pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0088749**
Facility Type	**Municipal**	APS ID	**707604**
Major / Minor	**Minor**	Authorization ID	**1485563**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Gettysburg Borough Municipal Authority Adams County**	Facility Name	**Gettysburg Municipal Authority Hunterstown STP**
Applicant Address	601 East Middle Street, PO Box 3307	Facility Address	Pa Route 394
	Gettysburg, PA 17325-0307		Hunterstown, PA 17325
Applicant Contact	Mark Guise	Facility Contact	Mark Guise
Applicant Phone	(717) 334-6738	Facility Phone	(717) 334-6738
Client ID	78262	Site ID	544075
Ch 94 Load Status	Not Overloaded	Municipality	Straban Township
Connection Status	No Limitations	County	Adams
Date Application Received	May 17, 2024	EPA Waived?	Yes
Date Application Accepted	May 21, 2024	If No, Reason	
Purpose of Application	NPDES permit renewal.		

Summary of Review

Buchart Horn, Inc., on behalf of the Gettysburg Borough Municipal Authority Hunterstown (Authority/Permittee), applied to the Pennsylvania Department of Environmental Protection (DEP) for issuance of the NPDES permit. The permit was reissued on November 14, 2019 and became effective on December 1, 2019. The permit expires on November 30, 2024.

The average annual design flow is 0.232 MGD, hydraulic design capacity of 0.292 MGD, and the organic loading capacity is 570 lbs BOD_5/day. The renewal application indicated the STP receives its 100% from the Straban Township.

The WQM Part II permit No. 0101405 was issued on 10/18/2001. The WQM Part II permit No. 102405 pump station was issued on 7/08/2002. The WQM Part II permit No. 0101405 amendment was issued on 7/20/2005.

Sludge use and disposal description and location(s): N/A because sludge hauled off the site.

Changes from the previous permit: E. Coli monitoring and report requirements will add to the proposed permit. Ammonia concentrations limits changed to 1.4 mg/L AML & 2.8 mg/L IMAX for summer, and 4.2 mg/L AML & 8.4 mg/L for winter; and mass limits changed to 2.7 lbs/day AML for summer & 8.1 lbs/day AML for winter.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted. A public notice of the draft permit will be published in the *Pennsylvania Bulletin* for public comments for 30 days.

Approve	Deny	Signatures	Date
X		*Hilaryle* Hilary H. Le / Environmental Engineering Specialist	August 23, 2024
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	August 28, 2024

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.232
Latitude	39º 53' 16.00"	Longitude	-77º 19' 56.00"
Quad Name	Biglerville	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Beaverdam Creek (WWF)	Stream Code	08990
NHD Com ID	57473377	RMI	3.83 miles
Drainage Area	1.45 mi.^{2}	Yield (cfs/mi^2)	See comment below
Q_{7-10} Flow (cfs)	See comment below	Q_{7-10} Basis	USGS gage 0157400
Elevation (ft)	531.30	Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Siltation		
Source(s) of Impairment	Agriculture		
TMDL Status	Final	Name	Beaverdam Creek TMDL
Nearest Downstream Public Water Supply Intake	Wrightsville Municipal Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	12.63 miles	Distance from Outfall (mi)	Approximate 71.0 miles

Changes Since Last Permit Issuance:

Drainage Area
The discharge is to Beaverdam Creek at RMI 3.83. A drainage area upstream of the point of discharge is estimated to be 1.45 sq.mi. using USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
USGS StreamStats produced a Q7-10 flow of 0.0138 cfs at the point of discharge. However, as indicated by USGS StreamStats, the estimated drainage area is below the minimum required drainage area value to properly estimate the Q7-10 flow. As a result, the produced Q7-10 value may not be representative. In such cases, DEP generally selects a low-flow yield method to calculate the Q7-10 flow. Consequently, the Q7-10 has been calculated using the nearest USGS gage station no.0157400 on the West Conewago Creek near Manchester, PA. This calculation is shown below:

$$\text{Low Flow Yield} = Q7\text{-}10_{gage} / \text{Drainage Area}_{gage} = 39.2 \text{ cfs} / 512 \text{ sq.mi} = 0.077 \text{ cfs/sq.mi}$$
$$Q7\text{-}10_{site} = \text{Low Flow Yield} * \text{Drainage Area}_{site} = 0.077 \text{ cfs/sq.mi} * 1.45 \text{ sq.mi} = 0.11 \text{ cfs.}$$
$$Q1\text{-}10/Q7\text{-}10 = 8.0 \text{ cfs} / 11.1 \text{ cfs} = 1{:}0.72$$
$$Q30\text{-}10/Q7\text{-}10 = 17.7 \text{ cfs} / 11.1 \text{ cfs} = 1{:}1.59$$

Beaverdam Creek
Under 25 Pa Code §93.9o, Beaverdam Creek is designated as warm water fishes and supports migratory fishes. Beaverdam Creek is a tributary of West Conewago Creek which is also designated as warm water fishes. No special protection water is therefore impacted by this discharge. No Class A Wild Trout Fishery is impacted by this discharge. DEP's latest integrated water quality report indicates that Beaverdam Creek at the point of discharge is impaired for siltation as a result of agricultural activities. DEP developed a Total Maximum Daily Load (TMDL) in June 2011 to address this impairment. This TMDL in fact includes a wasteload allocation (WLA) for this facility.

Public Water Supply Intake

The fact sheet developed for the last permit renewal indicates that the nearest downstream public water supply intake is the Wrightsville Municipal Authority located on the Susquehanna River approximately 71.0 miles from the discharge. Given a distance and dilution available, the discharge is not expected to impact the water supply.

Treatment Facility Summary

Treatment Facility Name: Hunterstown STP

WQM Permit No.	Issuance Date
0101405	10/18/2001
102405	7/8/2002
0101405 A-1	7/20/2005

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia And Phosphorus	Sequencing Batch Reactor	Ultraviolet	0.232

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.292	570	Not Overloaded	Aerobic Digestion	Land Application

Changes Since Last Permit Issuance:

Other Comments:
The process includes screening, SBRs (2), UV disinfection, post-aeration (cascade aeration), and outfall structure.

This facility utilizes a sequencing batch reactor (SBR) activated sludge treatment process.

Chemical used:
Alum is used for coagulant at a rate of 115 gpd.

Industrial/Commercial Users:
The permit application indicated there are no commercial or industrial contributors to the treatment plant.

Biosolids:
The total sewage sludge/biosolids production within the facility for the previous year was 16.14 dry tons.

Compliance History	
Summary of DMRs:	A summary of past 12-month DMR data is presented on the next page.
Summary of Inspections:	8/29/2023: Mr. Hoy, DEP Water Quality Specialist, conducted a compliance evaluation inspection. The outfall was observed and appeared clear upstream and downstream. The field test results were within permit limits. Recommendations: 1. Ensuring the float controller for pump station # 3 is operational. 2. Revising the UV intensity for December 2023, January 2023, and February 2023 on the daily effluent supplemental reports to reflect the new minimum UVI Low Alarm Set Point. 3. Maintaining a complete copy of the current permit on-site. Requests: 1. Storing copies of chain of custody records on-site. 2. Submitting the sewage sludge supplemental report as an attachment to the DMR monthly as required by NPDES Permit PA0088749 Part C. II.B. 3. Submitting the change of operator form within 10 days when the available operator(s) or OIC has changed. 7/7/2021: Mr. Bettinger, DEP Water Quality Specialist, conducted a compliance evaluation inspection. There were no violations noted during inspection.
Other Comments:	There are no violations against or associated to the facility or permittee.

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)	212 mg/L	212 mg/L
BOD_5 (lbs/day)	123 lbs/day	123 lbs/day
TSS (mg/L)	144 mg/L	144 mg/L
TSS (lbs/day)	83.3 lbs/day	83.3 lbs/day
TN (mg/L)	49 mg/L	49 mg/L
TN (lbs/day)	28.4 lbs/day	28.4 lbs/day
TP (mg/L)	6 mg/L	6 mg/L
TP (lbs/day)	3.47 lbs/day	3.47 lbs/day
NH_3-N (mg/L)	34.0 mg/L	34.0 mg/L
NH_3-N (lbs/day)	19.7 lbs/day	19.7 lbs/day
TDS (mg/L)	392 mg/L	392 mg/L
TDS (lbs/day)	227.0 lbs/day	227.0 lbs/day
TKN	49.0 mg/L	49.0mg/L
NO_2-N + NO_3-N	< 0.8 mg/L	<0.8 mg/L

Effluent Testing Results

Parameter	Min/Max Value	Average Value
pH (minimum)	6.9 S.U.	
pH (maximum)	7.0 S.U.	
D.O (minimum)	5.4 mg/L	6.7 mg/L
TRC	< 0.1mg/L	< 0.1 mg/L
Fecal Coliform	11 No./100mL	<4.7 No./100 mL
$CBOD_5$	3.7 mg/L	2.8 mg/L
TSS	3.0 mg/L	2.0 mg/L
NH_3-N	0.21 mg/L	<0.1 mg/L
TN	15 mg/L	10.5 mg/L
TP	0.58 mg/L	0.54 mg/L
Temp	20.3 F	18.6 F
TKN	1.4 mg/L	< 0.80 mg/L
NO_2-N + NO_3-N	15.01 mg/L	10.55 mg/L
TDS	652 mg/L	547 mg/L
Chloride	130 mg/L	120 mg/L
Bromide	< 0.2 mg/L	< 0.2 mg/L
Sulfate	150 mg/L	127 mg/L
Oil and Grease	< 5.0 mg/L	< 5.0 mg/L
Total Copper	0.0038 mg/L	0.0031 mg/L
Total Lead	< 0.001 mg/L	< 0.001 mg/L
Total Zinc	0.230 mg/L	0.212 mg/L

Compliance History

DMR Data for Outfall 001 (from July 1, 2023 to June 30, 2024)

Parameter	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23
Flow (MGD) Average Monthly	0.0869	0.1025	0.1099	0.1189	0.1023	0.1054	0.0852	0.0612	0.0697	0.0799	0.0939	0.0877
Flow (MGD) Daily Maximum	0.1704	0.1706	0.2885	0.224	0.1775	0.3382	0.1726	0.1703	0.1093	0.0925	0.134	0.123
pH (S.U.) Instantaneous Minimum	6.8	6.7	6.7	6.6	6.6	6.7	6.7	6.7	6.7	6.8	6.9	6.9
pH (S.U.) Instantaneous Maximum	7.5	8.0	7.6	7.2	7.1	7.3	7.3	7.3	7.5	7.4	7.5	7.4
DO (mg/L) Instantaneous Minimum	6.0	6.0	5.3	5.1	5.0	5.4	5.5	5.3	5.4	5.3	5.5	5.3
CBOD5 (lbs/day) Average Monthly	< 1.5	< 2.6	2.7	< 2.1	2.6	< 2.8	3.2	1.4	< 1.3	< 2.2	< 1.7	< 1.5
CBOD5 (lbs/day) Weekly Average	1.9	4.1	2.727	2.6	4.4	5.6	5.6	1.8	1.7	2.9	< 2.0	< 1.6
CBOD5 (mg/L) Average Monthly	< 2.7	< 3.4	3.4	< 2.5	3.4	< 2.9	3.7	3.4	< 2.4	< 2.5	< 2.4	< 2.4
CBOD5 (mg/L) Weekly Average	3.0	5.0	4.0	3.0	5.0	4.0	4.0	4.0	< 2.0	3.0	< 2.0	< 2.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	129	102	137	1307	141	119	1934	81	68	84	66	61
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	264	158	201	282	268	219	392	108	124	113	101	82
BOD5 (mg/L) Raw Sewage Influent Average Monthly	203	147	153	136	191	143	197	176	129	92	84	85
TSS (lbs/day) Average Monthly	0.7	1.2	1.0	1.3	1.8	1.0	1.2	1.1	0.9	2.7	1.1	1.0
TSS (lbs/day) Raw Sewage Influent Average Monthly	126	94	90	138	76	95	101	100	46	90	46	72
TSS (lbs/day) Raw Sewage Influent Daily Maximum	302	141	128	281	130	216	233	121	84	176	97	160

TSS (lbs/day) Weekly Average	1.3	1.7	1.5	2.2	4.2	1.6	1.7	1.8	1.4	4.9	1.4	2.6
TSS (mg/L) Average Monthly	1.2	1.5	1.3	1.6	3.3	1.2	1.5	2.5	1.8	3.0	1.5	1.6
TSS (mg/L) Raw Sewage Influent Average Monthly	190	135	101	143	102	114	96	223	86	90	56	98
TSS (mg/L) Weekly Average	2.0	2.0	3.0	2.0	10.0	2.0	3.0	4.0	3.0	5.0	< 2.0	4.0
Total Suspended Solids (lbs) Total Annual							429.00					
Fecal Coliform (No./100 ml) Geometric Mean	8	8	< 4	< 12	< 1	< 92	< 9	3	< 5	< 4	< 6	< 7
Fecal Coliform (No./100 ml) Instantaneous Maximum	22	54	38	190	5	> 2420	74	11	93	27	62	36
UV Intensity (mW/cm^2) Instantaneous Minimum	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Nitrate-Nitrite (mg/L) Average Monthly	< 2.4	< 4.4	< 7.43	< 2.59	< 3.17	< 1.29	< 1	< 8.79	< 6.36	< 4.4	< 2.4	< 8.7
Nitrate-Nitrite (lbs) Total Monthly	< 41	< 107	< 170	< 70	< 81	< 37	< 27	< 102	< 103	< 124	< 52	< 167
Total Nitrogen (mg/L) Average Monthly	< 4.1	< 4.9	< 8.38	< 3.77	< 6.94	< 2.68	< 2.05	< 9.82	< 7.22	< 6.8	< 4	< 9.35
Total Nitrogen (lbs) Total Monthly	< 69	< 118	< 193	< 103	< 152	< 80	< 57	< 116	< 115	< 177	< 88	< 180
Total Nitrogen (lbs) Total Annual							1334					
Ammonia (lbs/day) Average Monthly	< 0.4	< 0.1	< 0.3	< 0.3	1.9	0.6	0.3	< 0.06	< 0.07	< 0.7	0.7	< 0.1
Ammonia (mg/L) Average Monthly	< 0.86	< 0.21	< 0.35	< 2.8	2.8	0.63	0.31	< 0.13	< 0.13	< 1.1	1.09	< 0.19
Ammonia (lbs) Total Monthly	< 13.0	< 4.6	< 9.6	< 8.0	54.1	19.3	7.9	< 1.7	< 2.1	< 22.1	23.0	< 3.6
TKN (mg/L) Average Monthly	< 1.7	< 0.5	< 1	< 1.18	3.8	1.38	1.06	< 1.02	< 0.86	< 2.4	< 1.6	< 0.69
TKN (lbs) Total Monthly	< 28	< 12	< 24	< 33	72	43	30	< 13	< 13	< 53	< 35	< 13
Total Phosphorus (lbs/day) Average Monthly	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.2	0.4

Total Phosphorus (mg/L) Average Monthly	0.35	0.3	0.24	0.16	0.23	0.18	0.26	0.47	0.49	0.52	0.34	0.57
Total Phosphorus (lbs) Total Monthly	6.0	7.1	5.8	4.6	5.0	4.9	6.7	5.7	8.2	13.8	7.6	10.9
Total Phosphorus (lbs) Total Annual							96					

Existing Effluent Limits and Monitoring Requirements

A table below summarizes effluent limits and monitoring requirements specified in the current permit renewal.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	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/cm2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
CBOD5 May 1 - Oct 31	29	43	XXX	15	22	30	1/week	8-Hr Composite
CBOD5 Nov 1 - Apr 30	48	77	XXX	25	40	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Suspended Solids	58	87	XXX	30	45	60	1/week	8-Hr Composite
Total Suspended Solids (lbs/year)	XXX	21,186.94 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	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 May 1 - Oct 31	2.9	XXX	XXX	1.5	XXX	3.0	1/week	8-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	8.7	XXX	XXX	4.5	XXX	9.0	1/week	8-Hr Composite
Total Phosphorus	3.9	XXX	XXX	2.0	XXX	4.0	1/week	8-Hr Composite
Ammonia-Nitrogen (Total Load, lbs) (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Kjeldahl Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite

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

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.232
Latitude 39º 53' 16.00" **Longitude** -77º 9' 56.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

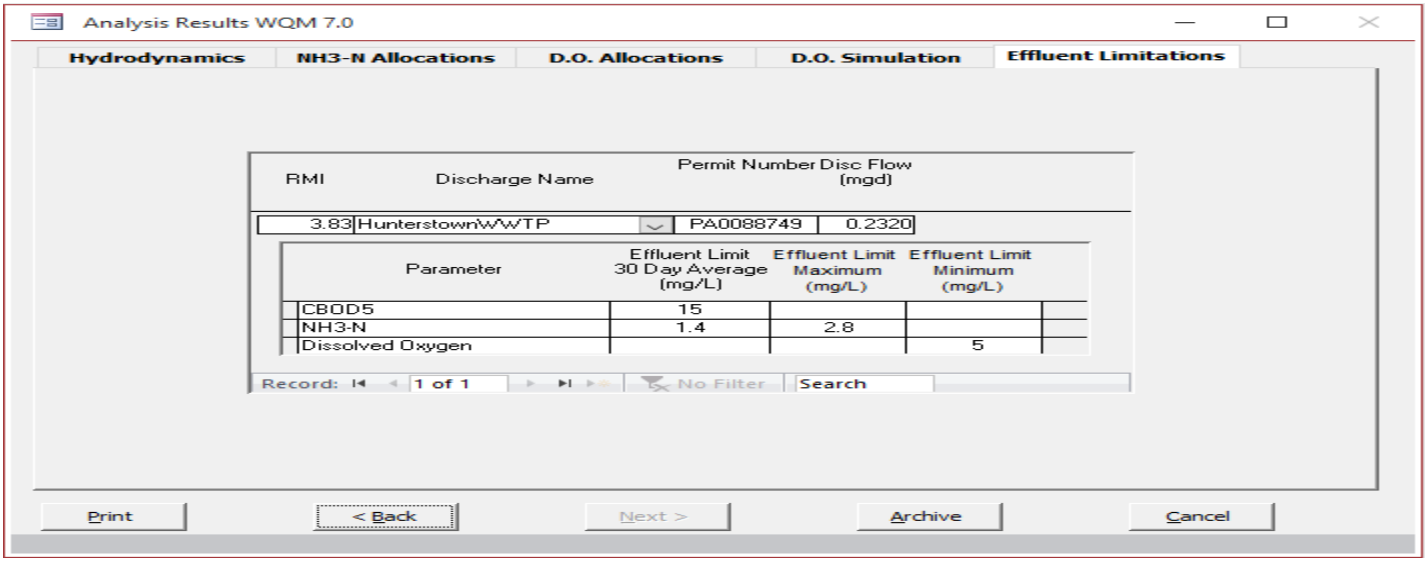
Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	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)

Comments:

Water Quality-Based Limitations

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	=	25ºC	(Default)
*	Background NH_3-N	=	0 mg/L	(Default)



Regarding NH_3-N limits, the attached computer printout of the WQM 7.0 stream model (version 1.1) indicates that a limit of 1.4 mg/L as a monthly average and 2.8 mg/L instantaneous maximum (IMAX) are necessary to protect the aquatic life from toxicity effects at the point of discharge. The limits of 1.4 mg/L monthly average & 2.8 mg/L IMAX are more stringent and will replace in the proposed permit. The winter average monthly limit of 4.2 mg/L & IMAX limit of 8.4 mg/L will replace in the proposed permit. 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: 1.4 mg/L x 0.232 MGD x 8.34 = 2.70 lbs/day
Winter average monthly mass limit: 4.2 mg/L x 0.232 MGD x 8.34 = 8.13 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. BCW-PMT-033, version 2.0 revised February 5, 2024, and has been applied to other point source dischargers throughout the state.

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

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model (ver. 1.1) indicates that a monthly average limit of 15.0 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. Therefore, the summer existing permit 15.0 mg/L as AML, 22.0 mg/L as weekly average limit (AWL), & 30.0 mg/L as IMAX will remain in the proposed permit. Recent DMRs and inspection reports show that the facility has typically been achieving concentrations below this limit. Mass limits are calculated as follows:

Summer Average monthly mass limit: 15.0 mg/L x 0.232 MGD x 8.34 = 29.02 (29.0) lbs/day
Summer Average weekly mass limit: 22.0 mg/L x 0.232 MGD x 8.34 = 42.6 (43.0) lbs/day

The winter existing permit 25.0 mg/L as AML, 40.0 mg/L as weekly average limit (AWL), & 50.0 mg/L as IMAX will remain in the proposed permit. Mass limits are calculated as follows:

Winter Average monthly mass limit: 25.0 mg/L x 0.232 MGD x 8.34 = 48.37 (48.0) lbs/day
Winter Average weekly mass limit: 40.0 mg/L x 0.232 MGD x 8.34 = 77.40 (77.0) lbs/day

Total Suspended Solids (TSS):
The existing technology-based limits of 30.0 mg/L average monthly, 45.0 mg/L average weekly, and 60.0 mg/L IMAX 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 these limits. Mass limits are calculated as follows:

Average monthly mass limit: 30.0 mg/L x 0.232 MGD x 8.34 = 58.05 (58.0) lbs/day
Average weekly mass limit: 45.0 mg/L x 0.232 MGD x 8.34 = 87.07 (87.0) lbs/day

The average monthly and average weekly mass loadings will be rounded down to 58.0 lbs/day and 87.0 lbs/day, respectively.

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. BCW-PMT-033, version 2.0 revised February 5, 2024, a 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/quarter will be included in the permit to be consistent with the recommendation from this SOP.

Flow Monitoring:
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Total Phosphorus:
The existing permit contains average monthly and instantaneous maximum (IMAX) effluent limits of 2.0 mg/L and 4.0 mg/L, respectively. As algae growth was noted at the downstream of the discharge by DEP biologist during a site visit in 2006, the permit previously required effluent limits of 2.0 mg/L (average monthly) and 4.0 mg/L (IMAX) in accordance with 25 Pa Code §96.5(c). These effluent limits have continued to be included in the last permit renewal to meet the federal anti-back sliding regulation found in 40 CFR §122.44(l)(1). The facility currently utilizes alum for phosphorous removal and effluent limits have been consistently met. DEP finds no reason to remove or relax these effluent limits at this time. No changes are therefore recommended in accordance with 40 CFR §122.44(l)(1). Mass limits are calculated as follows:

Average monthly mass limit: 2.0 mg/L x 0.232 MGD x 8.34 = 3.87 (3.9) lbs/day

Influent BOD & TSS Monitoring:
As a result of negotiation with EPA, the existing influent monitoring reporting requirement for TSS and BOD_5 will be maintained in the draft permit. This requirement has been consistently assigned to all municipal wastewater treatment facilities.

UV:
The UV system daily monitor and report the UV light intensity (mW/cm^2) will remain in the proposed permit.

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

Toxics:
DEP's current permit renewal application for minor sewage facilities requires sampling of Total Copper, Total Lead, and Total Zinc for facilities with a design flow greater than or equal to 0.1 MGD. The application reported non-detect sample results for these pollutants. Previously, a routine monitoring requirement were developed for Total Copper, Total Lead, Total Zinc and Osmotic Pressure. As none of these parameters has been considered pollutants of concern based on the review of DMR data, DEP removed this requirement during the last permit renewal. Consequently, DEP determined that there is no toxic pollutant of concern for this facility at this time.

Local Watershed TMDL:
The discharge is to Beaverdam Creek. DEP developed a TMDL to address sediment impairment identified within the Beaverdam Creek watershed in Adams County. This TMDL contains a wasteload allocation (WLA) for Hunterstown STP. The following table is identified in the TMDL document.

Table 9. Waste Load Allocations for the Beaverdam Creek Watershed

Name	NPDES Permit #	Monthly Average (mg/L)	Loading Rate (lb/yr)	Loading Rate (lb/day)
Hunterstown WWTP	PA0088749	30	21,186.94	58.05
Cuttin Company WWTP	PA0081884	10	304.41	0.83
Bulk Reserve			11,115.7	30.45
Total			32,607.05	89.33

30.0 mg/L x 0.232 MGD x 8.34 X 365 = 21,186.936 lbs/year

The annual mass loading effluent limit of 21,186.94 lbs/yr is included in the current permit and annual data has been reported as follows:

Year	Annual TSS Load (lbs/yr)
2019	1,918
2020	1,355
2021	862
2022	562
2023	429

As shown above, the facility has consistently achieved compliance with the effluent limit, and actual effluent levels are significantly lower than the effluent limit imposed in the permit. As the facility is capable of meeting the effluent limit, the existing effluent limit will remain unchanged in the permit.

Chesapeake Bay TMDL:

According to this document, Hunterstown STP is a Phase 4 non-significant sewage facility with a design flow less than 0.4 MGD but greater than 0.2 MGD. The last permit renewal required weekly sampling of Total Phosphorus and Total Nitrogen constituents. A summary of the past monitoring data is shown below:

	2018			2019			2020		
	Average	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum
Avg Mon TN (mg/L)	7.72	4.1	14.5	6.5	2.1	9.6	8.83	3.33	12.7
Total Mon TN (lbs)	222	11	516	169	49	297	213	71	355
Total Annual TN (lbs)	2215			2634			2541		
Avg Mon TP (mg/L)	0.49	0.32	0.97	0.47	0.17	1.15	0.67	0.45	1.2
Total Mon TP (lbs)	15.86	9.5	33.3	15.5	3.8	41.2	17.3	9.5	28.9
Total Annual TP (lbs)	210			204			192		
	2021			2022			2023		
	Average	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum
Avg Mon TN (mg/L)	8.9	2.79	15.97	3.6	1.64	6.24	5.48	2.05	9.8
Total Mon TN (lbs)	250	73	462	77	31	173	111	57	186
Total Annual TN (lbs)	3005			902			1334		
Avg Mon TP (mg/L)	0.53	0.37	0.86	0.3	0.2	0.51	0.37	0.19	0.57
Total Mon TP (lbs)	16.03	7.4	34.4	6.65	4.0	11.1	7.06	4.5	13.8
Total Annual TP (lbs)	192			77			96		

The existing weekly sampling requirement for these parameters will continued to be included in the permit. DEP's Phase 2 WIP Supplement recommends a continuation of nutrient monitoring for renewed or amended permits for all phase 4 sewage facilities at a frequency no less than monthly. In addition, DEP's SOP No. BCW-PMT-033 recommends nutrient monitoring at a frequency equivalent to requirements listed in Table 6-3 of DEP's technical guidance no. 362-0400-001 in which this table recommends 1/week monitoring for these pollutants. No "net" monitoring is needed as Cap Loads (annual effluent limits) have not been assigned to this facility.

Mass Loading Limitations:

All effluent mass loading limits will be based on the formula: design flow x concentration limit x conversion factor of 8.34.

Antidegradation Requirements:

All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Anti-backsliding Requirements:

Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as those specified in the existing permit.

WQM 7.0:

The following data were used in the attached computer model (WQM 7.0) of the stream:

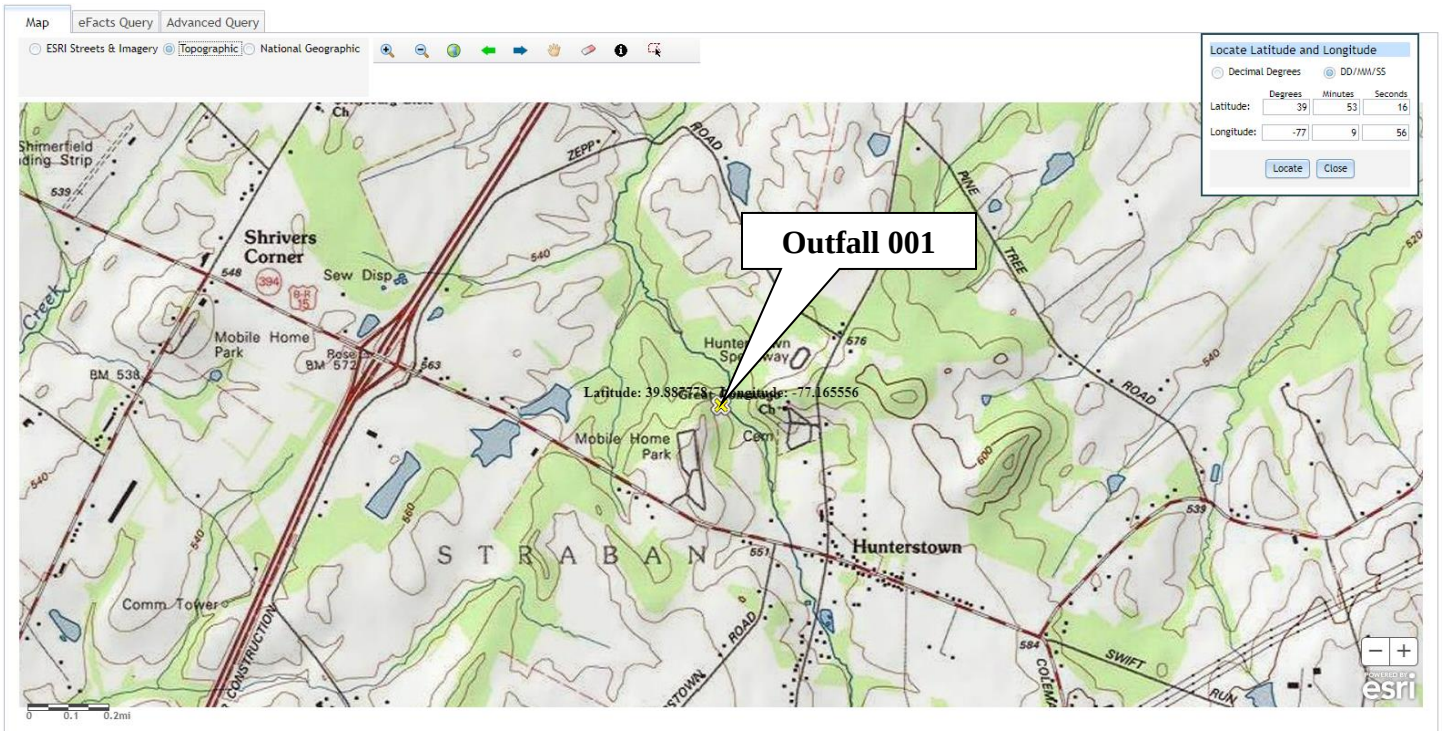
*	Discharge pH	=	7.0	(Default)
*	Discharge Temperature	=	20°C	(Default)
*	Stream pH	=	7.0	(Default)
*	Stream Temperature	=	25°C	(Default)
*	Background NH_3-N	=	0 mg/L	(Default)

Node 1: Outfall 001 Beaverdam Creek (8990)

Elevation:	531.30 ft (USGS National Map Viewer)
Drainage Area:	1.45 mi^2 (USGS PA StreamStats)
River Mile Index:	3.830 (PA DEP eMapPA)
Low Flow Yield:	0.077 cfs/mi^2
Discharge Flow:	0.232 mgd

Node 2: At confluence with Unnamed Tributary 8990

Elevation:	516.93 ft (USGS National Map Viewer)
Drainage Area:	1.68 mi^2 (USGS PA StreamStats)
River Mile Index:	3.500 (PA DEP eMapPA)
Low Flow Yield:	0.077 cfs/mi^2
Discharge Flow:	0.0 MGD



USGS StreamStats
science for a changing world

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

Open Report

POWERED BY WIM

USGS Home Contact USGS Search USGS
Accessibility FOIA Privacy Policy & Notices

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	1.2876	degrees
DRNAREA	Area that drains to a point on a stream	1.45	square miles
ROCKDEP	Depth to rock	4.6	feet
URBAN	Percentage of basin with urban development	3.4602	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

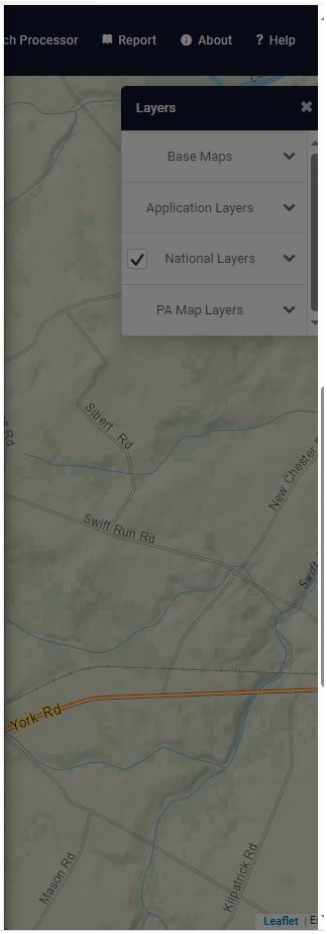
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.45	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	1.2876	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.6	feet	4.13	5.21
URBAN	Percent Urban	3.4602	percent	0	89

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	0.0521	ft^3/s
30 Day 2 Year Low Flow	0.0928	ft^3/s
7 Day 10 Year Low Flow	0.0138	ft^3/s
30 Day 10 Year Low Flow	0.0263	ft^3/s
90 Day 10 Year Low Flow	0.0802	ft^3/s



USGS StreamStats
science for a changing world

Collapse All

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

Open Report

POWERED BY WIM

USGS Home Contact USGS Search USGS
Accessibility FOIA Privacy Policy & Notices

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	3.8618	degrees
DRNAREA	Area that drains to a point on a stream	512	square miles
ROCKDEP	Depth to rock	4.6	feet
URBAN	Percentage of basin with urban development	3.2433	percent

Low-Flow Statistics

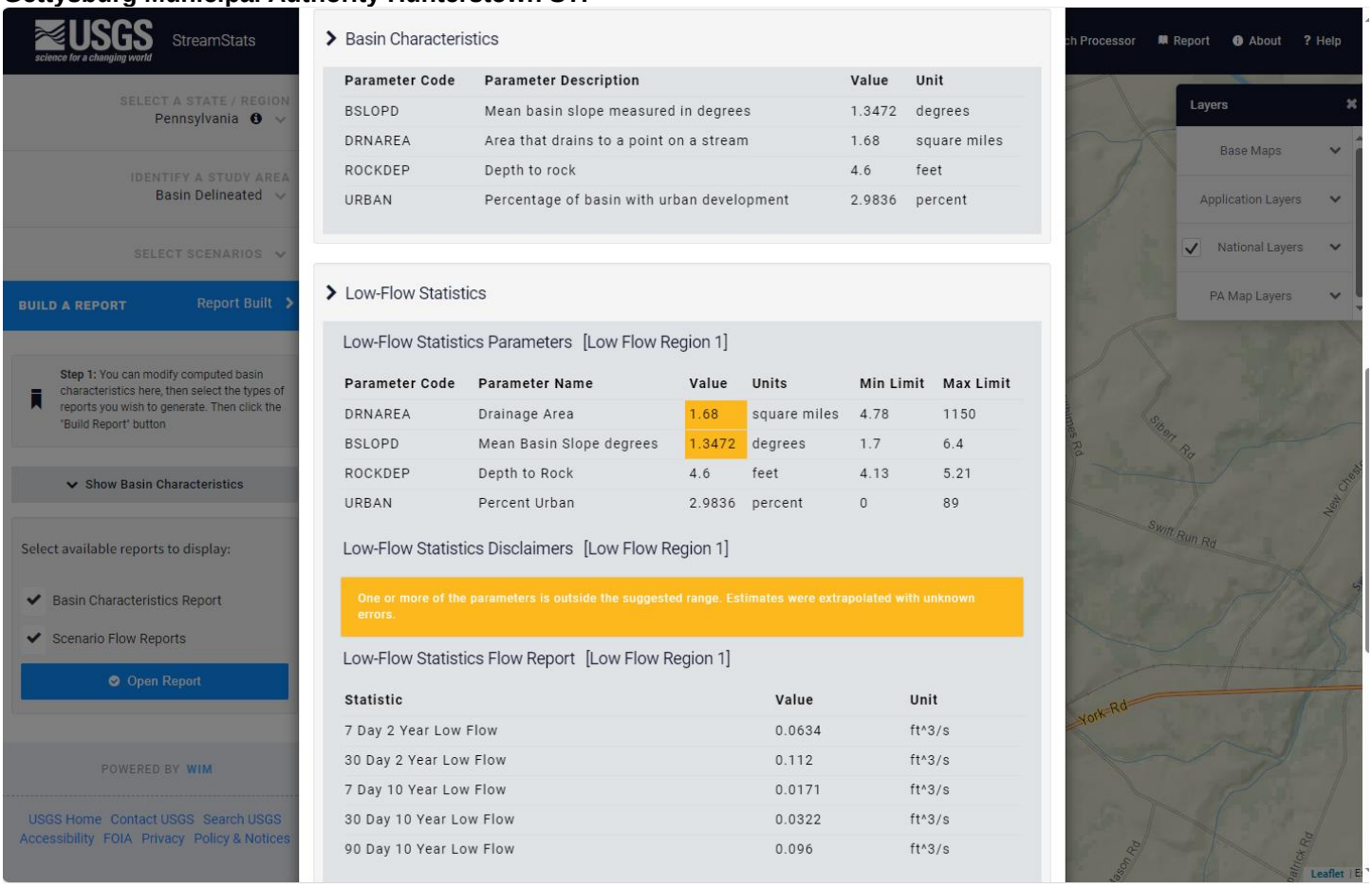
Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	512	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	3.8618	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.6	feet	4.13	5.21
URBAN	Percent Urban	3.2433	percent	0	89

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

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	76.7	ft^3/s	46	46
30 Day 2 Year Low Flow	102	ft^3/s	38	38
7 Day 10 Year Low Flow	39.2	ft^3/s	51	51
30 Day 10 Year Low Flow	52	ft^3/s	46	46
90 Day 10 Year Low Flow	84	ft^3/s	41	41



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

Open Report

POWERED BY WIM

USGS Home Contact USGS Search USGS
Accessibility FOIA Privacy Policy & Notices

Processor Report About Help

Layers

Base Maps
Application Layers
National Layers
PA Map Layers

Sibert Rd
Swift Run Rd
York Rd
Leaflet

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	1.3472	degrees
DRNAREA	Area that drains to a point on a stream	1.68	square miles
ROCKDEP	Depth to rock	4.6	feet
URBAN	Percentage of basin with urban development	2.9836	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

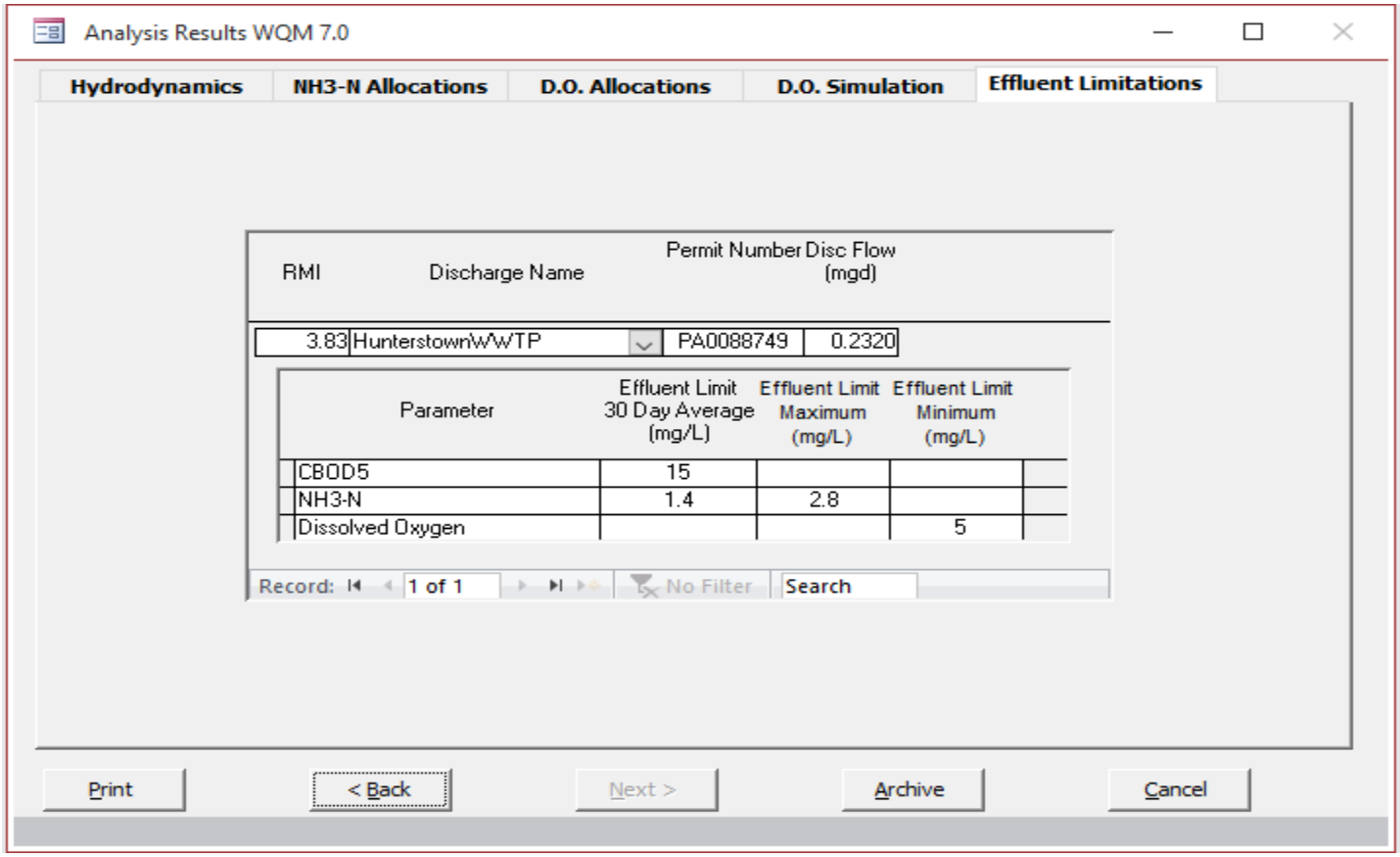
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.68	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	1.3472	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4.6	feet	4.13	5.21
URBAN	Percent Urban	2.9836	percent	0	89

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	0.0634	ft^3/s
30 Day 2 Year Low Flow	0.112	ft^3/s
7 Day 10 Year Low Flow	0.0171	ft^3/s
30 Day 10 Year Low Flow	0.0322	ft^3/s
90 Day 10 Year Low Flow	0.096	ft^3/s



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)
3.83	HunterstownWWTP	PA0088749	0.2320

Parameter	Effluent Limit 30 Day Average (mg/L)	Effluent Limit Maximum (mg/L)	Effluent Limit Minimum (mg/L)
CBOD5	15		
NH3-N	1.4	2.8	
Dissolved Oxygen			5

Record: 1 of 1 | No Filter | Search

Print | < Back | Next > | Archive | Cancel

rptEffLimits

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
07F	8990	BEAVERDAM CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
3.830	HunterstownWWTP	PA0088749	0.232	CBOD5	15		
				NH3-N	1.4	2.8	
				Dissolved Oxygen			5

Wednesday, August 21, 2024 Version 1.1 Page 1 of 1

Page: 1 No Filter

rpt_WLA

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
07F	8990	BEAVERDAM 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
3.830	HunterstownWW	16.76	2.8	16.76	2.8	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
3.830	HunterstownWW	1.89	1.4	1.89	1.4	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
3.83	HunterstownWW TP	15	15	1.4	1.4	5	5	0	0

Wednesday, August 21, 2024 Version 1.1 Page 1 of 1

Page: 1 No Filter

rptDOSim

WQM 7.0 D.O. Simulation

SWP Basin	Stream Code	Stream Name
07F	8990	BEAVERDAM CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.830	0.232	20.000	7.000
Reach W idth (ft)	Reach Depth (ft)	Reach W /D Ratio	Reach Velocity (fps)
7.968	0.446	17.854	0.132
Reach CBOD5 (mg/L)	Reach Kc (1/days)	Reach NH3-N (mg/L)	Reach Kn (1/days)
11.92	1.433	1.07	0.700
Reach DO (mg/L)	Reach Kr (1/days)	Kr Equation	Reach DO Goal (mg/L)
5.769	24.895	Owens	5
Reach Travel Time (days)			
0.152			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.015	11.66	1.06	6.48
0.030	11.41	1.05	6.97
0.046	11.16	1.03	7.31
0.061	10.92	1.02	7.55
0.076	10.68	1.01	7.72
0.091	10.45	1.00	7.85
0.107	10.23	0.99	7.94
0.122	10.00	0.98	8.01
0.137	9.79	0.97	8.06
0.152	9.58	0.96	8.11

Wednesday, August 21, 2024 Version 1.1 Page 1 of 1

Page: 1 No Filter

rptModelSpecs

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 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	5		

Wednesday, August 21, 2024 Version 1.1 Page 1 of 1

Page: 1 No Filter

rptHydro

WQM 7.0 Hydrodynamic Outputs

SWP Basin: 07F Stream Code: 8990 Stream Name: BEAVERDAM 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												
3.830	0.11	0.00	0.11	.3589	0.00825	.446	7.97	17.85	0.13	0.152	20.00	7.00
Q1-10 Flow												
3.830	0.07	0.00	0.07	.3589	0.00825	NA	NA	NA	0.13	0.160	20.00	7.00
Q30-10 Flow												
3.830	0.15	0.00	0.15	.3589	0.00825	NA	NA	NA	0.14	0.146	20.00	7.00

Wednesday, August 21, 2024 Version 1.1 Page 1 of 1

Page: 1 No Filter

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
07F	8990	BEAVERDAM CREEK	3.830	531.30	1.45	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	0.077	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	20.00	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
HunterstownWWTP	PA0088749	0.2320	0.2320	0.2320	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	15.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	1.40	0.00	0.00	0.70

Wednesday, August 21, 2024 Version 1.1 Page 1 of 2

Page: 1 No Filter

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
07F	8990	BEAVERDAM CREEK	3.500	516.93	1.68	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	0.077	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	20.00	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
Hunterstown WWT	PA0088749	0.0000	0.0000	0.0000	0.000	20.00	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

Wednesday, August 21, 2024 Version 1.1 Page 2 of 2

Page: 2 No Filter

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" (386-0400-001), 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	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	XXX	9.0	1/day	Grab
D.O.	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
UV Intensity (mW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
$CBOD_5$ Nov 1 - Apr 30	48.0	77.0	XXX	25.0	40.0	50.0	1/week	8-Hr Composite
$CBOD_5$ May 1 - Oct 31	29.0	43.0	XXX	15.0	22.0	30.0	1/week	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	58.0	87.0	XXX	30.0	45.0	60.0	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Suspended Solids (lbs)	XXX	21186.94 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ammonia Nov 1 - Apr 30	8.1	XXX	XXX	4.2	XXX	8.4	1/week	8-Hr Composite

Outfall 001, Continued (from 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	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia May 1 - Oct 31	2.7	XXX	XXX	1.4	XXX	2.8	1/week	8-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Nitrate-Nitrite (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus	3.9	XXX	XXX	2.0	XXX	4.0	1/week	8-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus (lbs)	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)
☐	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, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☒	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: BCW-PMT-033
☐	Other: