



Application Type  
Facility Type  
Major / Minor

Renewal  
Municipal  
Minor

Application No. PA0247081  
APS ID 471735  
Authorization ID 1517964

## NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

### Applicant and Facility Information

Applicant Name	<u>Hopewell Township Bedford County</u>	Facility Name	<u>Hopewell Township Tatesville STP</u>
Applicant Address	<u>2759 Raystown Road</u> <u>Hopewell, PA 16650-7638</u>	Facility Address	<u>2759 Raystown Road</u> <u>Hopewell, PA 16650</u>
Applicant Contact	<u>Melissa Donaldson</u>	Facility Contact	<u>Melissa Douglas</u>
Applicant Phone	<u>(814) 652-5743</u>	Facility Phone	<u>(814) 652-5743</u>
Client ID	<u>39558</u>	Site ID	<u>609351</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Hopewell Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Bedford</u>
Date Application Received	<u>March 3, 2025</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>March 21, 2025</u>	If No, Reason	
Purpose of Application	<u>This is an application or NPDES renewal.</u>		

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	May 1, 2025
X		Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for	June 30, 2025
X		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	June 30, 2025

### Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Tatesville STP located at 2759 Raystown Road, Hopewell, PA 16650 in Bedford County, municipality of Hopewell Township. The existing permit became effective on September 1, 2020 and expires(d) on August 31, 2025. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on March 3, 2025.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, a description of the facility's receiving waters attainment/non-attainment assessment status, and a description of any changes to the proposed monitoring/sampling frequency. Section 6 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.120 MGD treatment facility. The applicant anticipates upgrading UV lighting. The NPDES application has been processed as a Minor Sewage Facility (Level 2) due to the type of sewage and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Bedford County Commissioners and Hopewell Township Supervisors and the notice was received by the parties on February 11, 2025 and February 19, 2025. A planning approval letter was not necessary as the facility is neither new or expanding.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Pipers Run. The sequence of receiving streams that the Pipers Run discharges into are the Raystown Juniata River, the Juniata River and the Susquehanna River which eventually drains into the Chesapeake Bay. The subject site is subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Pipers Run is a Category 4c and 5 stream listed in the 2024 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an impaired stream for aquatic life due to habitat alterations from grazing in riparian/shoreline zones. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- Monitoring for E. Coli shall be required
- Monitoring shall be required for copper, lead and zinc.

Sludge use and disposal description and location(s): Biosolids/sewage sludge disposed at (a) Walter's Septic AG in Hanover Township, Dauphin County as agricultural utilization; (b) Annville Township Authority in Annville Township, Lebanon County for treatment plant disposal

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. 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.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

**1.0 Applicant**

**1.1 General Information**

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name: Tatesville WWTP  
NPDES Permit #: PA0247081  
Physical Address: 2759 Raystown Road  
Hopewell, PA 16650  
Mailing Address: 2759 Raystown Road  
Hopewell, PA 16650  
Contact: Melissa Douglas  
Secretary  
mthomas@hopewell-comcastbiz.net  
Consultant: Brock Bowers  
Water/Wastewater Designer  
Keller Engineers, Inc.  
420 Allegheny Street  
Hollidaysburg, PA 16648  
(814) 696-7430  
bbowers@keller-engineers.com

**1.2 Permit History**

Permit submittal included the following information.

- NPDES Application
- Flow Diagrams
- Influent Sample Data
- Effluent Sample Data

**2.0 Treatment Facility Summary**

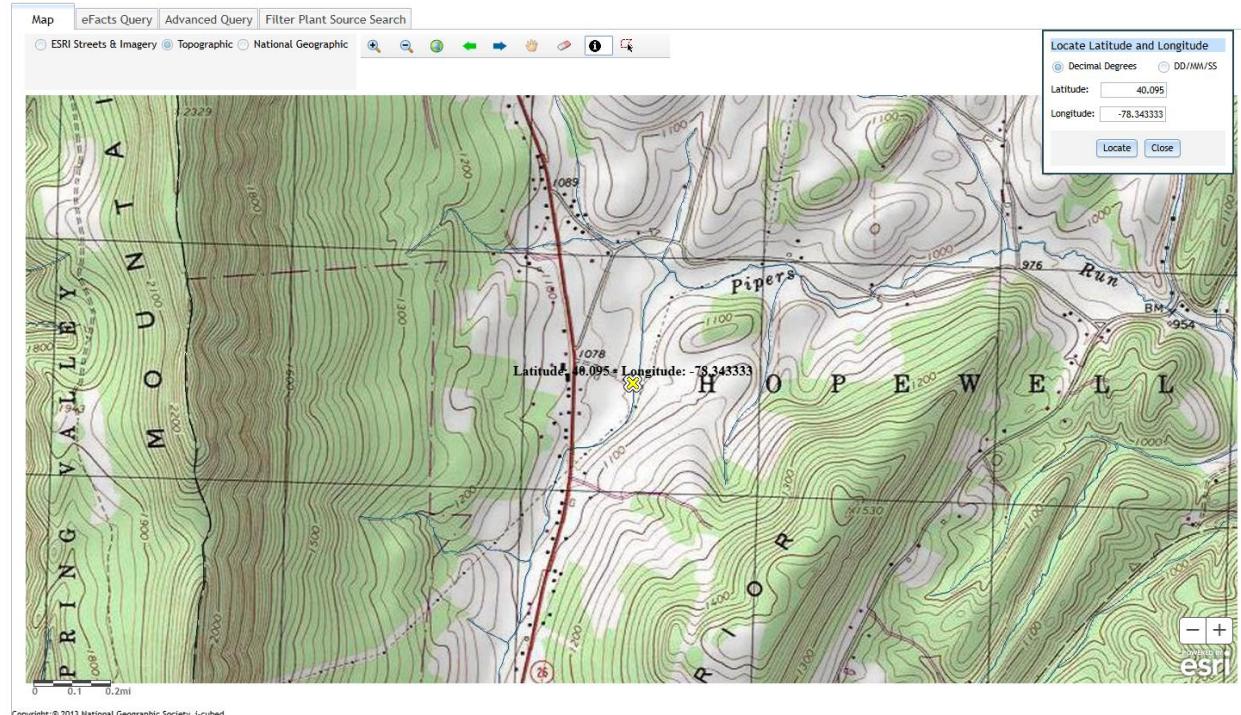
**2.1.1 Site location**

The physical address for the facility is 2759 Raystown Road, Hopewell, PA 16650. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

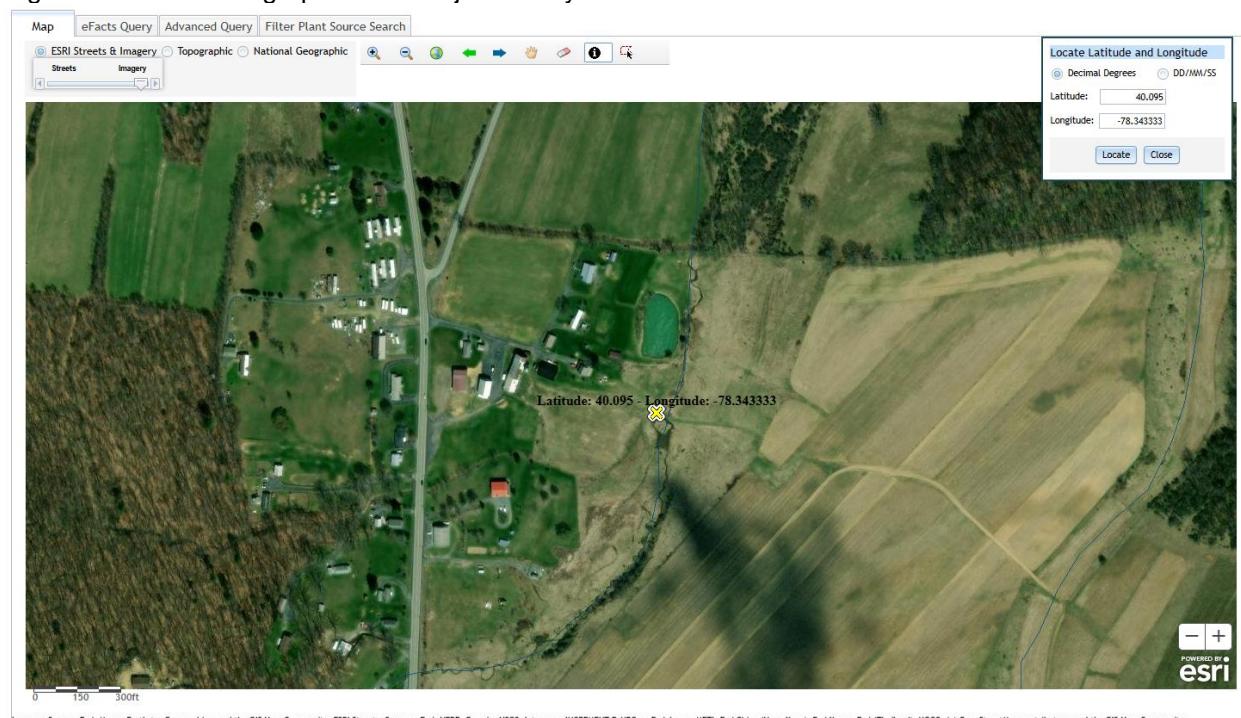
**NPDES Permit Fact Sheet**  
**PA0247081**  
**Hopewell Township Tatesville STP**

**NPDES Permit No.**

**Figure 1: Topographical map of the subject facility**



**Figure 2: Aerial Photograph of the subject facility**



### 2.1.2 Sources of Wastewater/Stormwater

The facility receives 100% of their wastewater contribution from Hopewell Township.

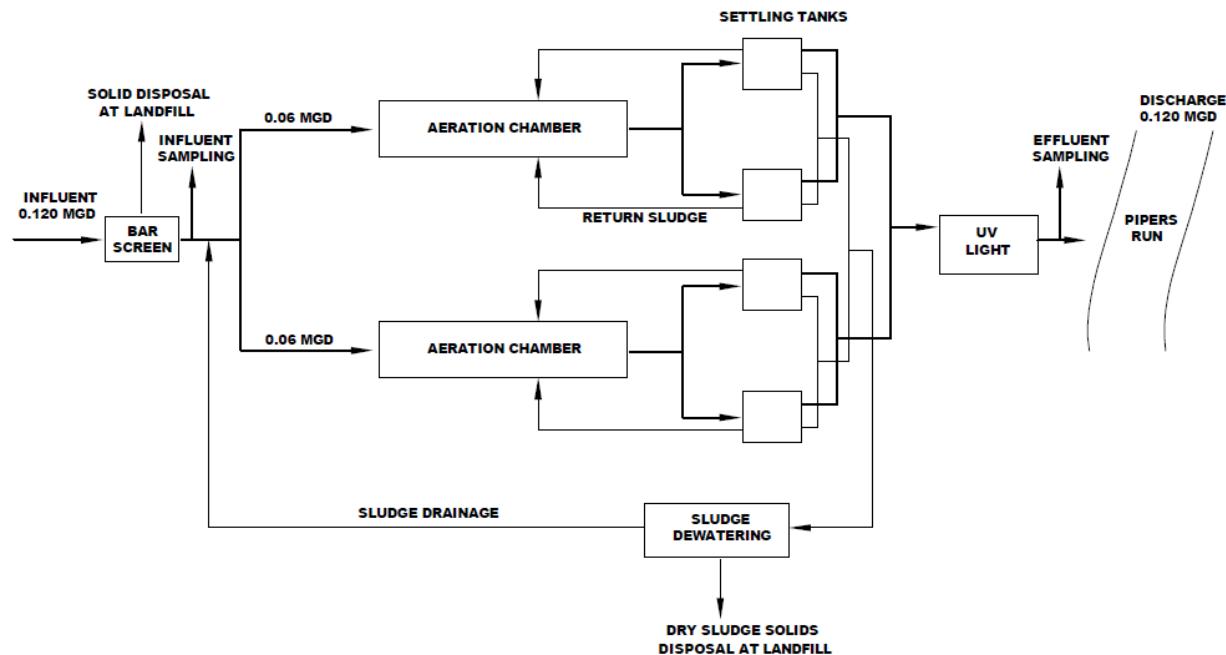
### 2.2 Description of Wastewater Treatment Process

The subject facility is a 0.12 MGD design flow facility. The subject facility treats wastewater using a bar screen, an aeration chamber, a settling tank, UV for disinfection prior to discharge through outfall. The facility is being evaluated for flow, pH, dissolved oxygen, CBOD5, TSS, fecal coliform, ultraviolet, nitrogen species, and phosphorus. The existing permits limits for the facility is summarized in Section 2.4.

The treatment process is summarized in the table.

Treatment Facility Summary				
<b>Treatment Facility Name:</b> Tatesville STP				
<b>WQM Permit No.</b>		<b>Issuance Date</b>		
0503404		09/12/2003		
0503404		05/17/2004		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Ultraviolet	0.12
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.12	210	Not Overloaded	Aerobic Digestion	Combination of methods

A schematic of the treatment plant is depicted.



### **2.3 Facility Outfall Information**

The facility has the following outfall information for wastewater.

**Outfall No.** 001  
**Latitude** 40° 5' 42.00"  
**Wastewater Description:** Sewage Effluent

**Design Flow (MGD)** .12  
**Longitude** -78° 20' 36.00"

#### **2.3.1 Operational Considerations – Chemical Additives**

Chemical additives are chemical products introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. Chemicals excluded are those used for neutralization of waste streams, the production of goods, and treatment of wastewater.

The subject facility utilizes the following chemicals as part of their treatment process.

- The facility does not use any chemicals for wastewater treatment.

### **2.4 Existing NPDES Permits Limits**

The existing NPDES permit limits are summarized in the table.

**NPDES Permit Fact Sheet  
PA0247081  
Hopewell Township Tatesville STP**

**NPDES Permit No.**

**PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS**

I. A. For Outfall 001, Latitude 40° 5' 42.00", Longitude 78° 20' 36.00", River Mile Index 3.43, Stream Code 14053

Receiving Waters: Pipers Run (WWF)

Type of Effluent: Sewage Effluent

1. The permittee is authorized to discharge during the period from September 1, 2020 through August 31, 2025.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> 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	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	25	40	XXX	25	40	50	1/week	Composite
Biochemical Oxygen Demand (BOD5)							8-Hr	
Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	Composite
Total Suspended Solids	30	45	XXX	30	45	60	1/week	Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000				Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200				Grab
Ultraviolet light intensity (mW/cm <sup>2</sup> )	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
Nitrate-Nitrite as N	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	8-Hr Composite

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Nitrogen	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	Calculation
Ammonia-Nitrogen Nov 1 - Apr 30	6.0	XXX	XXX	6.0	XXX	12	1/week	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	2.0	XXX	XXX	2.0	XXX	4	1/week	8-Hr Composite
Total Kjeldahl Nitrogen	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	8-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

### **3.0 Facility NPDES Compliance History**

#### **3.1 Summary of Inspections**

A summary of the most recent inspections during the existing permit review cycle is as follows.

The DEP inspector noted the following during the inspection.

09/16/2020:

- Since the last full inspection of the plant on December 3, 2019, there had been a few repairs made at the facility. One raw sewer pump was repaired (bad seal) and the water pumps on 3 back-up generators were replaced. One generator was located at the plant and the other two are at pump stations. Jeff also mentioned that the township has decided to dispose of liquid sludge instead of pressing and removing dry sludge. The sludge is hauled by Walters Septic

04/07/2022:

- There was a collection of overflowing rag buckets above the EQ tank.
- DEP recommend disposing material into a dumpster if dry.
- Facility reported a sanitary sewer overflow during tropical storm Ida in September 2021.

07/07/2023:

- There was currently a leaking air line in the aeration tank.
- The facility has switched from pressing sludge to just having liquid sludge removed from the plant. The sludge disposal supplemental forms needs to indicate where sludge is being sent.

09/12/2024:

- The treatment plant appear to be operating properly with the exception of a broken air line. There was a major leak from the air line in the aeration tank. This was noted in the inspection report dated July 7, 2023.
- The treatment plant was in need of routine maintenance. There were rags and debris on the ground around the influent headworks and the bar screen was covered with rags.
- The bucket of gravel was routinely removed from headworks and was due to leaks in the collection system.
- The clarifiers contained an abundance of floating sludge and debris. This may be due to not wasting enough sludge or old sludge may be accumulated on tank walls and corners.
- The surface skimmers also need to be adjusted.
- Recommend checking sludge depth, scraping tank walls, and adjusting clarifier skimmers on a routine basis.
- Floating plastic debris should be manually removed.
- One pump was currently out of service at the Tatesville pump station and was scheduled to be repaired. The Cottles Corner pump station was being worked on.
- A pipe was repaired and a sealer coating will be applied.
- The UV sensor unit was not functioning properly.
- There were no laboratory results or sludge hauling records available for all of 2024. Jeff said the records are stored in the township office and the office is closed today. Monitoring records need to be available for review during DEP inspections. Recommend keeping copies at the treatment plant.
- The #10 pH buffer was expired and needs to be replaced.

01/08/2025:

- Conducted a follow-up inspection to check on violations noted during the inspection on September 12, 2024. The major air line leak in the aeration tank had been temporarily repaired using an epoxy. Corroded sections of the piping will need to be welded.

- The UV sensor had not been repaired. Damian stated that the sensor can be wiped off and will work for a short time.
- One pump at the Tatesville pump station was repaired since the last inspection but the second pump is now out of service.
- The expired #10 pH buffer had been replaced.
- Laboratory results not available during the last inspection are now on-site and stored on a flash drive. Records for two months, July 2023 and March 2024 need to be added to the drive.

### **3.2 Summary of DMR Data**

A review of approximately 1-year of DMR data shows that the monthly average flow data for the facility below the design capacity of the treatment system. The maximum average flow data for the DMR reviewed was 0.1065 MGD in April 2024. The design capacity of the treatment system is 0.12 MGD.

The off-site laboratory used for the analysis of the parameters was Pace Analytical located at 2019 9<sup>th</sup> Avenue, Altoona, PA.

DMR Data for Outfall 001 (from February 1, 2024 to January 31, 2025)

Parameter	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24
Flow (MGD) Average Monthly	0.0577	0.0636	0.0522	0.0514	0.0593	0.0666	0.0544	0.0528	0.0707	0.1065	0.0765	0.0674
Flow (MGD) Daily Maximum	0.1021	0.0992	0.0833	0.0826	0.0865	0.2314	0.0981	0.0814	0.14	0.4889	0.3076	0.1035
pH (S.U.) Instantaneous Minimum	7.1	7.1	7.1	7.2	7.2	7.1	7.0	6.8	6.7	7.2	7.2	7.2
pH (S.U.) Instantaneous Maximum	7.7	7.8	7.6	7.7	7.9	7.8	7.7	7.6	7.5	7.9	7.6	7.6
DO (mg/L) Instantaneous Minimum	6.8	5.9	6.8	5.8	5.8	5.4	5.2	5.5	6.3	6.2	6.4	7.0
CBOD5 (lbs/day) Average Monthly	< 1.1	< 2.3	< 1.1	< 1.2	< 1.3	< 1.4	< 1.2	< 1.2	< 1.2	< 4.3	< 1.6	< 3
CBOD5 (lbs/day) Weekly Average	< 2.7	4.2	< 1.3	< 1.5	< 1.6	< 1.7	< 1.8	< 1.5	1.4	12.3	< 1.7	5.5
CBOD5 (mg/L) Average Monthly	< 3	< 4	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 6
CBOD5 (mg/L) Weekly Average	< 4	6	< 3	< 3	< 3	< 3	< 3	< 3	< 3	4	< 3	11
BOD5 (lbs/day) Raw Sewage Influent   Average Monthly	91	95	112	106	81	72	67	73	131	265	177	70
BOD5 (lbs/day) Raw Sewage Influent   Daily Maximum	118	155	123	141	106	89	113	81	262	538	351	95
BOD5 (mg/L) Raw Sewage Influent   Average Monthly	248	180	273	281	187	166	164	179	338	251	351	138
TSS (lbs/day) Average Monthly	2.6	< 3.1	1.8	< 2.3	< 3.4	< 1.0	< 0.9	< 0.9	< 1.1	< 9.2	< 0.8	< 2.2
TSS (lbs/day) Raw Sewage Influent   Average Monthly	101	80	135	137	173	84	68	60	167	803	208	57

NPDES Permit Fact Sheet  
Hopewell Township Tatesville STP

NPDES Permit No. PA0247081

TSS (lbs/day) Raw Sewage Influent   Daily Maximum	268	152	184	157	405	185	144	91	363	2006	437	80
TSS (lbs/day) Weekly Average	5.0	3.9	2.3	6.6	9.8	2.1	1.4	1.1	1.6	32.3	< 0.9	4.3
TSS (mg/L) Average Monthly	7	< 5	5	< 6	< 7	< 2	< 2	< 2	< 3	< 5	< 1	< 4
TSS (mg/L) Raw Sewage Influent   Average Monthly	277	143	332	372	372	206	166	146	435	690	422	115
TSS (mg/L) Weekly Average	12	7	7	14	18	4	4	3	4	10	2	8
Fecal Coliform (No./100 ml) Geometric Mean	< 212	< 26	< 36	< 21	< 21	134	168	< 38	< 23	< 44	< 12	< 35
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 9678.8	1302	4340	395	185	384	1379.2	2595.2	533.2	9678.4	53.6	406.8
UV Intensity (mW/cm <sup>2</sup> ) Instantaneous Minimum	2.1	2.4	1.9	1.4	1.0	1	1	1.3	1.1	1	1.5	1.3
Nitrate-Nitrite (mg/L) Semi-Annual Average		< 46.36						< 32.53				
Total Nitrogen (mg/L) Semi-Annual Average		< 46.86						< 33.03				
Ammonia (lbs/day) Average Monthly	< 0.04	< 1.0	< 0.04	< 0.04	< 0.04	< 0.05	< 0.04	< 0.09	< 0.04	< 1.0	< 0.05	< 0.05
Ammonia (mg/L) Average Monthly	< 0.1	< 1.63	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.353	< 0.1	< 0.1
TKN (mg/L) Semi-Annual Average		< 0.5						< 0.5				
Total Phosphorus (mg/L) Semi-Annual Average		6.54						4.12				

### 3.3 Non-Compliance

#### 3.3.1 Non-Compliance- NPDES Effluent

A summary of the non-compliance to the permit limits for the existing permit cycle is as follows.

From the DMR data beginning in September 1, 2020 to March 25, 2025, the following were observed effluent non-compliances.

Summary of Non-Compliance with NPDES Effluent Limits Beginning September 1, 2020 and Ending March 25, 2025									
NON_COMPLIANCE_DATE	NON_COMPL_TYPE_DESC	NON_COMPL_CATEGORY_DESC	PARAMETER	SAMPLE_VALUE	VIOLATION_CONDITION	PERMIT_VALUE	UNIT_OF_MEASURE	STAT_BASE_CODE	FACILITY_COMMENTS
10/20/2021	Violation of permit condition	Effluent	Fecal Coliform	9678.4	>	1000	No./100 ml	Instantaneous Maximum	Due to heavy rains the flow affected the FC results. Operator shut off RAS, WAS and blowers to preserve the activated sludge and return plant to normal range.
12/20/2021	Violation of permit condition	Effluent	Carbonaceous Biochemical Oxygen Demand	44.6	>	40	mg/L	Weekly Average	At the time of sampling the air was off for hours while repairing a wasting valve resulting in higher CBOD result..
7/30/2024	Late DMR Submission	Other Violations							
7/30/2024	Late DMR Submission	Other Violations							
7/15/2024	Violation of permit condition	Effluent	Fecal Coliform	2595.2	>	1000	No./100 ml	Instantaneous Maximum	
8/16/2024	Violation of permit condition	Effluent	Fecal Coliform	1379.2	>	1000	No./100 ml	Instantaneous Maximum	UV light need cleaning and general maintenance, operator will work to get the issue fixed

### 3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

Beginning in September 1, 2020 to March 25, 2025 the following were observed enforcement actions.

**Summary of Enforcement Actions**  
**Beginning September 1, 2020 and Ending March 25, 2025**

ENF ID	ENF TYPE DESC	ENF CREATION DATE	EXECUTED DATE	VIOL CODE ID	VIOLATIONS	ENF FINALSTATUS	ENF CLOSED DATE
<a href="#">433541</a>	Notice of Violation	09/23/2024	09/16/2024	17282	92A.41(A)10B; 92A.41(A)5; 92A.41(A)9	Comply/Closed	01/08/2025
<a href="#">433541</a>	Notice of Violation	09/23/2024	09/16/2024	17260	92A.41(A)10B; 92A.41(A)5; 92A.41(A)9	Comply/Closed	01/08/2025
<a href="#">433541</a>	Notice of Violation	09/23/2024	09/16/2024	17262	92A.41(A)10B; 92A.41(A)5; 92A.41(A)9	Comply/Closed	01/08/2025

### 3.4 Summary of Biosolids Disposal

A summary of the biosolids disposed of from the facility is as follows.

2024			
Sewage Sludge / Biosolids Production Information			
Hauled Off-Site			
2024	Gallons	% Solids	Dry Tons
January	0		
February	0		
March	0		
April	0		
May	0		
June	0		
July	0		
August	0		
September	0		
October	0		
November	0		
December	11,200	0.7	0.327
Notes:			
Biosolids/sewage sludge disposed at			
Walter's Septic AG in Hanover Township, Dauphin			
County as agricultural utilization			
Annville Township Authority in Annville Township,			
Lebanon County for treatment plant disposal			

### 3.5 Open Violations

As of May 2025, an open violations existed for Tatesville STP.

## **4.0 Receiving Waters and Water Supply Information Detail Summary**

### **4.1 Receiving Waters**

The receiving waters has been determined to be Pipers Run. The sequence of receiving streams that the Pipers Run discharges into are the Raystown Juniata River, the Juniata River and the Susquehanna River which eventually drains into the Chesapeake Bay.

### **4.2 Public Water Supply (PWS) Intake**

The closest PWS to the subject facility is Saxton Municipal Water Authority (PWS ID # 4050021) located approximately 17 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

### **4.3 Class A Wild Trout Streams**

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

### **4.4 2024 Integrated List of All Waters (303d Listed Streams)**

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

**The receiving waters is listed in the 2024 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 4c and 5 waterbody. This stream is an impaired stream for aquatic life due to habitat alterations from grazing in riparian/shoreline zones. The designated use has been classified as protected waters for warm water fishes (WWF) and migratory fishes (MF).**

### **4.5 Low Flow Stream Conditions**

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The closest WQN station to the subject facility is the Raystown Branch Juniata at Saxton, PA (WQN223). This WQN station is located approximately 18 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Raystown Branch Juniata River at Saxton, PA (USGS station number 1562000). This gauge station is located approximately 18 miles downstream of the subject facility.

For WQM modeling, pH and stream water temperature data from the water quality network station was used. pH was estimated to be 8.00 and the stream water temperature was estimated to be 23.3 C.

The hardness of the stream was estimated from the water quality network to be 96 mg/l CaCO<sub>3</sub>.

The low flow yield and the Q710 for the subject facility was estimated as shown below.

Gauge Station Data	
USGS Station Number	1562000
Station Name	Raystown Branch Juniata River at Saxton, PA
Q710	67.1 ft <sup>3</sup> /sec
Drainage Area (DA)	756 mi <sup>2</sup>

***Calculations***

The low flow yield of the gauge station is:

Low Flow Yield (LFY) = Q710 / DA

$$LFY = (67.1 \text{ ft}^3/\text{sec} / 756 \text{ mi}^2)$$

$$LFY = 0.0888 \text{ ft}^3/\text{sec}/\text{mi}^2$$

The low flow at the subject site is based upon the DA of 2.074 mi<sup>2</sup>

$$Q710 = (LFY @ \text{gauge station})(DA @ \text{Subject Site})$$

$$Q710 = (0.0888 \text{ ft}^3/\text{sec}/\text{mi}^2)(2.074 \text{ mi}^2)$$

$$Q710 = 0.184 \text{ ft}^3/\text{sec}$$

**4.6 Summary of Discharge, Receiving Waters and Water Supply Information**

Outfall No.	001	Design Flow (MGD)	.12
Latitude	40° 5' 41.78"	Longitude	-78° 20' 35.28"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Pipers Run (WWF)	Stream Code	14053
NHD Com ID	65845225	RMI	3.45
Drainage Area	2.07	Yield (cfs/mi <sup>2</sup> )	0.0888
Q <sub>7-10</sub> Flow (cfs)	0.184	Q <sub>7-10</sub> Basis	StreamStats/streamgauge
Elevation (ft)	1034	Slope (ft/ft)	
Watershed No.	11-D	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired for aquatic life		
Cause(s) of Impairment	HABITAT ALTERATIONS, SILTATION		
Source(s) of Impairment	GRAZING IN RIPARIAN OR SHORELINE ZONES		
TMDL Status	Not applicable	Name	
Background/Ambient Data		Data Source	
pH (SU)	8.00	WQN223; Median July to Oct	
Temperature (°C)	23.3	WQN223; Median July to Oct	
Hardness (mg/L)	96.00	WQN223; Median historical	
Other:			
Nearest Downstream Public Water Supply Intake	Saxton Municipal Water Authority		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	41	Distance from Outfall (mi)	17

## **5.0: Overview of Presiding Water Quality Standards**

### **5.1 General**

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET). The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

### **5.2.1 Technology-Based Limitations**

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3). Available TBEL requirements for the state of Pennsylvania are itemized in PA Code 25, Chapter 92a.47.

The presiding sources for the basis for the effluent limitations are governed by either federal or state regulation. The reference sources for each of the parameters is itemized in the tables. The following technology-based limitations apply, subject to water quality analysis and best professional judgement (BPJ) where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD <sub>5</sub>	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)

### **5.2.2 Mass Based Limits**

For publicly owned treatment works (POTW), mass loadings are calculated based upon design flow rate of the facility and the permit limit concentration. The generalized calculation for mass loadings is shown below:

$$\text{Quantity } \left( \frac{\text{lb}}{\text{day}} \right) = (\text{MGD})(\text{Concentration})(8.34)$$

### **5.3 Water Quality-Based Limitations**

WQBEL are based on the need to attain or maintain the water quality criteria and to assure protection of designated and existing uses (PA Code 25, Chapter 92a.2). The subject facility that is typically enforced is the more stringent limit of either the TBEL or the WQBEL.

Determination of WQBEL is calculated by spreadsheet analysis or by a computer modeling program developed by DEP. DEP permit engineers utilize the following computing programs for WQBEL permit limitations: (1) MS Excel worksheet for Total Residual Chlorine (TRC); (2) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.1 (WQM Model) and (3) Toxics using DEP Toxics Management Spreadsheet for Toxics pollutants.

The modeling point nodes utilized for this facility are summarized below.

<b>General Data 1</b>	<b>(Modeling Point #1)</b>	<b>(Modeling Point #2)</b>	<b>Units</b>
Stream Code	14053	14053	
River Mile Index	3.45	2.13	miles
Elevation	1034	967	feet
Latitude	40.095	40.10022	
Longitude	-78.343333	-78.324613	
Drainage Area	2.07	4.8	sq miles
Low Flow Yield	0.0888	0.0888	cfs/sq mile

### **5.3.1 Water Quality Modeling 7.0**

The WQM Model is a computer model that is used to determine NPDES discharge effluent limitations for Carbonaceous BOD (CBOD5), Ammonia Nitrogen (NH<sub>3</sub>-N), and Dissolved Oxygen (DO) for single and multiple point source discharges scenarios. WQM Model is a complete-mix model which means that the discharge flow and the stream flow are assumed to instantly and completely mixed at the discharge node.

WQM recommends effluent limits for DO, CBOD5, and NH<sub>3</sub>-N in mg/l for the discharge(s) in the simulation.

Four types of limits may be recommended. The limits are

- (a) a *minimum concentration for DO in the discharge as 30-day average*;
- (b) a *30-day average concentration for CBOD5 in the discharge*;
- (c) a *30-day average concentration for the NH<sub>3</sub>-N in the discharge*;
- (d) *24-hour average concentration for NH<sub>3</sub>-N in the discharge*.

The WQM Model requires several input values for calculating output values. The source of data originates from either EMAP, the National Map, or Stream Stats. Data for stream gauge information, if any, was abstracted from USGS Low-Flow, Base-Flow, and Mean-Flow Regression Equations for Pennsylvania Streams authored by Marla H. Stuckey (Scientific Investigations Report 2006-5130).

**The applicable WQM Effluent Limit Type are discussed in Section 6 under the corresponding parameter which is either DO, CBOD, or ammonia-nitrogen.**

### **5.3.2 Toxics Modeling**

The Toxics Management Spreadsheet model is a computer model that is used to determine effluent limitations for toxics (and other substances) for single discharge wasteload allocations. This computer model uses a mass-balance water quality analysis that includes consideration for mixing, first-order decay, and other factors used to determine recommended water quality-based effluent limits. Toxics Management Spreadsheet does not assume that all discharges completely mix with the stream. The point of compliance with water quality criteria are established using criteria compliance times (CCTs). The available CCTs are either acute fish criterion (AFC), chronic fish criterion (CFC), or human health criteria (THH & CRL).

**Acute Fish Criterion (AFC)** measures the criteria compliance time as either the maximum criteria compliance time (i.e. 15 minutes travel time downstream of the current discharge) or the complete mix time whichever comes first. AFC is evaluated at Q710 conditions.

**Chronic Fish Criterion (CFC)** measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CFC is evaluated at Q710 conditions.

**Threshold Human Health (THH)** measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the estimated travel time downstream to the nearest potable water supply intake whichever comes first. THH is evaluated at Q710 conditions.

**Cancer Risk Level (CRL)** measures the criteria compliance time as either the maximum criteria compliance time (i.e. 12 hours travel time downstream of the current discharge) or the complete mix time whichever comes first. CRL is evaluated at Qh (harmonic mean or normal flow) conditions.

The Toxics Model requires several input values for calculating output values. The source of data originates from either EMAP, the National Map, or Stream Stats. Data for stream gauge information, if any, was abstracted from USGS Low-Flow, Base-Flow, and Mean-Flow Regression Equations for Pennsylvania Streams authored by Marla H. Stuckey (Scientific Investigations Report 2006-5130).

### **5.3.2.1 Determining if NPDES Permit Will Require Monitoring/Limits in the Proposed Permit for Toxic Pollutants**

To determine if Toxics modeling is necessary, DEP has developed a Toxics Management Spreadsheet to identify toxics of concern. Toxic pollutants whose maximum concentrations as reported in the permit application or on DMRs are greater than the most stringent applicable water quality criterion are pollutants of concern. A Reasonable Potential Analysis was utilized to determine (a) if the toxic parameters modeled would require monitoring or (b) if permit limitations would be required for the parameters. The toxics reviewed for reasonable potential were the following pollutants: TDS, chloride, bromide, sulfate, copper, lead, and zinc.

The NPDES application collected one sample for the aforementioned parameters.

Based upon the SOP- Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants (Revised January 10, 2019), monitoring and/or limits will be established as follows.

- (a) When reasonable potential is demonstrated, establish limits where the maximum reported concentration equals or exceeds 50% of the WQBEL.
- (b) For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
- (c) For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

**Applicable monitoring or permit limits for toxics are summarized in Section 6.**

**The Toxics Management Spreadsheet output has been included in Attachment B.**

### **5.3.3 Whole Effluent Toxicity (WET)**

The facility is not subject to WET.

### **5.4 Total Maximum Daily Loading (TMDL)**

#### **5.4.1 TMDL**

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load (TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody. The TMDL components are illustrated using the following equation:

$$\text{TMDL} = \sum \text{WLAs} + \sum \text{LAs} + \text{MOS}$$

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

#### **5.4.1.1 Local TMDL**

The subject facility does not discharge into a local TMDL.

#### **5.4.1.2 Chesapeake Bay TMDL Requirement**

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was September 13, 2021.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Cap Loads will be established in permits as Net Annual TN and TP loads (lbs/yr) that apply during the period of October 1 – September 30. For facilities that have received Cap Loads in any other form, the Cap Loads will be modified accordingly when the permits are renewed.

Offsets have been incorporated into Cap Loads in several permits issued to date. From this point forward, permits will be issued with the WLAs as Cap Loads and will identify Offsets separately to facilitate nutrient trading activities and compliance with the TMDL.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a Non-significant dischargers include sewage facilities (Phase 4 facilities:  $\geq 0.2$  MGD and  $< 0.4$  MGD and Phase 5 facilities:  $> 0.002$  MGD and  $< 0.2$  MGD), small flow/single residence sewage treatment facilities ( $\leq 0.002$  MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

For Phase 5 sewage facilities with individual permits (average annual design flow on August 29, 2005 > 0.002 MGD and < 0.2 MGD), DEP will issue individual permits with monitoring and reporting for TN and TP throughout the permit term at a frequency no less than annually, unless 1) the facility has already conducted at least two years of nutrient monitoring and 2) a summary of the monitoring results are included in the next permit's fact sheet. If, however, Phase 5 facilities choose to expand, the renewed or amended permits will contain Cap Loads based on the lesser of a) existing TN/TP concentrations at current design average annual flow or b) 7,306 lbs/yr TN and 974 lbs/yr TP.

If no data are available to determine existing concentrations for expanding Phase 4 or 5 facilities, default concentrations of 25 mg/l TN and 4 mg/l TP may be used (these are the average estimated concentrations of all non-significant sewage facilities).

DEP will not issue permits to existing Phase 4 and 5 facilities containing Cap Loads unless it is done on a broad scale or unless the facilities are expanding.

For new Phase 4 and 5 sewage discharges, in general DEP will issue new permits containing Cap Loads of "0" and new facilities will be expected to purchase credits and/or apply offsets to achieve compliance, with the exception of small flow and single residence facilities.

**Due to the Chesapeake Bay WIP, this facility is subject to Sector C monitoring requirements. Monitoring shall be required at least 2x/yr.**

### **5.5 Anti-Degradation Requirement**

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

**The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.**

### **5.6 Anti-Backsliding**

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.1.1 and 40 CFR 122.1.2). A review of the existing permit limitations with the proposed permit limitations confirm that the facility is consistent with anti-backsliding requirements. The facility has proposed effluent limitations that are as stringent as the existing permit.

## **6.0 NPDES Parameter Details**

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

- a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit;
- b) a summary of changes from the existing NPDES permit to the proposed permit; and
- c) a summary of the proposed NPDES effluent limits.

### **6.1 Recommended Monitoring Requirements and Effluent Limitations**

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The tables are categorized by (a) Conventional Pollutants and Disinfection, (b) Nitrogen Species and Phosphorus, (c) Toxics, and (d) Non-Conventional Pollutants, and (e) Chapter 92a.61 targeted parameters

### 6.1.1 Conventional Pollutants and Disinfection

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection Tatesville WWTP; PA0247081			
Parameter	Permit Limitation Required by <sup>1</sup> :	Recommendation	
pH (S.U.)	TBEL	Monitoring: The monitoring frequency shall be daily as a grab sample (Table 6-3). Effluent Limit: Effluent limits may range from pH = 6.0 to 9.0 Rationale: The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 95.2(1).	
Dissolved Oxygen		Monitoring: The monitoring frequency shall be daily as a grab sample (Table 6-3). Effluent Limit: Effluent limits shall be greater than 5.0 mg/l. Rationale: The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by best professional judgement.	
CBOD		Monitoring: The monitoring frequency shall be 1x/week as an 8-hr composite sample (Table 6-3). Effluent Limit: Effluent limits shall not exceed 25 lbs/day and 25 mg/l as an average monthly. Rationale: The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.47(a)(1). WQM modeling indicates that the TBEL is more stringent than the WQBEL. Thus, the permit limit is confined to TBEL.	
TSS	TBEL	Monitoring: The monitoring frequency shall be 1/week as an 8-hr composite sample (Table 6-3). Effluent Limit: Effluent limits shall not exceed 30 lbs/day and 30 mg/l as an average monthly. Rationale: The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.47(a)(1). While there is no WQM modeling for this parameter, the permit limit for TSS is generally assigned similar effluent limits as CBOD or BOD.	
UV disinfection		Monitoring: The monitoring frequency is 1/day. The facility will be required to recording the UV intensity. Effluent Limit: No effluent requirements. Rationale: Consistent with the SOP- Establishing Effluent Limitations for Individual Sewage Permits (Revised January 10, 2019), the facility will be required to have routine monitoring for UV transmittance, UV dosage, or UV intensity.	
Fecal Coliform		Monitoring: The monitoring frequency shall be 1x/week as a grab sample (Table 6-3). Effluent Limit: Summer effluent limits shall not exceed 200 No./100 mL as a geometric mean. Winter effluent limits shall not exceed 2000 No./100 mL as a geometric mean. Rationale: The monitoring frequency has been assigned in accordance with Table 6-3 and the effluent limits assigned by Chapter 92a.47(a)(4) and 92a.47(a)(5).	
<b>Notes:</b>			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other			
2 Monitoring frequency based on flow rate of 0.120 MGD.			
3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document # 362-0400-001) Revised 10/97			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021			

**6.1.2 Nitrogen Species and Phosphorus**

**Summary of Proposed NPDES Parameter Details for Nitrogen Species and Phosphorus**

**Tatesville WWTP; PA0247081**

Parameter	Permit Limitation Required by <sup>1</sup> :	Recommendation	
Ammonia-Nitrogen	WQBEL	Monitoring:	The monitoring frequency shall be 1x/wk as an 8-hr composite sample
		Effluent Limit:	During the months of May 1 to October 31, effluent limits shall not exceed 2.0 lbs/day and 2.0 mg/l as an average monthly. During the months of Nov 1 to April 30, effluent limits shall not exceed 6.0 lbs/day and 6.0 mg/l as an average monthly.
		Rationale:	Water quality modeling recommends water quality based effluent limits.
Nitrate-Nitrite as N	Chesapeake Bay TMDL	Monitoring:	The monitoring frequency shall be 2x/yr as a 24-hr composite sample
		Effluent Limit:	No effluent requirements.
		Rationale:	Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 2x/yr.
Total Nitrogen	Chesapeake Bay TMDL	Monitoring:	The monitoring frequency shall be 2x/yr as a calculation.
		Effluent Limit:	No effluent requirements.
		Rationale:	Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 2x/yr.
TKN	Chesapeake Bay TMDL	Monitoring:	The monitoring frequency shall be 2x/yr as a 8-hr composite sample
		Effluent Limit:	No effluent requirements.
		Rationale:	Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 2x/yr.
Total Phosphorus	Chesapeake Bay TMDL	Monitoring:	The monitoring frequency shall be 2x/yr as a 8-hr composite sample
		Effluent Limit:	No effluent requirements.
		Rationale:	Due to the Chesapeake Bay Implementation Plan, the facility is required to be monitored on a frequency at least 2x/yr.

**Notes:**

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.120 MGD.

3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021

### **6.1.3 Toxics**

The consultant stated that the facility does not receive wastewater contributions from industrial/commercial users.

The effluent samples for the NPDES application was based upon one sample event.

TMS recommends limits for Total Copper and Total Lead. Monitoring has been recommended to collect additional samples to aid in make a more determined rationale for including limits in future renewals.

TMS did not recommend limits for Total Zinc. In conjunction with monitoring for Total Copper and Total Lead, additional samples shall be collected to aid in make a more determined rationale for including limits in future renewals.

#### **Summary of Proposed NPDES Parameter Details for Toxics**

##### **Tatesville WWTP; PA0247081**

Parameter	Permit Limitation Required by <sup>1</sup> :	Recommendation	
Total Copper	WQBEL	Monitoring:	The monitoring frequency shall be 1x/quarter as an 8-hr composite sample
		Effluent Limit:	No effluent limits.
		Rationale:	TMS recommends effluent limits. Monitoring only for the parameter has been recommended to collect additional data. Pending the results of the monitoring, subsequent renewals may increase frequency and/or include limits.
Total Lead	WQBEL	Monitoring:	The monitoring frequency shall be 1x/quarter as an 8-hr composite sample
		Effluent Limit:	No effluent limits.
		Rationale:	TMS recommends effluent limits. Monitoring only for the parameter has been recommended to collect additional data. Pending the results of the monitoring, subsequent renewals may increase frequency and/or include limits.
Total Zinc	WQBEL	Monitoring:	The monitoring frequency shall be 1x/quarter as an 8-hr composite sample
		Effluent Limit:	No effluent limits.
		Rationale:	TMS recommends monitoring Pending the results of the monitoring, subsequent renewals may increase frequency and/or include limits.
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other			
2 Monitoring frequency based on flow rate of 0.120 MGD.			
3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021			

### **6.1.3.1 Implementation of Regulation- Chapter 92a.61**

Chapter 92a.61 provides provisions to DEP to monitor for pollutants that may have an impact on the quality of waters of the Commonwealth.

Based upon DEP policy directives the following pollutants shall be monitored:

- Consistent with DEP Management directives issued on March 22, 2021 and in conjunction with EPA's 2017 Triennial Review, monitoring for E. Coli shall be required. The monitoring frequency is based upon flow rate.

<b>Summary of Proposed NPDES Parameter Details for pollutants monitored under Chapter 92a.61</b>		
<b>Tatesville WWTP; PA0247081</b>		
<b>Parameter</b>	<b>Permit Limitation Required by<sup>1</sup>:</b>	<b>Recommendation</b>
<b>E. Coli</b>	SOP; Chapter 92a.61	Monitoring: The monitoring frequency shall be 1x/quarter as a grab sample (SOP).
		Effluent Limit: No effluent requirements.
		Rationale: Consistent with the SOP- Establishing Effluent Limitations for Individual Sewage Permits (Revised February 5, 2024) and under the authority of Chapter 92a.61, the facility will be required to monitor for E.Coli.
Notes:		
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other		
2 Monitoring frequency based on flow rate of 0.120 MGD.		
3 Table 6-3 (Self Monitoring Requirements for Sewage Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document # 362-0400-001) Revised 10/97		
4 Water Quality Antidegradation Implementation Guidance (Document # 391-0300-002)		
5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021		

### **6.2 Summary of Changes From Existing Permit to Proposed Permit**

A summary of how the proposed NPDES permit differs from the existing NPDES permit is summarized as follows.

- **Monitoring will be required for E. Coli.**
- **Monitoring will be required for Total Copper, Total Lead, and Total Zinc.**

### 6.3.1 Summary of Proposed NPDES Effluent Limits

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.

The proposed NPDES effluent limitations are summarized in the table below.

#### **PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS**

I. A. For Outfall 001, Latitude 40° 5' 42.00", Longitude 78° 20' 36.00", River Mile Index 3.45, Stream Code 14053

Receiving Waters: Pipers Run (WWF)

Type of Effluent: Sewage Effluent

1. The permittee is authorized to discharge during the period from Permit Effective Date through Permit Expiration Date.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement	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	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	25	40	XXX	25	40	50	1/week	8-Hr Composite
Biochemical Oxygen Demand (BOD5)		Report Daily Max						8-Hr Composite
Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Suspended Solids	30	45	XXX	30	45	60	1/week	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ultraviolet light intensity (mW/cm <sup>2</sup> )	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Nitrate-Nitrite as N	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	Calculation
Ammonia-Nitrogen Nov 1 - Apr 30	6.0	XXX	XXX	6.0	XXX	12	1/week	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	2.0	XXX	XXX	2.0	XXX	4	1/week	8-Hr Composite
Total <del>Nitrogen</del> Kjeldahl Nitrogen	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	1/6 months	8-Hr Composite
Copper, Total	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Lead, Total	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Zinc, Total	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

### 6.3.2 Summary of Proposed Permit Part C Conditions

The subject facility has the following Part C conditions.

- UV Monitoring Conditions
- Peak Flow Management Plan
- Hauled-in Waste Restrictions
- Chesapeake Bay Nutrient Definitions
- Solids Management for Non-Lagoon Treatment Systems

Tools and References Used to Develop Permit	
<input checked="" type="checkbox"/>	WQM for Windows Model (see Attachment [REDACTED])
<input checked="" type="checkbox"/>	Toxics Management Spreadsheet (see Attachment [REDACTED])
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment [REDACTED])
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [REDACTED])
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 386-2000-002, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Design Stream Flows, 386-2000-003, 9/98.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input checked="" type="checkbox"/>	SOP: [REDACTED]
<input type="checkbox"/>	Other: [REDACTED]

# Attachment A

## Stream Stats/Gauge Data

14 Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania

**Table 1.** List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued  
[Latitude and Longitude in decimal degrees; mi<sup>2</sup>, square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi <sup>2</sup> )	Regulated <sup>1</sup>
01561000	Brush Creek at Gapsville, Pa.	39.956	-78.254	36.8	N
01562000	Raystown Branch Juniata River at Saxton, Pa.	40.216	-78.265	756	N
01562500	Great Trough Creek near Marklesburg, Pa.	40.350	-78.130	84.6	N
01563200	Raystown Branch Juniata River below Rays Dam nr Huntingdon, Pa.	40.429	-77.991	960	Y
01563500	Juniata River at Mapleton Depot, Pa.	40.392	-77.935	2,030	Y
01564500	Aughwick Creek near Three Springs, Pa.	40.213	-77.925	205	N
01565000	Kishacoquillas Creek at Reedsville, Pa.	40.655	-77.583	164	N
01565700	Little Lost Creek at Oakland Mills, Pa.	40.605	-77.311	6.52	N
01566000	Tuscarora Creek near Port Royal, Pa.	40.515	-77.419	214	N
01566500	Cocolamus Creek near Millerstown, Pa.	40.566	-77.118	57.2	N
01567000	Juniata River at Newport, Pa.	40.478	-77.129	3,354	Y
01567500	Bixler Run near Loysville, Pa.	40.371	-77.402	15.0	N
01568000	Sherman Creek at Shermans Dale, Pa.	40.323	-77.169	207	N
01568500	Clark Creek near Carsonville, Pa.	40.460	-76.751	22.5	LF
01569000	Stony Creek nr Dauphin, Pa.	40.380	-76.907	33.2	N
01569800	Letort Spring Run near Carlisle, Pa.	40.235	-77.139	21.6	N
01570000	Conodoguinet Creek near Hogestown, Pa.	40.252	-77.021	470	LF
01570500	Susquehanna River at Harrisburg, Pa.	40.255	-76.886	24,100	Y
01571000	Paxton Creek near Penbrook, Pa.	40.308	-76.850	11.2	N
01571500	Yellow Breeches Creek near Camp Hill, Pa.	40.225	-76.898	213	N
01572000	Lower Little Swatara Creek at Pine Grove, Pa.	40.538	-76.377	34.3	N
01572025	Swatara Creek near Pine Grove, Pa.	40.533	-76.402	116	N
01572190	Swatara Creek near Inwood, Pa.	40.479	-76.531	167	N
01573000	Swatara Creek at Harper Tavern, Pa.	40.403	-76.577	337	N
01573086	Beck Creek near Cleona, Pa.	40.323	-76.483	7.87	N
01573160	Quittapahilla Creek near Belle Grove, Pa.	40.343	-76.562	74.2	N
01573500	Manada Creek at Manada Gap, Pa.	40.397	-76.709	13.5	N
01573560	Swatara Creek near Hershey, Pa.	40.298	-76.668	483	N
01574000	West Conewago Creek near Manchester, Pa.	40.082	-76.720	510	N
01574500	Codorus Creek at Spring Grove, Pa.	39.879	-76.853	75.5	Y
01575000	South Branch Codorus Creek near York, Pa.	39.921	-76.749	117	Y
01575500	Codorus Creek near York, Pa.	39.946	-76.755	222	Y
01576000	Susquehanna River at Marietta, Pa.	40.055	-76.531	25,990	Y
01576085	Little Conestoga Creek near Churchtown, Pa.	40.145	-75.989	5.82	N
01576500	Conestoga River at Lancaster, Pa.	40.050	-76.277	324	N
01576754	Conestoga River at Conestoga, Pa.	39.946	-76.368	470	N
01578310	Susquehanna River at Conowingo, Md.	39.658	-76.174	27,100	Y
01578400	Bowery Run near Quarryville, Pa.	39.895	-76.114	5.98	N
01580000	Deer Creek at Rocks, Md.	39.630	-76.403	94.4	N
01581500	Bynum Run at Bel Air, Md.	39.541	-76.330	8.52	N
01581700	Winters Run near Benson, Md.	39.520	-76.373	34.8	N
01582000	Little Falls at Blue Mount, Md.	39.604	-76.620	52.9	N
01582500	Gunpowder Falls at Glencoe, Md.	39.550	-76.636	160	Y
01583000	Slade Run near Glyndon, Md.	39.495	-76.795	2.09	N
01583100	Piney Run at Dover, Md.	39.521	-76.767	12.3	N

26 Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft<sup>3</sup>/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis <sup>1</sup>	Number of years used in analysis	1-day, 10-year (ft <sup>3</sup> /s)	7-day, 10-year (ft <sup>3</sup> /s)	7-day, 2-year (ft <sup>3</sup> /s)	30-day, 10-year (ft <sup>3</sup> /s)	30-day, 2-year (ft <sup>3</sup> /s)	90-day, 10-year (ft <sup>3</sup> /s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	<sup>2</sup> 1971–2008	38	28.2	109	151	131	172	153
01547500	<sup>3</sup> 1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	<sup>2</sup> 1971–2000	25	142	151	206	178	241	223
01548005	<sup>3</sup> 1912–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	<sup>2</sup> 1963–2008	46	520	578	1,020	678	1,330	919
01551500	<sup>3</sup> 1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	<sup>2</sup> 1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	<sup>3</sup> 1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	<sup>2</sup> 1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	<sup>3</sup> 1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.9	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	<sup>2</sup> 1974–2008	35	—	—	—	112	266	129
01563200	<sup>3</sup> 1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	<sup>2</sup> 1974–2008	35	384	415	519	441	580	493
01563500	<sup>3</sup> 1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6

## StreamStats Report

Region ID: PA  
Workspace ID: PA20250325143723563000  
Clicked Point (Latitude, Longitude): 40.09503, -78.34318  
Time: 2025-03-25 10:37:46 -0400



Tatesville WWTP PA0247081 Modeling Point #1 March 2025

[Collapse All](#)

### Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	19.56	percent
DRNAREA	Area that drains to a point on a stream	2.07	square miles
PRECIP	Mean Annual Precipitation	37	inches
ROCKDEP	Depth to rock	5.1	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	1.02	miles per square mile

### Low-Flow Statistics

#### Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CARBON	Percent Carbonate	19.56	percent	0	99
DRNAREA	Drainage Area	2.07	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	37	inches	35	50.4
ROCKDEP	Depth to Rock	5.1	feet	3.32	5.65
STRDEN	Stream Density	1.02	miles per square mile	0.51	3.1

#### Low-Flow Statistics Disclaimers [Low Flow Region 2]

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 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.331	ft <sup>3</sup> /s
30 Day 2 Year Low Flow	0.419	ft <sup>3</sup> /s
7 Day 10 Year Low Flow	0.178	ft <sup>3</sup> /s
30 Day 10 Year Low Flow	0.221	ft <sup>3</sup> /s
90 Day 10 Year Low Flow	0.332	ft <sup>3</sup> /s

*Low-Flow Statistics Citations*

**Stuckey, M.H., 2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (<http://pubs.usgs.gov/sir/2006/5130/>)**

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

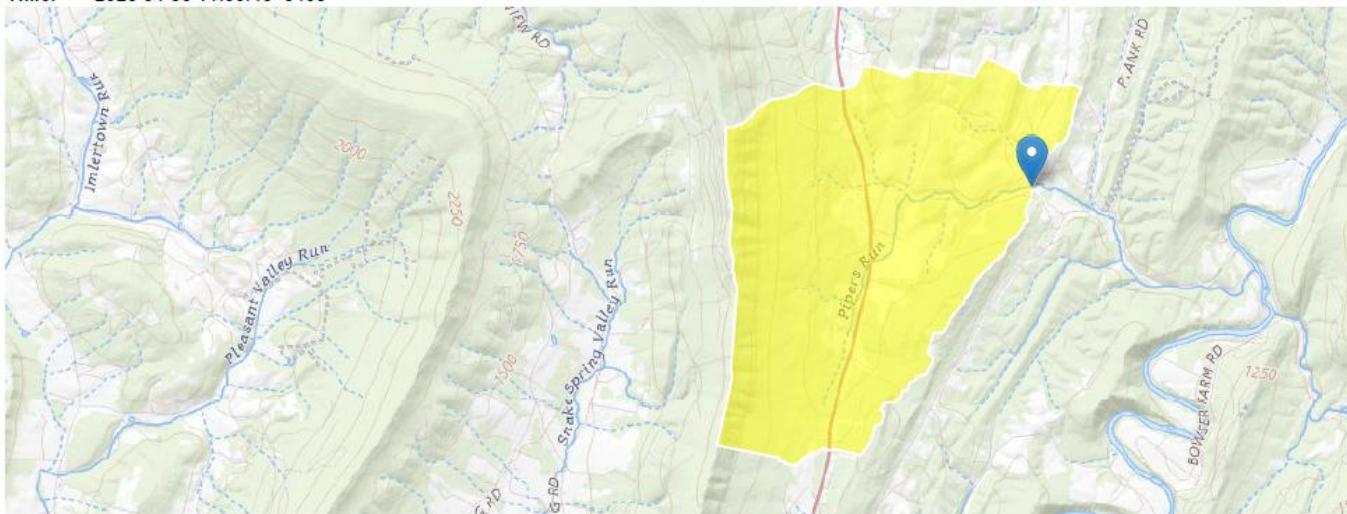
Application Version: 4.28.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

## StreamStats Report

Region ID: PA  
Workspace ID: PA20250430150601304000  
Clicked Point (Latitude, Longitude): 40.10010, -78.32462  
Time: 2025-04-30 11:06:45 -0400



Tatesville WWTP PA0247081 Modeling Point #2 April 2024

[Collapse All](#)

### ► Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	25.94	percent
DRNAREA	Area that drains to a point on a stream	4.8	square miles
PRECIP	Mean Annual Precipitation	37	inches
ROCKDEP	Depth to rock	4.9	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	1.41	miles per square mile

### ► Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CARBON	Percent Carbonate	25.94	percent	0	99
DRNAREA	Drainage Area	4.8	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	37	inches	35	50.4
ROCKDEP	Depth to Rock	4.9	feet	3.32	5.65
STRDEN	Stream Density	1.41	miles per square mile	0.51	3.1

Low-Flow Statistics Disclaimers [Low Flow Region 2]

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 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.622	ft <sup>3</sup> /s
30 Day 2 Year Low Flow	0.793	ft <sup>3</sup> /s
7 Day 10 Year Low Flow	0.329	ft <sup>3</sup> /s
30 Day 10 Year Low Flow	0.416	ft <sup>3</sup> /s
90 Day 10 Year Low Flow	0.609	ft <sup>3</sup> /s

*Low-Flow Statistics Citations*

Stuckey, M.H., 2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (<http://pubs.usgs.gov/sir/2006/5130/>)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.28.1

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

## Attachment B

### WQM 7.0 Modeling Output Values

**WQM 7.0 Effluent Limits**

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>					
11D	14053	PIPERS RUN					
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)
3.450	Tatesville WWTP	PA0247081	0.120	CBOD5	25		
				NH3-N	2.07	4.14	
				Dissolved Oxygen			5

**WQM 7.0 Wasteload Allocations**

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
11D	14053	PIPERS RUN

**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
3.450 Tatesville WWTP		5.77	11.25	5.77	11.25	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
3.450 Tatesville WWTP		.97	2.07	.97	2.07	0	0

**Dissolved Oxygen Allocations**

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
3.45 Tatesville WWTP		25	25	2.07	2.07	5	5	0	0

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
11D	14053	PIPER'S RUN	3.450	1034.00	2.07	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD	Rch Width	Rch Depth	Tributary Temp	pH	Stream Temp	pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.089	0.00	0.00	0.000	0.000	0.0	0.00	0.00	23.30	8.00	0.00	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	
Tatesville WWTP	PA0247081	0.1200	0.1200	0.1200	0.000	25.00	7.38	
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			

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
11D	14053	PIPER'S RUN	2.130	967.00	4.80	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	pH	Stream Temp	pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.089	0.00	0.00	0.000	0.000	0.0	0.00	0.00	23.30	8.00	0.00	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
		0.0000	0.0000	0.0000	0.000	25.00	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		3.00	8.24	0.00	0.00		
NH3-N		25.00	0.00	0.00	0.70		

**WQM 7.0 D.O.Simulation**

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
11D	14053	PIPERS RUN		
<u>RMI</u>		<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>
3.450		0.120	24.154	7.586
<u>Reach Width (ft)</u>		<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>
7.962		0.429	18.569	0.108
<u>Reach CBOD5 (mg/L)</u>		<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>
13.56		1.288	1.04	0.964
<u>Reach DO (mg/L)</u>		<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>
6.613		25.857	Owens	5
<u>Reach Travel Time (days)</u>		<u>Subreach Results</u>		
0.745		TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)
		0.075	12.07	0.97
		0.149	10.75	0.90
		0.224	9.57	0.84
		0.298	8.52	0.78
		0.373	7.58	0.73
		0.447	6.75	0.68
		0.522	6.01	0.63
		0.596	5.35	0.59
		0.671	4.76	0.55
		0.745	4.24	0.51
				D.O. (mg/L)
				7.11
				7.30
				7.43
				7.54
				7.64
				7.65
				7.65
				7.65
				7.65
				7.65

**WQM 7.0 Hydrodynamic Outputs**

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)	<u>Stream Name</u>	Analysis Temp (°C)	Analysis pH
											PIPERS RUN		
<b>Q7-10 Flow</b>													
3.450	0.18	0.00	0.18	.1856	0.00961	.429	7.96	18.57	0.11	0.745	24.15	7.59	
<b>Q1-10 Flow</b>													
3.450	0.18	0.00	0.18	.1856	0.00961	NA	NA	NA	0.11	0.754	24.17	7.58	
<b>Q30-10 Flow</b>													
3.450	0.21	0.00	0.21	.1856	0.00961	NA	NA	NA	0.11	0.716	24.09	7.61	

## WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.96	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.15	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		



## Discharge Information

Instructions Discharge Stream

Facility: Hopewell Township Tatesville STP

NPDES Permit No.: PA0247081

Outfall No.: 001

Evaluation Type: Major Sewage / Industrial Waste

Wastewater Description: Sewage Effluent

Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Discharge Characteristics					
			Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q <sub>7-10</sub>	Q <sub>h</sub>
0.12	100	7.38						

	Discharge Pollutant	Units	Max Discharge Conc	0 if left blank		0.5 if left blank		0 if left blank		1 if left blank	
				Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod
Group 1	Total Dissolved Solids (PWS)	mg/L	530								
	Chloride (PWS)	mg/L	119								
	Bromide	mg/L	0.4								
	Sulfate (PWS)	mg/L	29.9								
	Fluoride (PWS)	mg/L									
	Total Aluminum	µg/L									
Group 2	Total Antimony	µg/L									
	Total Arsenic	µg/L									
	Total Barium	µg/L									
	Total Beryllium	µg/L									
	Total Boron	µg/L									
	Total Cadmium	µg/L									
	Total Chromium (III)	µg/L									
	Hexavalent Chromium	µg/L									
	Total Cobalt	µg/L									
	Total Copper	mg/L	0.01								
	Free Cyanide	µg/L									
	Total Cyanide	µg/L									
	Dissolved Iron	µg/L									
	Total Iron	µg/L									
	Total Lead	mg/L	0.008								
	Total Manganese	µg/L									
	Total Mercury	µg/L									
	Total Nickel	µg/L									
	Total Phenols (Phenolics) (PWS)	µg/L									
	Total Selenium	µg/L									
	Total Silver	µg/L									
	Total Thallium	µg/L									
	Total Zinc	mg/L	0.0236								
	Total Molybdenum	µg/L									
	Acrolein	µg/L	<								
	Acrylamide	µg/L	<								
	Acrylonitrile	µg/L	<								
	Benzene	µg/L	<								
	Bromoform	µg/L	<								
	Carbon Tetrachloride	µg/L	<								
	Chlorobenzene	µg/L									
	Chlorodibromomethane	µg/L	<								
	Chloroethane	µg/L	<								
	2-Chloroethyl Vinyl Ether	µg/L	<								



## Stream / Surface Water Information

Hopewell Township Tatesville STP, NPDES Permit No. PA0247081, Outfall 001

Instructions **Discharge** Stream

Receiving Surface Water Name: Pipers Run

No. Reaches to Model: 1

Statewide Criteria  
 Great Lakes Criteria  
 ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi <sup>2</sup> )*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	014053	3.45	1034	2.07			Yes
End of Reach 1	014053	2.13	967	4.8			Yes

**Q<sub>7-10</sub>**

Location	RMI	LFY (cfs/mi <sup>2</sup> )*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	3.45	0.0888								96	8				
End of Reach 1	2.13	0.0888								96	8				

**Q<sub>h</sub>**

Location	RMI	LFY (cfs/mi <sup>2</sup> )*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	3.45														
End of Reach 1	2.13														



## Model Results

Hopewell Township Tatesville STP, NPDES Permit No. PA0247081, Outfall 001

Instructions  Results     All  Inputs  Results  Limits

**Hydrodynamics**

**Wasteload Allocations**

AFC

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	13.187	13.7	27.3	Chem Translator of 0.96 applied
Total Lead	0	0		0	63.183	79.6	158	Chem Translator of 0.794 applied
Total Zinc	0	0		0	115.201	118	234	Chem Translator of 0.978 applied

CFC

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	8.803	9.17	18.2	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.462	3.1	6.17	Chem Translator of 0.794 applied
Total Zinc	0	0		0	116.144	118	234	Chem Translator of 0.986 applied

THH

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

NPDES Permit Fact Sheet  
Hopewell Township Tatesville STP

NPDES Permit No. PA0247081

<input checked="" type="checkbox"/> CRL	CCT (min): <span style="border: 1px solid black; padding: 2px;">0.877</span>		PMF: <span style="border: 1px solid black; padding: 2px;">1</span>		Analysis Hardness (mg/l): <span style="border: 1px solid black; padding: 2px;">N/A</span>			Analysis pH: <span style="border: 1px solid black; padding: 2px;">N/A</span>	
Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments	
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A		
Chloride (PWS)	0	0		0	N/A	N/A	N/A		
Sulfate (PWS)	0	0		0	N/A	N/A	N/A		
Total Copper	0	0		0	N/A	N/A	N/A		
Total Lead	0	0		0	N/A	N/A	N/A		
Total Zinc	0	0		0	N/A	N/A	N/A		

Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Copper	0.018	0.027	0.018	0.027	0.044	mg/L	0.018	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	0.006	0.01	0.006	0.01	0.015	mg/L	0.006	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	Report	Report	Report	Report	Report	mg/L	0.15	AFC	Discharge Conc > 10% WQBEL (no RP)

Other Pollutants without Limits or Monitoring

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable

Model Results

5/1/2025

Page 6