Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0033405**
Facility Type	**Non-Municipal**	APS ID	**1144189**
Major / Minor	**Minor**	Authorization ID	**1538534**

Applicant and Facility Information

Applicant Name	**D & J Ventures**	Facility Name	**Sewickley Pines Manor STP**
Applicant Address	3170 E State Street Box 181	Facility Address	1434 Greensburg Pike
	Hermitage, PA 16148-3305		West Newton, PA 15089-3029
Applicant Contact	Dwight Ballestrasse	Facility Contact	Eric Planey
Applicant Phone	(206) 498-8269	Facility Phone	206-498-8269
Client ID	367887	Site ID	251051
Ch 94 Load Status	Not Overloaded	Municipality	Sewickley Township
Connection Status	No Limitations	County	Westmoreland
Date Application Received	August 21, 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 Gibson-Thomas Engineering (Consultant) on August 21, 2025 on behalf of D & J Ventures (Permittee), for Permittee's Sewickley Pines Manor STP (facility). This is a minor sewage facility with a design flow of 0.015 MGD that discharges into an UNT to Sewickley Creek (WWF) in state watershed 19-D. The current permit expired on July 31, 2025. 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.

Sludge use and disposal description and location(s): The collected biosolids are sent to Unity Township Sewage Plant 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	November 18, 2025
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	11/19/2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.015
Latitude	40º 13' 50"	Longitude	-79º 42' 33"
Quad Name	Smithton	Quad Code	1708
Wastewater Description:	Sewage Effluent		
Receiving Waters	UNT of Sewickley Creek (WWF)	Stream Code	No code (37622)
NHD Com ID	No ID (69913479)	RMI	0.66
Drainage Area	0.11 mi^2	Yield (cfs/mi^2)	0.194
Q_{7-10} Flow (cfs)	0.0213	Q_{7-10} Basis	Please see below
Elevation (ft)	1015.82	Slope (ft/ft)	
Watershed No.	19-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final	Name	Sewickley Creek Watershed

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°C)	25	Default
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake	MAWC McKeesport		
PWS Waters	Youghiogheny River	Flow at Intake (cfs)	
PWS RMI	1.36	Distance from Outfall (mi)	26.08

Changes Since Last Permit Issuance: The permit was transferred from HPD Flip LP to D & J Ventures on February 23, 2022.

Other Comments:

Stream Flow:

The receiving stream is an UNT to Sewickley Creek, parallel to Derr Road, on east side of the facility. This stream isn't identified in the eMapPA tool, but is recognized in USGS StreamStats map. The stream code for this stream is unknown. It travels approximately 0.66 miles to the south, parallel to Derr Road, reaches a pond, then overflows until it reaches to Sewickley Creek. The drainage area at the outfall location is calculated from StreamStats map (accessed on September 11, 2025 and October 3, 2025) is found to be 0.11 mi^2. At the request of the permit writer, a stream survey was conducted on September 24, 2025 by the regional aquatic biologist. The survey concluded that the receiving stream is not a dry stream. Therefore, modeling will be conducted at the discharge point. Streamgage 03083500 (Youghiogheny River at Sutersville) was utilized to calculate the yield. The streamgage data shows a drainage area of 1,715 mi^2 and a Q_{7-10} of 332 cfs at the gage location. The calculated yield is 332/1715 or 0.194 cfs/mi^2. Calculated Q_{1-10} :Q_{7-10} is 262/332 or 0.79 and Q_{30-10} :Q_{7-10} of 416/332 or 1.25.

PWS Intake:

The nearest downstream public water supply is MAWC McKeesport in McKeesport City, Allegheny County on Youghiogheny River at RMI 1.36. Its approximately 26.08 miles downstream of Outfall 001. Discharge from this facility is expected not to impact the PWS intake.

Wastewater Characteristics:
Default pH of 7.0, default discharge hardness of 100 mg/l, and default temperature of 25^{0}C will be used for modeling, as appropriate.

Background data:
The nearest WQN station is 0706 which is on Youghiogheny River at Sutersville @ SR3045 Bridge. Median pH, temperature, and hardness for months July-September for years 1999-2019 are 7.7, 23.5^{0}C, and 94 mg/l, respectively.

Sewickley Creek Watershed TMDL:
The discharge is to Sewickley Creek which has a Final TMDL, Sewickley Creek Watershed TMDL, and is impaired by metals and pH. This sewage discharge is not expected to contribute to the stream impairment for which abandoned mine drainage is source of such impairment. No WLAs have been developed for this sewage discharge and they are not expected to contribute to the stream impairment for these pollutants. No monitoring was imposed in the last permit for AMD parameters.

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 Warm Water Fishes (WWF). 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.

Treatment Facility Summary

Treatment Facility Name: Sewickley Pines Manor STP

WQM Permit No.	Issuance Date
6519400	7/6/2019

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Chlorination	0.015

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.015	45.9	Not Overloaded	Holding Tank	Other WWTP

Facility Information

D & J Ventures owns and operates a minor sewage treatment plant, named Sewickley Pines Manor STP. The facility is in Sewickley Township, Westmoreland County.

Per 2022 transferred WQM permit, the facility consists of pre-screening, two connected aeration tanks, clarification, sludge holding tank, chlorination, dechlorination, and outfall pipe. Raw sewage flows to the treatment plant from gravity sewer system, through bar screen to 2 aeration tanks, then final clarifier, and chlorine contact tank. Dechlorination tablets are introduced as the effluent exits the chlorine contact tank.

Biosolids management: The collected biosolids are sent to Unity Township Sewage Plant for further processing and ultimate disposal.

Compliance History

DMR Data for Outfall 001 (from August 1, 2024 to July 31, 2025)

Parameter	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24
Flow (MGD) Average Monthly	0.00745	0.014	0.014	0.014	0.014	0.009	0.0099	0.007	0.007	0.00704 3	0.007	0.006
pH (S.U.) IMIN	6.6	6.6	6.6	6.7	6.7	6.9	7.0	6.6	6.4	6.5	6.1	6.3
pH (S.U.) IMAX	7.7	8.1	7.9	7.4	7.7	7.6	7.9	7.3	7.6	7.5	7.7	7.6
DO (mg/L) IMIN	6.0	6.2	6.7	7.8	7.1	9.6	8.7	8.0	7.9	6.8	6.0	5.5
TRC (mg/L) Average Monthly	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TRC (mg/L) IMAX	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CBOD5 (mg/L) Average Monthly	3.6	2.5	2.0	3.0	3.0	3.2	3.0	4.1	3.0	3.0	3.0	3.0
CBOD5 (mg/L) IMAX	4.2	3.0	2.0	3.0	3.0	3.5	3.0	5.1	3.0	3.0	3.0	3.0
TSS (mg/L) Average Monthly	9.5	9.3	5.0	7.4	10.4	12.4	3.8	4.8	4.6	4.4	2.8	1.6
TSS (mg/L) IMAX	15.0	13.6	5.0	10.0	15.2	20.0	4.4	6.4	7.6	4.4	4.0	1.6
Fecal Coliform (No./100 ml) Geometric Mean	9.8	8.8	3.5	98	1.4	1.4	3.5	1.8	1.8	1.0	1.0	2.5
Fecal Coliform (No./100 ml) IMAX	96.0	38.8	12	2420	2.0	2.0	4.1	3.1	3.1	1.0	1.0	6.3
Total Nitrogen (mg/L) Daily Maximum								3.65				
Ammonia (mg/L) Average Monthly	2.0	0.49	1.4	0.4	1.0	0.1	0.1	0.1	0.43	0.1	0.1	0.17
Ammonia (mg/L) IMAX	2.5	0.58	1.5	0.6	1.3	0.2	0.1	0.1	0.76	0.1	0.1	0.12
Total Phosphorus (mg/L) Daily Maximum								0.45				

Compliance History

Compliance History/Inspection summary:

09/23/2025: RTPT conducted. No violation noted. Inspection confirmed the outfall location at the request of the permit writer.

07/31/2024: CEI conducted. No violation noted. The plant appeared to be well maintained and in good operational condition. Effluent from the chlorine contact tank appeared clear and in good visual condition. No offensive odors were detected during the inspection.

10/25/2021: CEI conducted. Violations noted including fecal coliform geo mean and IMAX violation. Rags were observed in the dosing tank and chlorine contact tank. The effluent appeared to be clear and in good visual condition. Solids were removed and the plant was reseeded at the end of 2018.

Existing limits

The following limits were applied at the Outfall 001 for the period August 1, 2020 through July 31, 2025:

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.015	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	0.1 Avg Mo	XXX	XXX	0.22	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	25.0	XXX	XXX	50.0	2/month	Grab
Total Suspended Solids	XXX	XXX	30.0	XXX	XXX	60.0	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
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	5.0	XXX	XXX	10.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	2.2	XXX	XXX	4.4	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .02
Latitude 40º 13' 50.00" **Longitude** -79º 42' 33.00"
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 7.7 (WQN0706, median Jul-Sep, 1999-2019)
- Stream Temperature 23.5°C (WQN0706, median Jul-Sep, 1999-2019)
- Stream Hardness 94 mg/l (WQN0706, median Jul-Sep, 1999-2019)

For modeling purpose, in absence of receiving stream's stream code, the UNT 37622 will be used. Other stream characteristics will remain unchanged. This approach was followed in previous permits.

The following two nodes were used in modeling:

Node 1: At the outfall 001 on UNT to Sewickley Creek (37622)
Elevation: 1015.82 ft (National Map-Advanced Viewer, 10/3/2025)
Drainage Area: 0.11 mi^2 (StreamStats Version 3.0, 09/11/2025)
River Mile Index: 0.66 (PA DEP eMapPA)
Low Flow Yield: 0.194 cfs/mi^2
Q_{7-10}: 0.0213 cfs
Discharge Flow: 0.015 MGD

Node 2: At confluence with Sewickley Creek at UNT RMI 0.0
Elevation: 925.16 ft (National Map-Advanced Viewer, 10/3/2025)
Drainage Area: 0.35 mi^2 (StreamStats Version 3.0, 09/11/2025)
River Mile Index: 0.0 (PA DEP eMapPA)
Low Flow Yield: 0.194 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 2.2 mg/l as monthly average and 4.4 mg/l as IMAX limit during summer to protect water quality standards. These limits are the same as existing limits and will be carried over.

CBOD5
WQM 7.0 suggests CBOD5 limit of 25.0 mg/l as AML which is the same as the existing limits. Existing limits will be carried over.

DO
WQM 7.0 suggests minimum DO of 5.0 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 metals or other toxics, unless they are legacy contaminant, or the facility receives waste that are known for these toxics. No TMS modeling is performed.

Other Requirements:

Nutrients monitoring:
PADEP's SOP BCW-PMT-033 recommends monitoring for Total Nitrogen and 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.

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 sewage dischargers with design flow less than 0.05 MGD and more than 0.0002 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).

Total Residual Chlorine (TRC):
The attached computer printout utilizes the equation and calculations as presented in the Department's 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID#391-2000-015) for developing chlorine limitations. The attached printout indicates that a water quality limit of 0.143 mg/l would be needed to prevent toxicity concerns at the discharge point for Outfall 001. The recommended IMAX limit is 0.468 mg/l. The current permit has an AML of 0.1 mg/l and IMAX of 0.22 mg/l. Current limits are more stringent and will be continued.

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).

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	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.015	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	0.1	XXX	XXX	0.22	1/day	Grab
CBOD5	XXX	XXX	25.0	XXX	XXX	50.0	2/month	Grab
TSS	XXX	XXX	30.0	XXX	XXX	60.0	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	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Calculation
Ammonia Nov 1 - Apr 30	XXX	XXX	5.0	XXX	XXX	10.0	2/month	Grab
Ammonia May 1 - Oct 31	XXX	XXX	2.2	XXX	XXX	4.4	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

Compliance Sampling Location: At Outfall 001

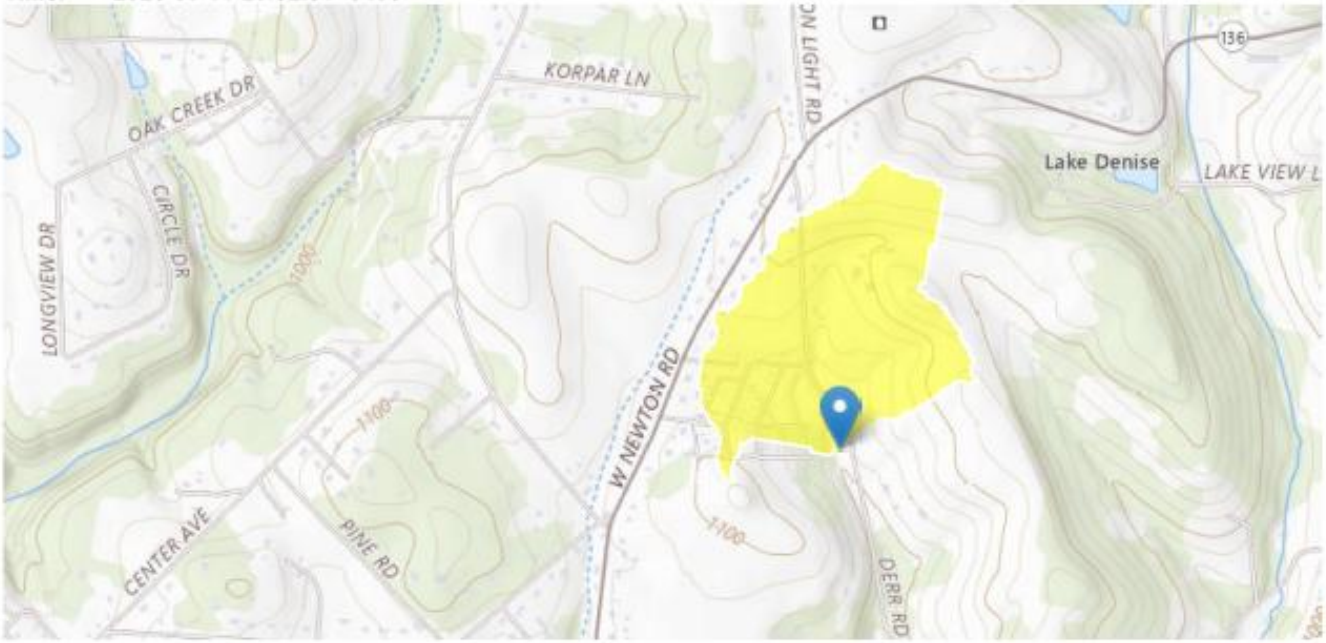
Other Comments: None

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:
☐	Other:

StreamStats at Outfall 001

PA0033405 at Outfall 001

Region ID: PA
Workspace ID: PA20250912003229198000
Clicked Point (Latitude, Longitude): 40.23048, -79.70864
Time: 2025-09-11 20:32:51 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.11	square miles
ELEV	Mean Basin Elevation	1087	feet
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.11	square miles	2.26	1400
ELEV	Mean Basin Elevation	1087	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	0.00209	ft^3/s
30 Day 2 Year Low Flow	0.00445	ft^3/s
7 Day 10 Year Low Flow	0.000511	ft^3/s
30 Day 10 Year Low Flow	0.00128	ft^3/s
90 Day 10 Year Low Flow	0.00285	ft^3/s

Low-Flow Statistics Citations

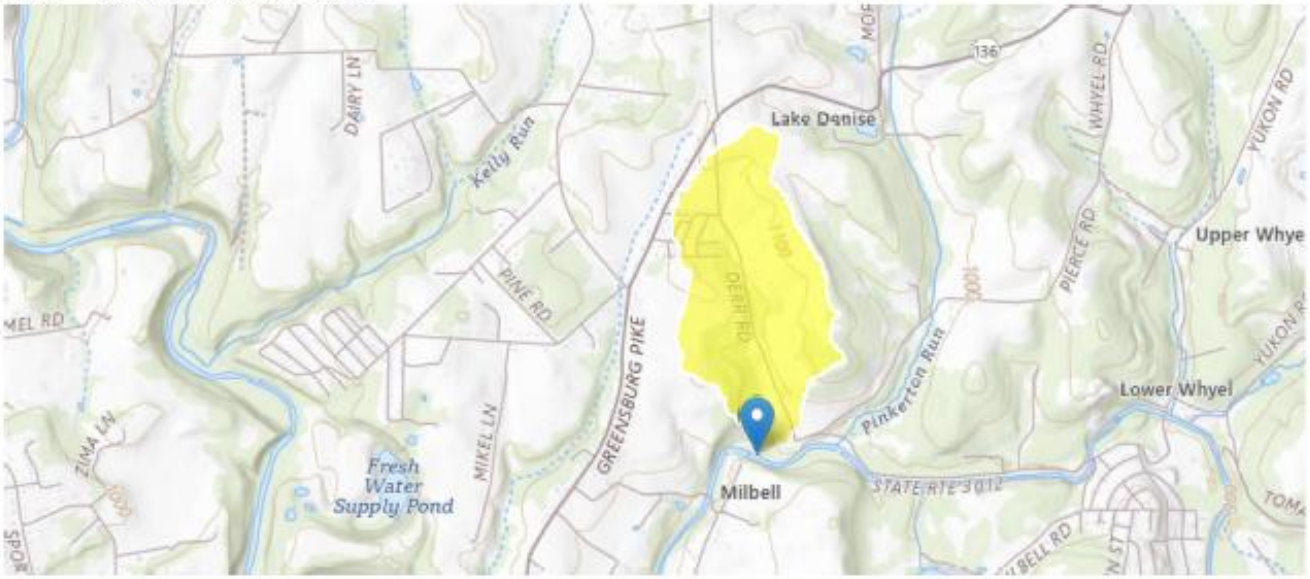
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats at node 2

StreamStats Report

Region ID: PA
Workspace ID: PA20251003190922337000
Clicked Point (Latitude, Longitude): 40.22121, -79.70718
Time: 2025-10-03 15:09:44 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.35	square miles
ELEV	Mean Basin Elevation	1059	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	0.35	square miles	2.26	1400
ELEV	Mean Basin Elevation	1059	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	0.00765	ft^3/s
30 Day 2 Year Low Flow	0.0154	ft^3/s
7 Day 10 Year Low Flow	0.0021	ft^3/s
30 Day 10 Year Low Flow	0.00481	ft^3/s
90 Day 10 Year Low Flow	0.0101	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: 4.29.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

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Prepared in cooperation with the Pennsylvania Department of Environmental Protection

Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania

Open-File Report 2011–1070

U.S. Department of the Interior
U.S. Geological Survey

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; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
03070000	Cheat River at Rowlesburg, W.Va.	39.346	-79.665	939	N
03070420	Stony Fork Tributary near Gibbon Glade, Pa.	39.764	-79.587	.93	N
03070500	Big Sandy Creek at Rockville, W.Va.	39.616	-79.705	200	N
03072000	Dunkard Creek at Shannopin, Pa.	39.759	-79.971	229	N
03072655	Monongahela River near Masontown, Pa.	39.825	-79.923	4,440	Y
03072840	Tenmile Creek near Clarksville, Pa.	39.998	-80.042	133	N
03073000	South Fork Tenmile Creek at Jefferson, Pa.	39.923	-80.073	180	N
03074300	Lick Run at Hopwood, Pa.	39.868	-79.694	3.80	N
03074500	Redstone Creek at Waltersburg, Pa.	39.980	-79.764	73.7	N
03075070	Monongahela River at Elizabeth, Pa.	40.262	-79.901	5,340	Y
03075500	Youghiogheny River near Oakland, Md.	39.422	-79.424	134	N
03076500	Youghiogheny River at Friendsville, Md.	39.654	-79.408	295	LF
03076600	Bear Creek at Friendsville, Md.	39.656	-79.394	48.9	N
03077500	Youghiogheny River at Youghiogheny River Dam, Pa.	39.805	-79.364	436	Y
03078000	Casselman River at Grantsville, Md.	39.702	-79.136	62.5	N
03078500	Big Piney Run near Salisbury, Pa.	39.726	-79.048	24.5	N
03079000	Casselman River at Markleton, Pa.	39.860	-79.228	382	N
03080000	Laurel Hill Creek at Ursina, Pa.	39.820	-79.321	121	N
03081000	Youghiogheny River below Confluence, Pa.	39.828	-79.373	1,029	Y
03082200	Poplar Run near Normalville, Pa.	40.016	-79.426	9.27	N
03082500	Youghiogheny River at Connellsville, Pa.	40.018	-79.594	1,326	Y
03083000	Green Lick Run at Green Lick Reservoir, Pa.	40.105	-79.500	3.07	N
03083500	Youghiogheny River at Sutersville, Pa.	40.240	-79.806	1,715	Y
03084000	Abers Creek near Murrysville, Pa.	40.450	-79.714	4.39	N
03085000	Monongahela River at Braddock, Pa.	40.391	-79.858	7,337	Y
03085500	Chartiers Creek at Carnegie, Pa.	40.401	-80.096	257	N
03086000	Ohio River at Sewickley, Pa.	40.549	-80.206	19,500	Y
03086500	Mahoning River at Alliance, Ohio	40.933	-81.095	89.2	N
03090500	Mahoning River bl Berlin Dam nr Berlin Center, Ohio	41.048	-81.001	248	Y
03091500	Mahoning River at Pricetown, Ohio	41.131	-80.971	273	Y
03092000	Kale Creek near Pricetown, Ohio	41.140	-80.995	21.9	N
03092090	West Branch Mahoning River near Ravenna, Ohio	41.161	-81.197	21.8	N
03092460	West Branch Mahoning River at Wayland, Ohio	41.157	-81.072	81.7	Y
03092500	West Branch Mahoning River near Newton Falls, Ohio	41.172	-81.021	96.3	Y
03093000	Eagle Creek at Phalanx Station, Ohio	41.261	-80.954	97.6	N
03094000	Mahoning River at Leavittsburg, Ohio	41.239	-80.881	575	Y
03095500	Mosquito Creek below Mosquito Creek Dam near Cortland, Ohio	41.300	-80.758	97.5	Y
03097550	Mahoning River at Ohio Edison P Plt at Niles, Ohio	41.173	-80.757	854	Y
03098000	Mahoning River at Youngstown, Ohio	41.111	-80.673	898	Y
03098500	Mill Creek at Youngstown, Ohio	41.072	-80.690	66.3	N
03098600	Mahoning River below West Ave at Youngstown, Ohio	41.105	-80.663	978	Y
03099500	Mahoning River at Lowellville, Ohio	41.037	-80.536	1,073	Y
03100000	Shenango River near Turnersville, Pa.	41.513	-80.471	152	N
03101500	Shenango River at Pymatuning Dam, Pa.	41.498	-80.460	167	Y
03102000	Shenango River near Jamestown, Pa.	41.458	-80.425	181	Y

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

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
03044000	[3]1941–1951	11	266	277	350	293	402	391
03045000	1941–2008	68	2.2	3.2	12.9	6.3	22.2	14.8
03045500	1921–1940	17	11.6	17.0	35.5	23.0	49.6	32.4
03047000	1943–1991	49	1.7	9.8	43.5	29.0	55.2	47.6
03047500	1909–1937	29	141	155	335	190	412	276
03048500	[2]1943–2008	66	182	232	385	307	496	392
03049000	1942–2008	67	3.2	3.8	8.5	5.7	13.5	9.4
03049500	[2]1967–2008	42	1,950	2,390	3,490	2,860	4,420	3,510
03049500	[3]1940–1965	26	1,030	1,200	1,600	1,380	2,000	1,850
03049800	1964–2008	45	<.1	<.1	.2	.1	.5	.3
[5]03061500	1909–2008	83	.6	1.0	3.7	1.9	6.7	4.6
03062400	1966–2002	33	0	0	.1	<.1	.5	.1
03062500	1947–2008	28	.7	1.1	3.0	1.8	4.8	3.3
[5]03065000	1942–2008	64	10.4	12.4	34.8	20.7	64.0	54.9
[5]03066000	1923–2008	86	4.0	5.1	11.6	7.6	19.4	16.5
03068800	1975–2008	17	12.0	15.4	32.8	26.0	57.7	53.6
[5]03069000	1912–1993	67	9.1	11.6	37.6	21.0	67.6	59.6
[5]03069500	1914–2008	95	31.8	37.6	98.3	60.2	178	146
[5]03070000	1925–1996	72	35.8	40.2	114	66.8	209	173
03070420	1979–1995	17	0	<.1	<.1	<.1	.1	.1
[5]03070500	1911–2008	94	2.3	2.9	13.2	5.5	22.9	14.8
03072000	1942–2008	67	1.2	1.7	5.4	2.7	9.5	5.7
03072655	1940–2008	69	295	484	845	618	1,150	944
03072840	1970–1979	10	1.9	2.7	5.5	4.9	9.2	9.3
03073000	1933–1995	63	.3	.4	1.8	1.0	4.0	2.8
03074300	1969–1979	11	<.1	.1	.2	.2	.4	.4
03074500	1944–2008	65	8.5	10.2	18.7	13.0	23.3	17.8
03075070	1935–2008	74	354	512	908	688	1,220	1,060
[4]03075500	1943–2008	66	5.4	6.3	16.2	10.0	25.2	18.2
[4]03076500	[2]1941–2008	67	19.9	48.0	83.2	67.6	117	98.0
[4]03076600	1966–2008	43	2.6	3.0	6.2	4.1	8.4	6.5
03077500	1945–1991	47	15.6	24.6	162	132	288	292
[4]03078000	1949–2008	60	1.2	1.6	5.0	2.8	8.4	5.6
03079000	1922–2008	87	16.4	18.4	37.5	24.8	56.3	43.0
03080000	1920–2008	89	3.9	5.1	12.1	8.4	20.6	15.6
03081000	1942–2008	67	240	283	535	358	644	518
03082200	1963–1978	16	0	.1	.4	.2	.7	.5
03082500	[2]1926–2008	83	155	214	526	283	655	460
03082500	[3]1910–1924	13	23.0	30.8	129	53.6	208	144
03083000	1943–1979	37	.1	.1	.2	.1	.3	.2
03083500	[2]1926–2008	74	262	332	644	416	776	621
03084000	1951–1994	44	0	<.1	.2	.2	.5	.3
03085000	1940–2004	65	1,060	1,230	1,950	1,440	2,380	1,950
03085500	1921–2008	80	26.7	30.8	52.4	36.5	62.4	48.5
03086000	1935–2008	74	2,760	3,060	5,030	3,650	6,230	4,930

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
19D	37622	Trib 37622 to Sewickley Creek	**0.660**	1015.82	0.11	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	0.194	0.00	0.00	0.000	0.000	0.0	0.00	0.00	23.50	7.70	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
Sewickley Pines	PA0033405	0.0150	0.0150	0.0150	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	2.20	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
19D	37622	Trib 37622 to Sewickley Creek	**0.000**	925.16	0.35	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	0.194	0.00	0.00	0.000	0.000	0.0	0.00	0.00	23.50	7.70	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	0.00	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 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	0.79	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.25	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19D	37622	Trib 37622 to Sewickley 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												
0.660	0.02	0.00	0.02	.0232	0.02602	.33	1.97	5.97	0.07	0.588	21.68	7.21
Q1-10 Flow												
0.660	0.02	0.00	0.02	.0232	0.02602	NA	NA	NA	0.06	0.624	21.47	7.18
Q30-10 Flow												
0.660	0.03	0.00	0.03	.0232	0.02602	NA	NA	NA	0.07	0.552	21.87	7.24

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19D	37622	Trib 37622 to Sewickley 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
0.660	Sewickley Pines	12.44	4.4	12.44	4.4	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
0.660	Sewickley Pines	1.49	2.2	1.49	2.2	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)		
0.66	Sewickley Pines	25	25	2.2	2.2	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19D	37622	Trib 37622 to Sewickley Creek

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.660	0.015	21.677	7.210
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.970	0.330	5.974	0.069
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
13.98	1.337	1.15	0.796
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.554	29.188	Owens	5
Reach Travel Time (days)			
0.588			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.059	12.84	1.09	7.54
0.118	11.80	1.04	7.79
0.176	10.84	1.00	7.90
0.235	9.95	0.95	7.98
0.294	9.14	0.91	7.99
0.353	8.40	0.87	7.99
0.412	7.71	0.83	7.99
0.471	7.09	0.79	7.99
0.529	6.51	0.75	7.99
0.588	5.98	0.72	7.99

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19D	37622	Trib 37622 to Sewickley 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)
0.660	Sewickley Pines	PA0033405	0.015	CBOD5	25		
				NH3-N	2.2	4.4	
				Dissolved Oxygen			5

TRC_Spreadsheet

TRC_CALC

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.0213	= Q stream (cfs)	0.5	= CV Daily
0.015	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations		Reference	CFC Calculations	
TRC	1.3.2.iii	WLA afc =	0.312	1.3.2.iii	WLA cfc =	0.296
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	0.116	5.1d	LTA_cfc =	0.172

Source		Effluent Limit Calculations		
PENTOXSD TRG	5.1f	AML MULT =	1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.143	AFC
		INST MAX LIMIT (mg/l) =	0.468	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)