Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0096326**
Facility Type	**Non-Municipal**	APS ID	**1137537**
Major / Minor	**Minor**	Authorization ID	**1527569**

Applicant and Facility Information

Applicant Name	**Elevate Jeannette LLC DBA Hilltop Estates MHP**	Facility Name	**Hilltop Estates MHP**
Applicant Address	PO Box 927215	Facility Address	120 Penn Adamsburg Road
	San Diego, CA 92192-7215		Jeannette, PA 15644-2901
Applicant Contact	Demetre Booker	Facility Contact	Jennifer Trocksa
Applicant Phone	(661) 547-9567	Facility Phone	724-204-2053
Client ID	357092	Site ID	244372
Ch 94 Load Status	Not Overloaded	Municipality	Hempfield Township
Connection Status	No Limitations	County	Westmoreland
Date Application Received	May 12, 2025	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	NPDES permit renewal application.		

Summary of Review

The Pa Department of Environmental Protection (PADEP/Department) received an NPDES permit renewal application from Elevate Jeannette LLC DBA Hilltop Estates MHP (permittee) on May 12, 2025, for Permittee's Hilltop Estates MHP STP (facility). This is a minor sewage facility with a design flow of 0.03 MGD that discharges into an UNT to Brush Creek (TSF) in state watershed 19-A. The current permit will expire on September 30, 2025. The terms and conditions of the current permit is automatically extended since the renewal application was received at least 180 days prior to expiration date. Renewal NPDES permit application under Clean Water Program are not covered by PADEP's PDG per 021-2100-001. This fact sheet is developed in accordance with 40 CFR §124.56.

Changes to existing permit: E. Coli monitoring added, Ammonia-N winter limits are recalculated, numeric flow number replaced with monitoring, and UV SBC changed to daily minimum.

Sludge use and disposal description and location(s): Sludge is hauled to Unity Township STP for further processing and ultimate disposal.

Public Participation

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

Approve	Deny	Signatures	Date
√		Reza H. Chowdhury, P.E. / Environmental Engineer 	June 17, 2025
X		Pravin Patel Pravin Patel, P.E. / Environmental Engineer Manager	6/17/2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.03
Latitude	40º 18' 57.69"	Longitude	-79º 39' 0.86"
Quad Name	Irwin	Quad Code	1608
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Brush Creek (TSF)	Stream Code	37315
NHD Com ID	99408208	RMI	1.0
Drainage Area	0.27 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.027	Q_{7-10} Basis	Please see below
Elevation (ft)	1075.37	Slope (ft/ft)	
Watershed No.	19-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	NUTRIENTS		
Source(s) of Impairment	RURAL (RESIDENTIAL AREAS)		
TMDL Status	Final, Final	Name	Brush Creek (Westmoreland), Turtle Creek Watershed

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°C)	20	Default
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake		PA American Water Co.- Pittsburgh	
PWS Waters	Monongahela River	Flow at Intake (cfs)	
PWS RMI	4.6	Distance from Outfall (mi)	29.86

Changes Since Last Permit Issuance: None

Streamflow:
There's no nearby StreamGage from this discharge point. The USGS's web based watershed delineation tool StreamStats (accessible at https://streamstats.usgs.gov/ss/, accessed on June 12, 2025) was utilized to determine the drainage area at discharge point and at confluence with UNT 37314 to Brush Creek (node 2). The drainage area at Outfall 001 was found to be 0.27 mi^2 and at node 2 it was 1.82 mi^2. A default yield of 0.1 cfs/mi^2 resulted in a Q_{7-10} of 0.027 cfs. The default Q_{1-10}:Q_{7-10} of 0.64 and default Q_{30-10}:Q_{7-10} of 1.36 will be used for modeling, as appropriate.

PWS Intake:
The nearest downstream public water supply is PA American Water Co. Pittsburgh, on Monongahela River at RMI 4.6. Its approximately 29.86 miles downstream of Outfall 001. Discharge from this facility is expected not to impact the PWS intake.

Wastewater Characteristics:
Discharge pH of 7.0 S.U., temperature of 25°C and hardness of 100 mg/l will be used for modeling, as appropriate.

Background data:
There's no nearby WQN station to collect the stream data from. In absence of site specific data, a default pH of 7.0, temperature of 20°C, and hardness of 100 mg/l will be used for modeling, as appropriate.

Antidegradation (93.4):
The effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The receiving streams are designated as Cold Water Fishes (CWF). No High-Quality stream or Exceptional Value water is impacted by this discharge; therefore, no Antidegradation Analysis is performed for the discharge.

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

Turtle Creek and Brush Creek Watershed TMDL:
There's no WLA for this facility in either of the TMDLs, therefore, no additional monitoring is warranted.

Treatment Facility Summary

Treatment Facility Name: Hilltop Estates MHP

WQM Permit No.	Issuance Date
6573449	12/7/73
6573449 T-1	12/6/97
6573449 T-2	9/2/2020

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended Aeration with Solids Removal	Ultraviolet	0.03

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.03	50.1	Not Overloaded		Other WWTP

Changes Since Last Permit Issuance: None

Facility Information

Elevate Jeannette LLC DBA Hilltop Estates MHP owns and operates a MHP named Hilltop Estates MHP that is served by a minor wastewater treatment plant (facility) with a design flow of 0.03 MGD. The facility is in Hempfield Township, Westmoreland County. The treated effluent is discharged in an UNT to Brush Creek, which has a Ch. 93 classification of TSF.

Per the 2020 transferred permit, the facility consists of a comminutor, an aeration tank, a settling tank, a dosing tank, two sand filters, and an UV disinfection system.

A CACP was entered into on February 24, 2024 for discharge violations between February 2019 through April 2022. The last inspection report available in WMS was prior to the CACP. A new inspection is requested to check the status of the CACP. Another CACP was entered into on June 1, 2020 for noncompliance between February 2015 and September 2019.

Biosolids management: Sludge is hauled to Unity Township STP for further processing and ultimate disposal.

Compliance History

DMR Data for Outfall 001 (from May 1, 2024 to April 30, 2025)

Parameter	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24
Flow (MGD) Average Monthly	0.012	0.013	0.013	0.012	0.012	0.009	0.007	0.006	0.0078	0.0069	0.010	0.009
pH (S.U.) IMIN	6.7	6.7	6.8	6.9	6.8	6.9	6.9	7.0	7.0	7.0	7.0	6.9
pH (S.U.) IMAX	7.3	7.3	7.6	7.3	7.6	7.5	7.6	7.4	7.8	7.3	7.3	7.5
DO (mg/L) IMIN	8.1	7.2	8.3	9.4	8.5	7.8	7.9	6.2	6.5	6.0	6.1	6.0
CBOD5 (mg/L) Average Monthly	2.1	2.0	2.6	2.0	3	3.0	3.0	3.0	3.0	3.0	3.0	3.0
CBOD5 (mg/L) IMAX	2.1	2.0	3.2	2.0	3	3.0	3.0	3.0	3.0	3.0	3.0	3.0
TSS (mg/L) Average Monthly	9	7.5	13	5.0	2	3.1	2.8	3.2	2.6	2.2	2.4	3.6
TSS (mg/L) IMAX	12	10	21	5.0	2.4	4.5	4.0	4.8	3.6	2.8	2.8	4.4
Fecal Coliform (No./100 ml) Geometric Mean	13	7.5	25.9	9	79.5	49	95	44	1.0	1.4	12.1	20.1
Fecal Coliform (No./100 ml) IMAX	178	56	84	79	80.1	249	172	52	1.0	2.0	35.9	201.4
UV Transmittance (%) Average Monthly	73.6	74.3	73.7	75.7	75.3	73.2	75	75	74	75	74.0	66.3
UV Transmittance (%) IMAX	76.3	76.3	76.1	77.2	76.8	77	77	86	87.3	82	80.1	76.2
Total Nitrogen (mg/L) Daily Maximum					35.8							
Ammonia (mg/L) Average Monthly	0.15	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Ammonia (mg/L) OMAX	0.15	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Phosphorus (mg/L) Daily Maximum					5.3							

Compliance History

Inspection report:

April 26, 2022: RTPT conducted. Violations noted including a. circuit rider failed to make available the general work plan and/or the system specific management plan, b. there were 21 effluent violations in past two years. Since the previous inspection, there have been new blowers installed, new piping and diffusers and new grates. The UV bulbs were refurbished. The licensed operator is onsite weekdays and different licensed operator goes on the weekends. There's still no flow meter, flow is off of bucket and stopwatch. The licensed operator believes there is significant I&I issue in the facility. The operator is now keeping a log book with daily readings and doing settleability testing. Solids were visible on the surface of the clarifier, substantial algae growth on the rock under the outfall, the effluent

appeared clear. Recommendations were made including a. keep all necessary paperwork onsite, b. install a flowmeter, c. calibration records for pH and DO need to be kept, d. a system specific management plan and a general work plan needs to be established, e. the vegetation needs to be cleaned off of the sand filters.

Existing Limits

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.03	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	25	XXX	50	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ultraviolet light transmittance (%)	XXX	XXX	XXX	Report	XXX	Report	1/day	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	4.4	XXX	8.8	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	2.1	XXX	4.2	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .03
Latitude 40º 18' 58.00" **Longitude** -79º 39' 1.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Model input data

The following data will be used for modeling, as needed:

- Discharge pH 7.0 (Default)
- Discharge Temperature 25°C (Default)
- Discharge Hardness 100 mg/l (Default)
- Stream pH 7.0 (Default)
- Stream Temperature 20.0°C (Default)
- Stream Hardness 100 mg/l (Default)

The following two nodes were used in modeling:

Node 1: At the outfall 001 on UNT to Brush Creek (37315)
Elevation: 1075.37 ft (National Map-Advanced Viewer, 06/11/2025)
Drainage Area: 0.27 mi^2 (StreamStat Version 3.0, 06/11/2025)
River Mile Index: 1.0 (PA DEP eMapPA)
Low Flow Yield: 0.1 cfs/mi^2
Q_{7-10}: 0.027 cfs
Discharge Flow: 0.03 MGD

Node 2: At confluence with UNT 37314 to Brush Creek
Elevation: 976.29 ft (National Map-Advanced Viewer, 06/11/2025)
Drainage Area: 1.82 mi^2 (StreamStat Version 3.0, 06/11/2025)
River Mile Index: 0.0 (PA DEP eMapPA)
Low Flow Yield: 0.1 cfs/mi^2
Discharge Flow: 0.0 MGD

WQM 7.0 Model

WQM 7.0 version 1.11 is a water quality model designed to assist DEP to determine appropriate effluent limits for $CBOD_5$, NH_3-N and DO. The model simulates two basic processes. In the NH_3-N module, the model simulates the mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to NH_3-N water

quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of $CBOD_5$ and NH_3N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model was utilized for this permit renewal by using Q_{7-10} and current background water quality levels of the stream.

NH_3-N
WQM 7.0 suggested NH_3-N limit of 2.1 mg/l as monthly average and 4.2 mg/l as IMAX limit during summer to protect water quality standards. The winter limits are calculated by multiplying summer limits with a factor of 2. Current winter limits will be adjusted, and summer limits will be carried over.

CBOD5
WQM 7.0 suggests CBOD5 limit of 25.0 mg/l as AML during summer season which is the same as existing limit. Existing AML and IMAX will be carried over.

DO
WQM 7.0 suggests minimum DO of 4.0 mg/l which is the model input and same as existing limit. Existing limit will be carried over.

Toxics Management Spreadsheet (TMS)

Minor facilities with design flow less than 0.1 MGD aren't required to sample for Total Copper, Total Lead, Total Zinc, and any other parameters unless they are accepting flows from industrial or commercial users. No toxics modeling is conducted.

Other Requirements/BPJ based limits

Total Phosphorus:
PADEP's SOP BCW-PMT-033 recommends monitoring for Total Phosphorus for facilities with design flow more than 2000-GPD, which is also supported by Pa Code 25 Ch. 92a.61. Current monitoring requirement will be continued.

Total Nitrogen:
PADEP's SOP BCW-PMT-033 recommends monitoring for Total Nitrogen for facilities with design flow more than 2000-GPD, which is also supported by Pa Code 25 Ch. 92a.61. Current monitoring requirement will be continued. Sampling type will be changed from grab to calculation.

Fecal Coliform:
The recent coliform guidance in 25 Pa. code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100ml and § 92a.47.(a)(5) requires a winter limit of 2,000/100ml as a geometric mean and an instantaneous maximum not greater than 10,000/100ml. These are existing requirements and will be carried over in this renewal.

E. Coli:
Pa Code 25 § 92a. 61 requires monitoring of E. Coli. DEP's SOP titled "Establishing Effluent Limitations for Individual Sewage Permits (BCW-PMT-033, revised March 24, 2021) recommends annual E. Coli monitoring for minor sewage dischargers with a design flow between ≥0.002 MGD and <0.05 MGD. This requirement will be applied from this permit term.

pH:
The TBEL for pH is above 6.0 and below 9.0 S.U. (40 CFR §133.102(c) and Pa Code 25 §§ 95.2(1), 92a.47) which are existing limits and will be carried over.

Total Suspended Solids (TSS):
The existing limits of 30 mg/L average monthly and 60 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment, 25 Pa. Code § 92a.47 and 40CFR 133.102(b). The current limits will be carried over.

UV Disinfection:
PADEP's SOP BCW-PMT-033 recommends UV parameter monitoring where UV is used as a method of disinfection, with the same frequency as would be if Chlorine is used for disinfection. The current permit has UV Transmittance in %

reporting requirement which will be carried over in this renewal. The current permit has SBCs as AML and IMAX, which will be changed to daily minimum.

Monitoring Frequency and Sample Types:
Otherwise specified above, the monitoring frequency and sample type of compliance monitoring for existing parameters are recommended by DEP's SOP and Permit Writers Manual and/or on a case-by-case basis using best professional judgment (BPJ).

Flow Monitoring Requirement:
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii). Numeric flow value is changed with average monthly and daily maximum reporting requirement.

Anti-Backsliding
Anti-backsliding prohibition is justified in sections where an exception is justified for the affected pollutant(s). For remaining pollutants, this prohibition isn't applicable since the proposed limits are at least as stringent as were in current permit.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
UV Transmittance (%)	XXX	XXX	XXX	Report	XXX	Report	1/day	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	4.4	XXX	8.8	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	2.1	XXX	4.2	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

Compliance Sampling Location: At Outfall 001

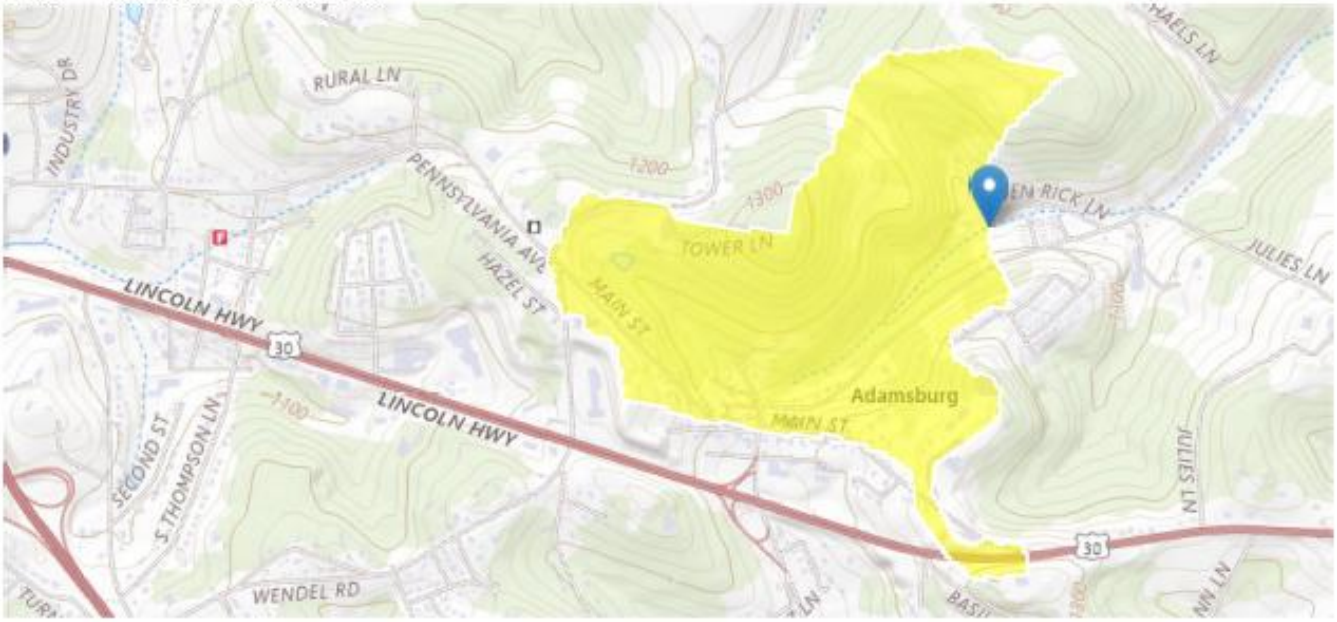
Other Comments: None

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: BCW-PMT-033
☐	Other:

StreamStats at Outfall 001

PA0096326 at Outfall 001

Region ID: PA
Workspace ID: PA20250612030836967000
Clicked Point (Latitude, Longitude): 40.31604, -79.65026
Time: 2025-06-11 23:09:03 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.27	square miles
ELEV	Mean Basin Elevation	1201	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.27	square miles	2.26	1400
ELEV	Mean Basin Elevation	1201	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

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 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00632	ft^3/s
30 Day 2 Year Low Flow	0.013	ft^3/s
7 Day 10 Year Low Flow	0.00163	ft^3/s
30 Day 10 Year Low Flow	0.00386	ft^3/s
90 Day 10 Year Low Flow	0.00843	ft^3/s

Low-Flow Statistics Citations

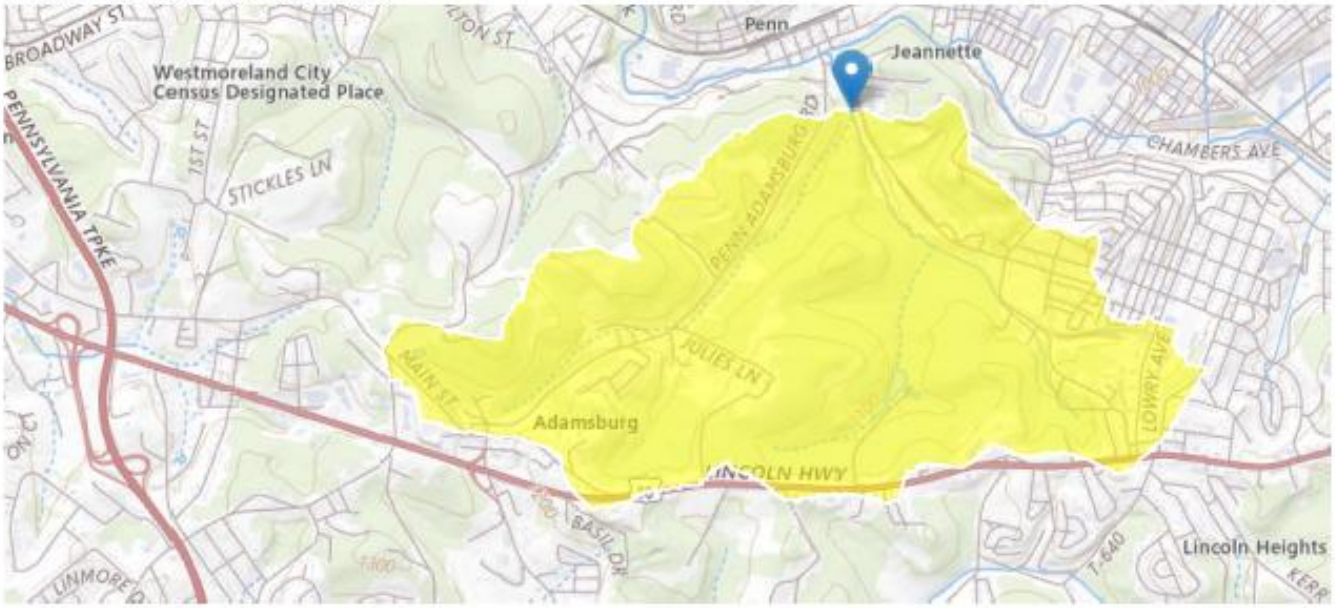
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats at node 2

PA0096326 at node 2

Region ID: PA
Workspace ID: PA20250612031209099000
Clicked Point (Latitude, Longitude): 40.32592, -79.63577
Time: 2025-06-11 23:12:34 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.82	square miles
ELEV	Mean Basin Elevation	1146	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.82	square miles	2.26	1400
ELEV	Mean Basin Elevation	1146	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

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 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0535	ft^3/s
30 Day 2 Year Low Flow	0.1	ft^3/s
7 Day 10 Year Low Flow	0.0168	ft^3/s
30 Day 10 Year Low Flow	0.0342	ft^3/s
90 Day 10 Year Low Flow	0.0672	ft^3/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/)

Application Version: 4.29.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

WQM 7.0

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
19A	37315	Trib 37315 of Brush Creek	**1.000**	1075.37	0.27	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	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
Hilltop Estates	PA0096326	0.0300	0.0300	0.0300	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	4.00	8.24	0.00	0.00
NH3-N	2.10	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
19A	37315	Trib 37315 of Brush Creek	**0.000**	976.29	1.82	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	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 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19A	37315	Trib 37315 of Brush Creek

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
1.000	0.03	0.00	0.03	.0464	0.01877	.342	2.96	8.66	0.07	0.844	23.16	7.00
Q1-10 Flow												
1.000	0.02	0.00	0.02	.0464	0.01877	NA	NA	NA	0.07	0.913	23.64	7.00
Q30-10 Flow												
1.000	0.04	0.00	0.04	.0464	0.01877	NA	NA	NA	0.08	0.787	22.79	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	4		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19A	37315	Trib 37315 of Brush Creek

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
1.000	Hilltop Estates	12.39	4.2	12.39	4.2	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
1.000	Hilltop Estates	1.58	2.1	1.58	2.1	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)		
1.00	Hilltop Estates	25	25	2.1	2.1	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19A	37315	Trib 37315 of Brush Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.000	0.030	23.161	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
2.962	0.342	8.656	0.072
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
16.54	1.359	1.33	0.893
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.561	29.304	Owens	4
Reach Travel Time (days)			
0.844			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.084	14.49	1.23	7.11
0.169	12.69	1.14	7.39
0.253	11.11	1.06	7.55
0.337	9.73	0.98	7.68
0.422	8.53	0.91	7.78
0.506	7.47	0.84	7.78
0.590	6.54	0.78	7.78
0.675	5.73	0.73	7.78
0.759	5.02	0.67	7.78
0.844	4.40	0.63	7.78

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19A	37315	Trib 37315 of Brush Creek

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
1.000	Hilltop Estates	PA0096326	0.030	CBOD5	25		
				NH3-N	2.1	4.2	
				Dissolved Oxygen			4