

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0062201
APS ID 756536
Authorization ID 1344985

Applicant and Facility Information

Applicant Name	<u>Schuylkill County Municipal Authority</u>	Facility Name	<u>Gordon WWTP</u>
Applicant Address	<u>221 South Centre Street</u> <u>Pottsville, PA 17901-3506</u>	Facility Address	<u>761 Airport Road</u> <u>Gordon, PA 17936</u>
Applicant Contact	<u>Patrick Caulfield, Executive Director</u>	Facility Contact	<u>Stephen Ulceski, Chief Wastewater Operator</u>
Applicant Phone	<u>(570) 622-8240</u>	Facility Phone	<u>(570) 622-8240</u>
Client ID	<u>5024</u>	Site ID	<u>450061</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Gordon Borough</u>
Connection Status	<u>No Limitations</u>	County	<u>Schuylkill</u>
Date Application Received	<u>March 4, 2021</u>	EPA Waived?	<u>No</u>
Date Application Accepted	<u>March 10, 2021</u>	If No, Reason	<u>Significant CB Discharge</u>
Purpose of Application	<u>Renewal of NPDES permit for discharge of treated sewage.</u>		

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.60 MGD of treated sewage into Mahanoy Creek, a Warm-Water Fishery, Migratory Fish (WWF, MF) receiving stream in State Water Plan Basin 6-B (Shamokin Creeks). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. This stream segment is not designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. This discharge is not expected to affect public water supplies.

Limitations for pH, CBOD₅, Total Suspended Solids (TSS), Fecal Coliform, and Dissolved Oxygen are technology-based and carried over from the previous permit.

WQM 7.0 modeling did not recommend stricter limits. The year-round monitoring and reporting for Ammonia-Nitrogen has been carried over from the previous permit.

The Total Residual Chlorine (TRC) Calculation Spreadsheet did not recommend stricter limitations than the previous permit. The technology based TRC limits have been carried over from the previous permit.

Influent monitoring requirements for TSS and BOD₅ has been carried over from the previous permit.

Sewage discharges now require monitoring and reporting for E. Coli. A monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD will be utilized.

Pollutant sampling results submitted with the permit application were entered into the Toxic Management Spreadsheet (TMS). The highest reported Total Lead concentration was 0.01 mg/L. The TMS recommended monitoring/reporting for Total Lead. The permittee was given the opportunity to conduct a minimum of 10 additional effluent samples for these parameters. The permittee collected 10 additional samples during March 2021 through May 2021 and provided the results to

Approve	Deny	Signatures	Date
X		/s/ Allison Seyfried / Environmental Engineering Specialist	September 19, 2022
X		/s/ Amy M. Bellanca, P.E. / Environmental Engineer Manager	9-21-22

Summary of Review

the Department via email on June 17, 2021. These updated results were used to re-run the modeling. The modeling no longer recommended monitoring/reporting for any parameter.

The previous permit included monitoring and reporting requirements for Total Copper and Total Zinc per Reasonable Potential Analysis. The permittee completed their sampling during their permit period and provided the average value for these parameters in the effluent testing information table in the permit renewal application. These additional sample results were able to give a better representation of the actual concentrations of Total Copper and Total Zinc in the effluent. The TMS did not recommend limits or monitoring/compliance for these parameters this permit cycle. Since this new data was provided that was not previously available, the Total Copper and Total Zinc monitoring/reporting requirements were removed from this permit.

A final Total Maximum Daily Load (TMDL) exists for the Mahony Creek Watershed. The TMDL addresses metals (iron, manganese, and aluminum) and pH associated with acid mine drainage (AMD). There are no approved Waste Load Allocations (WLA) for this facility and sewage is not considered a contributor to AMD. The annual monitoring/reporting for Total Iron and Total Manganese and the monthly monitoring/reporting for Total Aluminum has been carried over from the previous permit.

This is a Phase 2 Chesapeake Bay facility with annual mass limits for Total Nitrogen and Total Phosphorus. The monitoring/reporting for Total Kjeldahl Nitrogen (TKN), Nitrate-Nitrite as N, and Ammonia-Nitrogen has been maintained in this permit.

For this permit renewal, all monitoring frequencies for parameters with limitations are consistent with the Department's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document no. 362-0400-001).

There are no representative stream gages in the vicinity of the outfall. USGS StreamStats was used to generate the Q₇₋₁₀. Results were almost identical as the USGS StreamStats data that was used for modeling in the previous permit. RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

The existing permit expired on August 31, 2021 and the application for renewal was received on March 4, 2021

A Water Management System Inspection query indicated that on July 9, 2019 a Compliance Evaluation was performed. An Incident – Response to Accident or Event occurred on July 21, 2021 and a Follow-up Inspection was performed on July 28, 2021.

There are currently no open violations for this client that warrant withholding issuance of this permit.

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to Commonwealth Environmental Systems (CES) in Hegins, PA by County Waste.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.60
Latitude	40° 44' 45.07"	Longitude	-76° 21' 2.07"
Quad Name	Minersville	Quad Code	1335
Wastewater Description: Sewage Effluent			
Receiving Waters	Mahanoy Creek (WWF, MF)	Stream Code	17556
NHD Com ID	54963623	RMI	36.08
Drainage Area	56.6 mi ²	Yield (cfs/mi ²)	0.244
Q ₇₋₁₀ Flow (cfs)	13.8	Q ₇₋₁₀ Basis	PA StreamStats
Elevation (ft)	777	Slope (ft/ft)	-
Watershed No.	6-B	Chapter 93 Class.	WWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Mahanoy Creek
Nearest Downstream Public Water Supply Intake	Duncannon Municipal Authority Water System		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	~ 60 Miles

Treatment Facility Summary				
Treatment Facility Name: Scma Gordon WWTP				
WQM Permit No.	Issuance Date			
5491401	3/15/1991			
5400406	1/17/2001			
5418403	10/04/2018			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Chlorination	0.47 (2018-2020)
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.60	2,002	Not Overloaded	Reed Beds	Hauled

Compliance History

DMR Data for Outfall 001 (from June 1, 2021 to May 31, 2022)

Parameter	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21
Flow (MGD) Average Monthly	0.43	0.47	0.37	0.40	0.31	0.28	0.33	0.33	0.47	0.32	0.30	0.33
Flow (MGD) Daily Maximum	0.83	370	0.48	0.76	0.35	0.31	0.47	0.52	1.30	0.38	0.35	0.37
pH (S.U.) Minimum	6.50	6.44	6.60	6.65	6.70	6.56	6.58	6.61	6.58	6.65	6.80	6.57
pH (S.U.) Maximum	7.05	7.72	7.49	7.44	7.51	7.49	7.31	7.18	7.10	7.07	7.31	7.23
DO (mg/L) Minimum	7.08	6.04	6.88	6.42	7.36	6.95	6.39	6.08	8.08	5.91	5.15	5.48
TRC (mg/L) Average Monthly	0.22	0.25	0.16	0.17	0.19	0.09	0.15	0.13	0.17	0.10	0.11	0.17
TRC (mg/L) Instantaneous Maximum	1.05	0.74	0.53	0.59	0.85	0.44	0.57	0.66	0.61	0.45	0.32	0.91
CBOD5 (lbs/day) Average Monthly	13.13	18.26	10.78	12.99	8.33	8.78	10.46	8.32	13.41	7.75	5.80	8.64
CBOD5 (lbs/day) Weekly Average	17.68	25.44	12.94	17.95	12.04	11.13	14.26	9.42	33.48	9.01	6.56	13.54
CBOD5 (mg/L) Average Monthly	3.85	4.70	3.38	4.13	3.23	3.66	3.82	3.00	2.72	3.00	2.25	2.98
CBOD5 (mg/L) Weekly Average	4.60	5.90	3.60	5.30	5.03	4.70	4.90	3.20	3.10	3.00	3.00	4.40
BOD5 (mg/L) Influent Average Monthly	170.0	228.00	194.00	253	459.0	313.0	220.0	206.00	194.0	246	170.0	301
TSS (lbs/day) Average Monthly	8.24	12.94	13.71	7.28	7.35	5.76	3.98	10.55	14.21	7.75	7.89	15.15
TSS (lbs/day) Weekly Average	16.68	23.73	41.42	16.93	16.71	9.47	5.29	17.66	32.40	9.01	8.71	26.19
TSS (mg/L) Average Monthly	2.50	3.00	4.20	2.25	2.75	2.40	1.59	3.75	3.00	3.00	3.00	5.4
TSS (mg/L) Influent Average Monthly	62	190.0	234.0	647.18	136.0	500.0	254.0	332.00	284.0	622	78.0	184
TSS (mg/L) Weekly Average	5.00	5.00	13.00	5.00	6.00	4.00	2.00	6.00	3.00	3.00	3.00	10.0

**NPDES Permit Fact Sheet
Gordon WWTP**

NPDES Permit No. PA0062201

Fecal Coliform (CFU/100 ml) Geometric Mean	4.56	2.0	2.0	2	2.21	2.0	2.74	4.33	3.03	7.0	10.0	11.89
Fecal Coliform (CFU/100 ml) IMAX	54	2.0	2.0	2	3.0	2.0	7	7.0	7.0	10	10.0	20
Nitrate-Nitrite (mg/L) Average Monthly	3.3	3.0	2.40	2.76	4.32	3.59	4.61	7.60	7.87	8.6	5.6	4.7
Nitrate-Nitrite (lbs) Total Monthly	338.26	357.07	225.56	231.18	354.09	269.36	379.22	645.04	1012.48	715.76	443.26	406.06
Total Nitrogen (mg/L) Average Monthly	5.2	4.7	4.3	4.73	5.89	5.45	6.21	9.46	9.99	10.4	7.1	6.4
Total Nitrogen (lbs) Effluent Net Total Monthly	541.60	563.30	405.57	403.04	482.66	409.75	510.52	803.53	1348.23	865.82	565.02	554.45
Total Nitrogen (lbs) Total Monthly	541.60	563.30	405.57	403.04	482.66	409.75	510.52	803.53	1348.23	865.82	565.02	554.45
Total Nitrogen (lbs) Effluent Net Total Annual									8678			
Total Nitrogen (lbs) Total Annual									8678			
Ammonia (lbs/day) Average Monthly	2.2	3.8	2.5	3.21	1.33	2.05	1.84	1.62	5.83	1.9	1.2	1.6
Ammonia (mg/L) Average Monthly	0.6	0.90	0.8	1.03	0.51	0.84	0.67	2.55	0.94	0.5	0.50	0.5
Ammonia (lbs) Total Monthly	68.69	115.43	77.77	89.89	41.13	63.43	55.13	50.36	174.92	59.84	37.92	47.69
Ammonia (lbs) Total Annual									1016			
TKN (mg/L) Average Monthly	1.90	1.7	1.9	1.98	1.57	1.86	1.60	1.87	2.11	1.8	1.5	1.7
TKN (lbs) Total Monthly	203.34	206.23	180.01	172.51	128.57	140.39	131.30	158.69	335.43	150.06	121.76	148.38
Total Phosphorus (lbs/day) Average Monthly	6.8	6.4	5.6	5.35	5.42	5.00	5.89	7.05	11.59	8.1	7.6	7.5
Total Phosphorus (mg/L) Average Monthly	2.1	1.6	1.8	1.78	2.05	2.06	2.17	2.56	2.50	3.0	2.9	2.6
Total Phosphorus (lbs) Effluent Net Total Monthly	209.82	191.25	173.35	149.87	167.92	154.92	176.78	218.44	347.75	251.76	234.40	224.07
Total Phosphorus (lbs) Total Monthly	209.82	191.25	173.35	149.87	167.92	154.92	176.78	218.44	347.75	251.76	234.40	224.07

**NPDES Permit Fact Sheet
Gordon WWTP**

NPDES Permit No. PA0062201

Total Phosphorus (lbs) Effluent Net Total Annual									1460			
Total Phosphorus (lbs) Total Annual									2650			
Total Aluminum (mg/L) Average Monthly	0.020	0.240	0.030	0.02	0.020	0.0200	0.020	0.10	0.10	0.10	0.10	0.1
Total Copper (mg/L) Average Monthly	0.0115	0.0095	0.0078	0.0068	0.0078	0.0124	0.0055	0.010	0.0122	0.0105	0.015	0.007
Total Copper (mg/L) Daily Maximum	0.0230	0.0160	0.010	0.0080	0.010	0.0380	0.0060	0.013	0.020	0.012	0.020	0.013
Total Iron (mg/L) Average Monthly						0.040						
Total Manganese (mg/L) Average Monthly						0.030						
Total Zinc (mg/L) Average Monthly	0.0853	0.0873	0.0956	0.088	0.0908	0.0968	0.0883	0.10	0.0820	0.095	0.070	0.096
Total Zinc (mg/L) Daily Maximum	0.1110	0.1300	0.1250	0.126	0.1100	0.1100	0.1040	0.11	0.1200	0.10	0.100	0.10

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>0.60</u>
Latitude <u>40° 44' 45.19"</u>	Longitude <u>-76° 21' 2.37"</u>
Wastewater Description: <u>Sewage Effluent</u>	

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	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40.0	Average Weekly	133.102(a)(4)(ii)	
	50.0	IMAX	-	92a.47(a)(2)
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	60.0	IMAX	-	
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)
	1.6	IMAX	-	
Ammonia-Nitrogen	Report	Average Monthly	-	BPJ
Dissolved Oxygen	5.0	Minimum	-	BPJ
E. Coli	Report	IMAX	-	92a.61

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
CBOD ₅ – Raw Sewage Influent	Report	Monthly Average	POTW Requirement
Total Suspended Solids – Raw Sewage Influent	Report	Monthly Average	POTW Requirement
Aluminum, Total	Report	Monthly Average	Mahanoy Creek Watershed TMDL
Iron, Total	Report	Annual Average	
Manganese, Total	Report	Annual Average	
Total Phosphorus	1,461 lbs	Net Total Annual	Chesapeake Bay Phase 2 Facility
	Report lbs	Total Monthly	
	Report lbs	Total Annual	
	Report	Monthly Average	
Total Nitrogen	10,959 lbs	Net Total Annual	Chesapeake Bay Phase 2 Facility
	Report lbs	Total Monthly	
	Report lbs	Total Annual	
	Report	Monthly Average	

Anti-Backsliding

No limitations were made less stringent. Monitoring/Reporting for Total Copper and Total Zinc were removed from the permit due to new data being provided with this permit renewal application.

Modeling

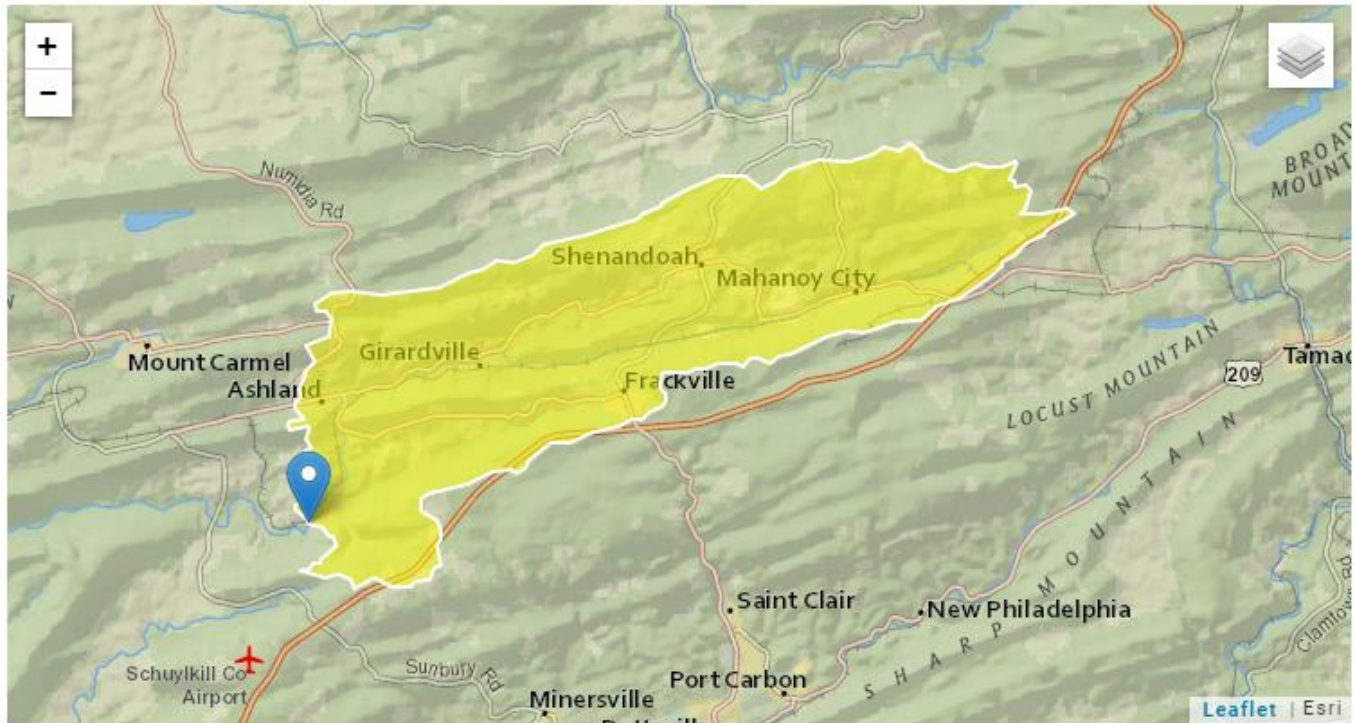
At Outfall 001 on Mahanoy Creek:

RMI	Elevation (ft)	Drainage Area (mi ²)	Q ₇₋₁₀ Flow (cfs)
36.08	777	56.6	13.8

$$\text{Low Flow Yield using StreamStats} = \frac{13.8 \text{ ft}^3/\text{sec}}{56.6 \text{ mi}^2} = 0.244 \frac{\text{ft}^3/\text{sec}}{\text{mi}^2}$$

StreamStats Report

Region ID: PA
 Workspace ID: PA20210312143027542000
 Clicked Point (Latitude, Longitude): 40.74588, -76.35052
 Time: 2021-03-12 09:30:45 -0500



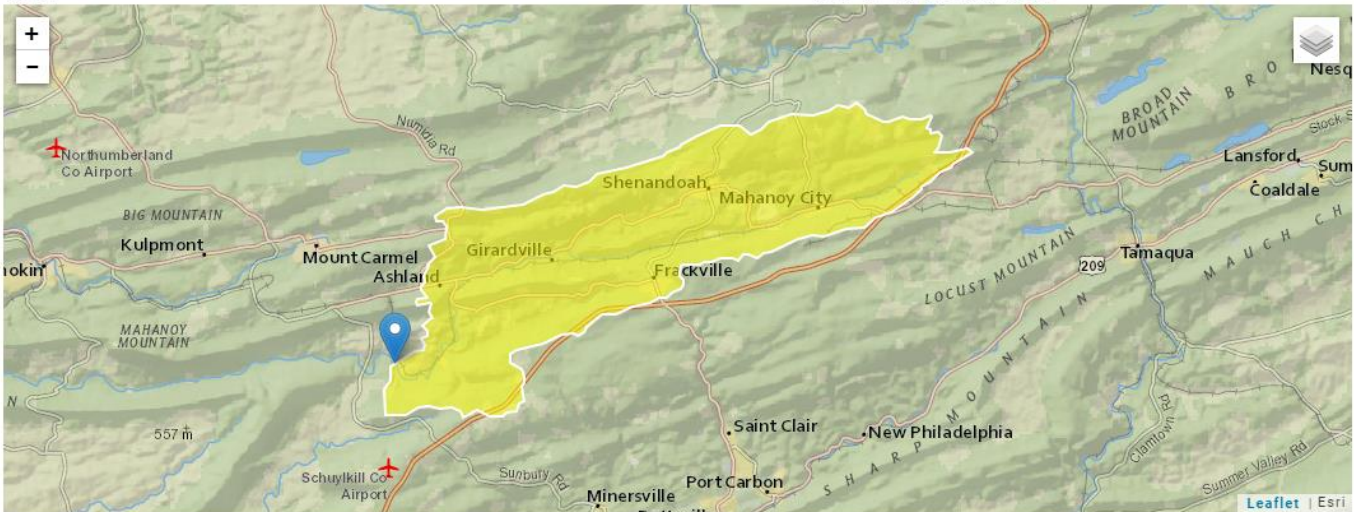
Parameter Code	Parameter Description	Value	Unit		
DRNAREA	Area that drains to a point on a stream	56.5	square miles		
Statistic		Value	Unit	SE	SEp
7 Day 2 Year Low Flow		24.3	ft ³ /s	38	38
30 Day 2 Year Low Flow		29.8	ft ³ /s	33	33
7 Day 10 Year Low Flow		13.8	ft ³ /s	51	51

At confluence with Unnamed Tributary 17674 to Mahanoy Creek:

RMI	Elevation (ft)	Drainage Area (mi ²)
34.484	757	58.7

StreamStats Report

Region ID: PA
 Workspace ID: PA20210312144237934000
 Clicked Point (Latitude, Longitude): 40.74890, -76.37041
 Time: 2021-03-12 09:42:57 -0500



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	58.7	square miles

WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>			
06B		17556		MAHANoy 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)
36.080	SCMA - Gordon	PA0062201	0.600	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

TRC EVALUATION					
Input appropriate values in A3:A9 and D3:D9					
5.66	= Q stream (cfs)	0.5	= CV Daily		
0.6	= Q discharge (MGD)	0.5	= CV Hourly		
30	= no. samples	1	= AFC_Partial Mix Factor		
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor		
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)		
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)		
0	= %Factor of Safety (FOS)		=Decay Coefficient (K)		
Source	Reference	AFC Calculations		Reference	CFC Calculations
TRC	1.3.2.ii	WLA_afc = 1.964		1.3.2.ii	WLA_cfc = 1.907
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373		5.1c	LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 0.732		5.1d	LTA_cfc = 1.109
Source	Effluent Limit Calculations				
PENTOXSD TRG	5.1f	AML MULT = 1.231			
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500		BAT/BPJ	
		INST MAX LIMIT (mg/l) = 1.635			

From the Phase 3 WIP Wastewater Supplement
Revised, September 13, 2021

NPDES Permit No.	Phase	Facility	Latest Permit Issuance Date	Permit Expiration Date	Cap Load Compliance Start Date	TN Cap Load (lbs/yr)	TN Offsets Included in Cap Load (lbs/yr)	TP Cap Load (lbs/yr)	TN Delivery Ratio	TP Delivery Ratio
PA0044113	2	South Middleton Township Municipal Authority	4/27/2017	4/30/2022	10/1/2014	27,397	-	3,653	0.961	0.436
PA0044661	1	Lewisburg Area Joint Sanitary Authority	3/12/2019	3/31/2024	10/1/2012	44,200	-	5,893	0.941	0.436
PA0045985	1	Mountaintop Area Sewer Authority	6/1/2019	5/31/2024	10/1/2010	76,318	-	10,185	0.871	0.436
PA0046221	3	Newville Borough	5/21/2021	5/31/2026	10/1/2011	7,306	-	974	0.951	0.436
PA0046272	3	Porter-Tower Joint Municipal Authority	9/21/2017	9/30/2022	10/1/2013	9,922	-	1,321	0.951	0.436
PA0046388	3	Butler Township St. Johns	4/18/2013	4/30/2018	10/1/2009	40,182	-	5,357	0.871	0.436
PA0060046	3	Can-Do Inc	4/27/2020	4/30/2025	10/1/2012	18,265	-	2,435	0.871	0.436
PA0060135	3	Shickshinny Borough Sewer Authority	10/26/2017	10/31/2022	10/1/2013	8,219	-	1,096	0.871	0.436
PA0060518	3	Hallstead-Great Bend Joint Sewer Authority	10/22/2015	10/31/2020	10/1/2012	9,741	-	1,218	0.495	0.436
PA0060801	2	Montrose Municipal Authority	2/25/2011	2/29/2016	10/1/2013	14,977	-	1,997	0.733	0.436
PA0061034	3	Waverly Township	7/1/2011	7/31/2016	10/1/2013	9,132	-	1,218	0.733	0.436
PA0061590	3	Little Washington Wastewater Co.	5/1/2019	4/30/2024	10/1/2013	24,073	-	3,210	0.871	0.436
PA0062201	2	Schuylkill County Municipal Authority	8/19/2016	8/31/2021	10/1/2012	10,959	-	1,461	0.951	0.436



Mahanoy Creek
TMDL Final.pdf



TMS PA0062201
UPDATED.pdf