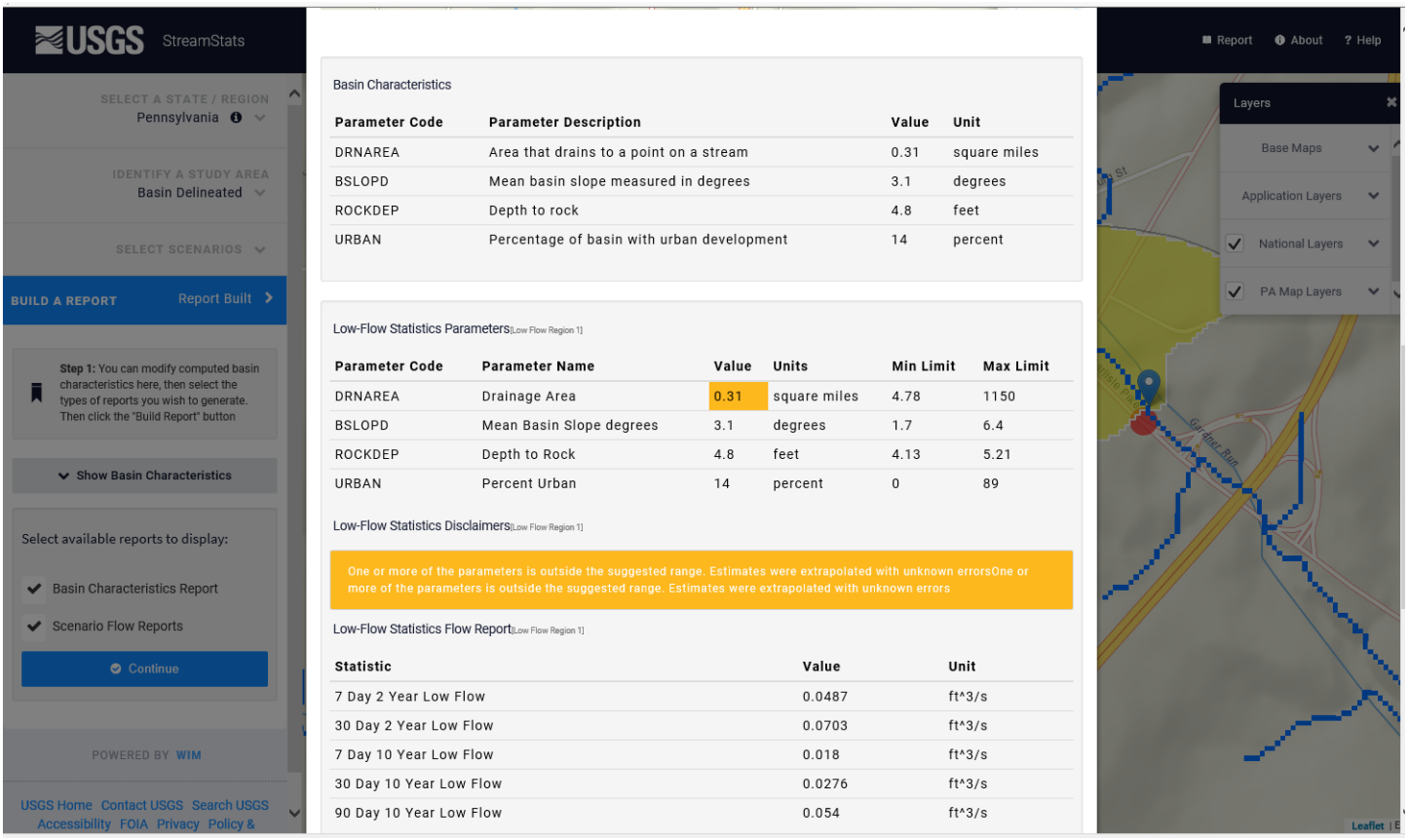
DO Goal: 5.0 mg/L

Node 1: Outfall 001 on Gardner Run (08712)

Elevation:	575 ft (USGS National Map Viewer)
Drainage Area:	0.31 mi.^{2} (USGS PA StreamStats)
River Mile Index:	0.66 (PA DEP eMapPA)
Low Flow Yield:	0.061 cfs/mi.^{2}
Discharge Flow:	0.120 MGD

Node 2: Just before confluence with Bermudian Creek

Elevation:	513 ft (USGS National Map Viewer)
Drainage Area:	0.70 mi.^{2} (USGS PA StreamStats)
River Mile Index:	0.001 (PA DEP eMapPA)
Low Flow Yield:	0.061 cfs/mi.^{2}
Discharge Flow:	0.0 MGD



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.31	square miles
BSLOPD	Mean basin slope measured in degrees	3.1	degrees
ROCKDEP	Depth to rock	4.8	feet
URBAN	Percentage of basin with urban development	14	percent

Low-Flow Statistics Parameters[Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.31	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	3.1	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.8	feet	4.13	5.21
URBAN	Percent Urban	14	percent	0	89

Low-Flow Statistics Disclaimers[Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errorsOne or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0487	ft^3/s
30 Day 2 Year Low Flow	0.0703	ft^3/s
7 Day 10 Year Low Flow	0.018	ft^3/s
30 Day 10 Year Low Flow	0.0276	ft^3/s
90 Day 10 Year Low Flow	0.054	ft^3/s

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

USGS Home Contact USGS Search USGS
Accessibility FOIA Privacy Policy &

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.7	square miles
BSLOPD	Mean basin slope measured in degrees	3.7	degrees
ROCKDEP	Depth to rock	4.5	feet
URBAN	Percentage of basin with urban development	9	percent

Low-Flow Statistics Parameters[Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.7	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	3.7	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.5	feet	4.13	5.21
URBAN	Percent Urban	9	percent	0	89

Low-Flow Statistics Disclaimers[Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0961	ft^3/s
30 Day 2 Year Low Flow	0.138	ft^3/s
7 Day 10 Year Low Flow	0.0361	ft^3/s
30 Day 10 Year Low Flow	0.0549	ft^3/s
90 Day 10 Year Low Flow	0.102	ft^3/s

Low-Flow Statistics Citations

Report About Help

Layers

Base Maps
Application Layers
National Layers
PA Map Layers

Plank Rd
Baltimore Rd
Leaflet

Analysis Results WQM 7.0

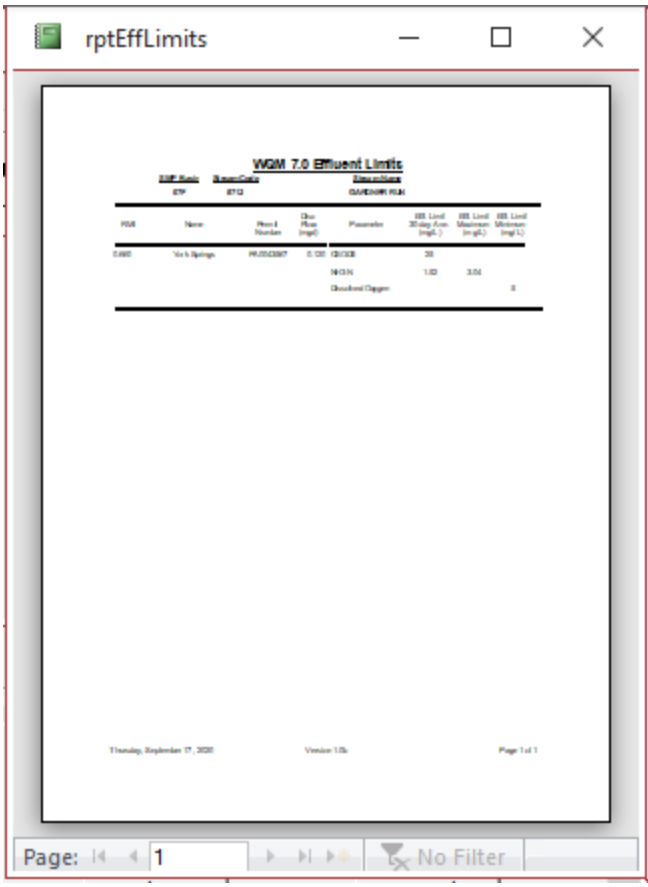
Hydrodynamics | NH3-N Allocations | D.O. Allocations | D.O. Simulation | Effluent Limitations

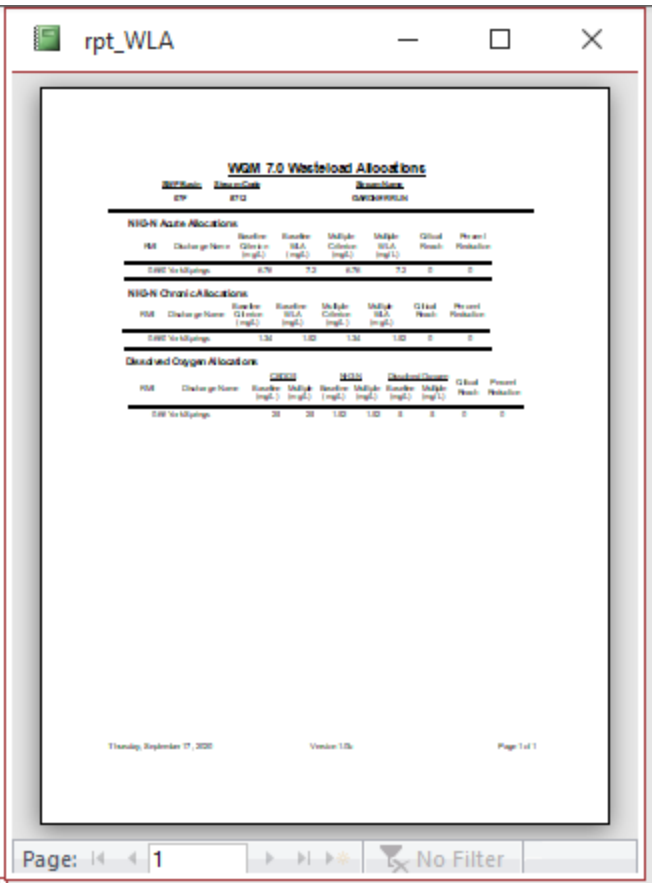
RMI	Discharge Name	Permit Number	Disc Flow (mgd)
0.66	York Springs	PA0043567	0.1200

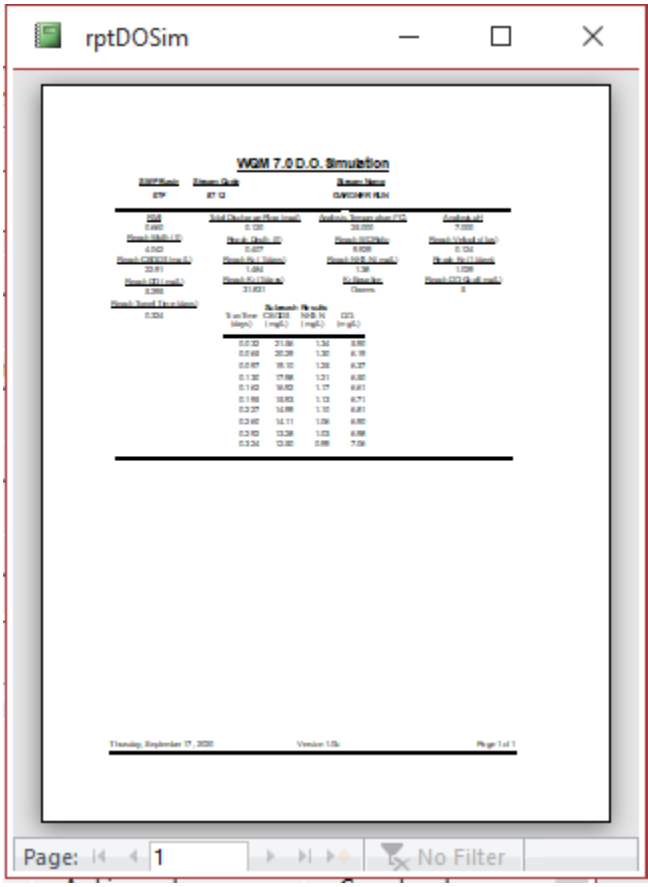
Parameter	Effluent Limit 30 Day Average (mg/L)	Effluent Limit Maximum (mg/L)	Effluent Limit Minimum (mg/L)
CBOD5	25		
NH3-N	1.52	3.04	
Dissolved Oxygen			5

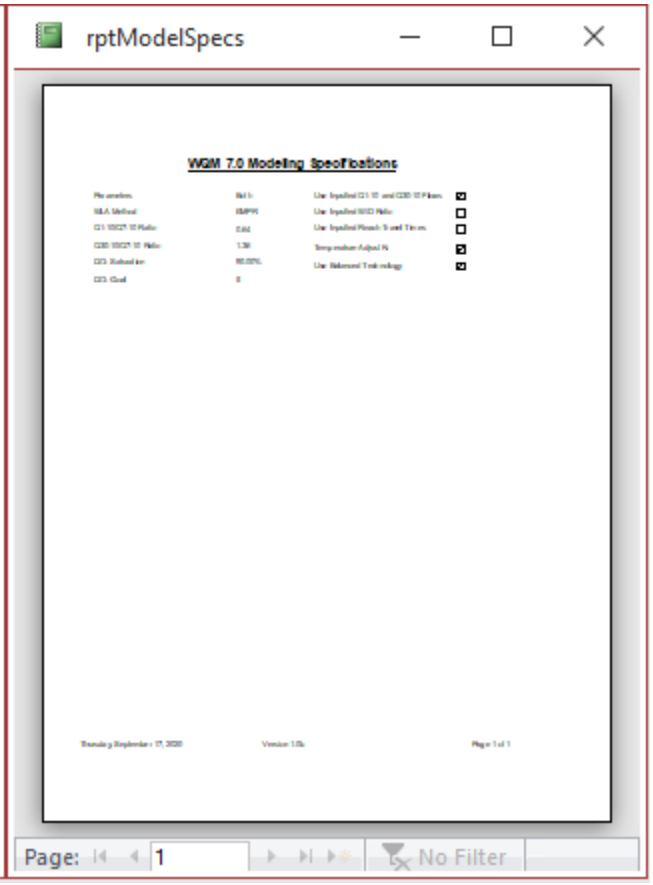
Record: 1 of 1 No Filter Search

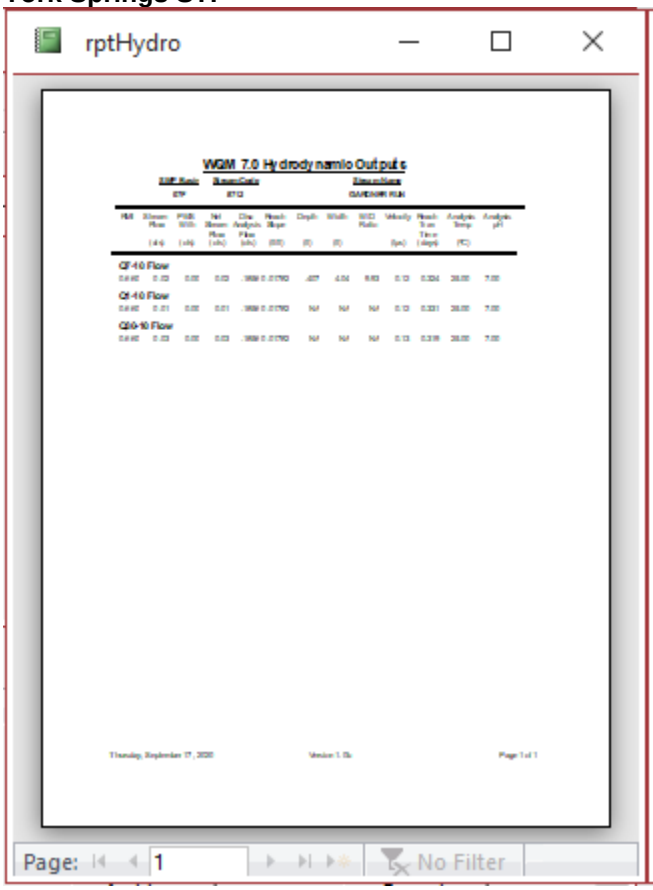
Print < Back Next > Archive Cancel

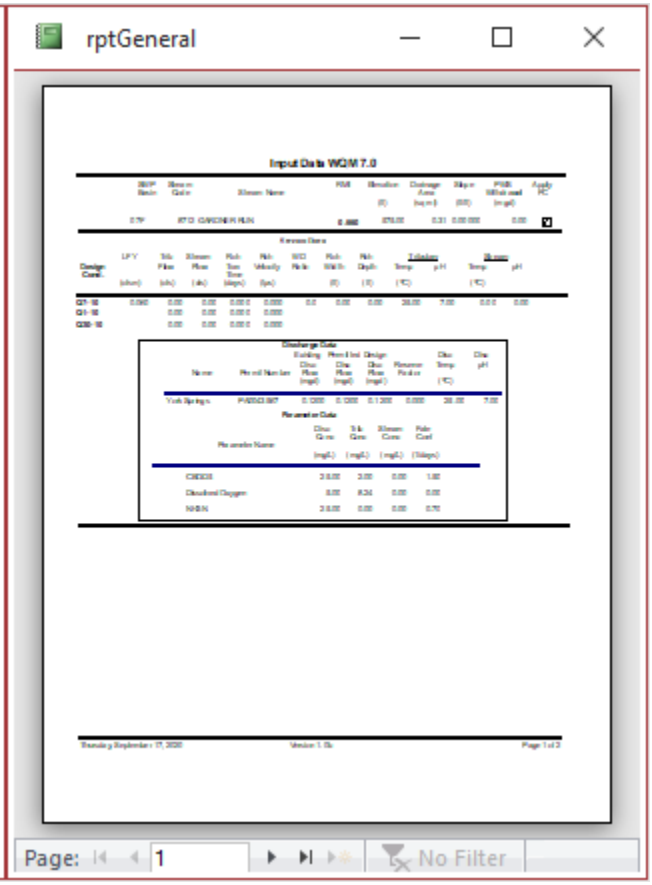

rptEffLimits
WQM 7.0 Effluent Limits
Page: 1
No Filter

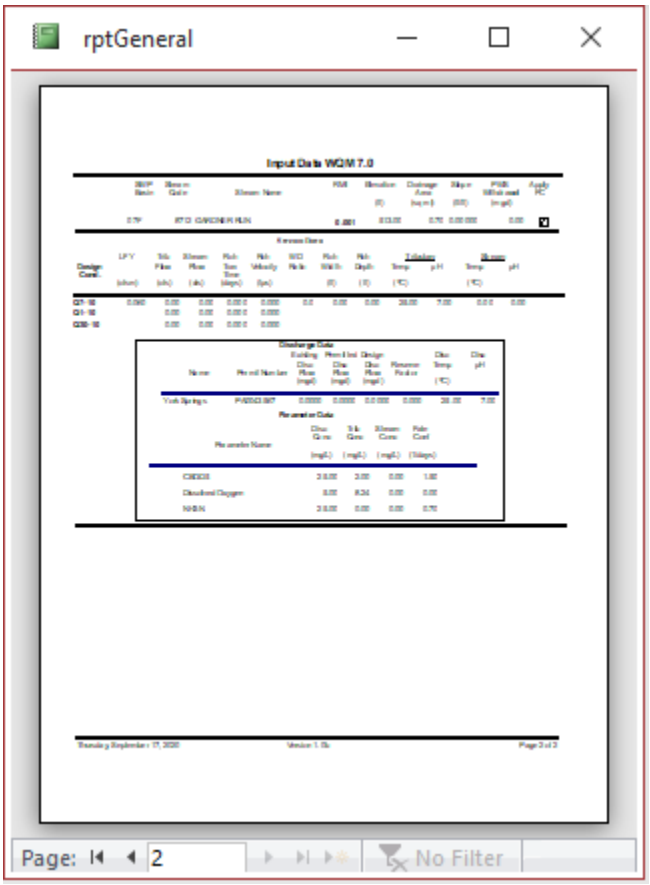

rpt_WLA
WQM 7.0 Wasteload Allocations
NH3-N Acute Allocations
NH3-N Chronic Allocations
Dissolved Oxygen Allocations
Page: 1
No Filter


rptDOSim
WQM 7.0 D.O. Simulation
Page: 1
No Filter


rptModelSpecs
WQM 7.0 Modeling Specifications
Page: 1
No Filter


rptHydro
WQM 7.0 Hydrodynamic Outputs
Page: 1
No Filter


rptGeneral
Input Data WQM 7.0
Page: 1
No Filter


rptGeneral
Input Data WQM 7.0
Page: 2
No Filter

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	Weekly Average	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	0.02 Inst Min	XXX	XXX	0.06	1/day	Grab
$CBOD_5$	15.0	22.0	15.0	22.0	XXX	30.0	1/week	8-Hr Composite
TSS	30.0	45.0	30.0	45.0	XXX	60.0	1/week	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	Report	XXX	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	Report	XXX	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	1.5	XXX	1.5	XXX	XXX	3.0	1/week	8-Hr Composite
Ammonia Nov 1 - Apr 30	4.5	XXX	4.5	XXX	XXX	9.0	1/week	8-Hr Composite
Total Phosphorus	Report Total Mo	XXX	2.0	XXX	XXX	4.0	1/week	8-Hr Composite
Nitrate-Nitrite	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	Calculation
TKN	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	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 Completion of Construction.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	0.02 Inst Min	XXX	XXX	0.06	1/day	Grab
$CBOD_5$	15.0	22.0	15.0	22.0	XXX	30.0	1/week	8-Hr Composite
TSS	30.0	45.0	30.0	45.0	XXX	60.0	1/week	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	Report	XXX	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	Report	XXX	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	1.5	XXX	1.5	XXX	XXX	3.0	1/week	8-Hr Composite
Ammonia Nov 1 - Apr 30	4.5	XXX	4.5	XXX	XXX	9.0	1/week	8-Hr Composite
Total Phosphorus	Report Total Mo	XXX	2.0	XXX	XXX	4.0	1/week	8-Hr Composite
Nitrate-Nitrite	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	Calculation
TKN	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	8-Hr Composite

Permit No. PA0043567

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Total Nitrogen	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

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: Completion of Construction 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	Weekly Average	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
$CBOD_5$	15.0	22.0	15.0	22.0	XXX	30.0	1/week	8-Hr Composite
UV Intensity (mW/cm^2)	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Measured
TSS	30.0	45.0	30.0	45.0	XXX	60.0	1/week	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	Report	XXX	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	Report	XXX	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	1.5	XXX	1.5	XXX	XXX	3.0	1/week	8-Hr Composite
Ammonia Nov 1 - Apr 30	4.5	XXX	4.5	XXX	XXX	9.0	1/week	8-Hr Composite
Total Phosphorus	Report Total Mo	XXX	2.0	XXX	XXX	4.0	1/week	8-Hr Composite
Nitrate-Nitrite	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	8-Hr Composite
Total Nitrogen	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	Calculation
TKN	Report Total Mo	XXX	Report	XXX	XXX	XXX	1/month	8-Hr Composite

Permit No. PA0043567

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Average Monthly	Weekly Average	Maximum	Instant. Maximum		
Total Nitrogen	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location:

Other Comments:

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, 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: