Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0034185**
Facility Type	**Non-Municipal**	APS ID	**1139575**
Major / Minor	**Minor**	Authorization ID	**1530966**

Applicant and Facility Information

Applicant Name	**PWF1 High Meadows LLC**	Facility Name	**High Meadows MHP STP**
Applicant Address	4751 Kendor Drive	Facility Address	219 Leewood Drive
	New Kensington, PA 15068-9506		Lower Burrell, PA 15068-9508
Applicant Contact	Dennis Steck	Facility Contact	Dennis Steck
Applicant Phone	(419) 892-4800	Facility Phone	(419) 892-4800
Client ID	387406	Site ID	244136
Ch 94 Load Status	Not Overloaded	Municipality	Allegheny Township
Connection Status		County	Westmoreland
Date Application Received	June 16, 2025	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Renewal of authorization for treated sewage discharge

Summary of Review

The applicant has applied for a renewal of NPDES Permit No. PA0034185, which was previously issued by the Department on 12/4/2019. That permit expired on 12/30/2024.

The receiving stream, the Tributary 42546 to Allegheny River, is classified as a Warm Water Fishery (WWF) located in the Lower Allegheny River State Watershed No.18-A.

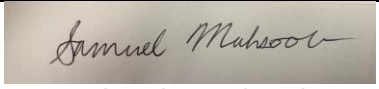
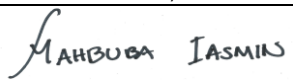
WQM Permit No. 6569433 A-2 was issued on 05/24/2004. The treatment plant is rated at an annual average design flow of 0.026 MGD and designed to serve 106 housing units. The treatment process consists of flow equalization, primary settling, Rotating Biological Contactors (RBCs), final clarification, and ultraviolet disinfection.

On February 3, 2020, a Point of First Surface Water Use (POFU) survey in the vicinity of the STP outfall was conducted by Jamie Detweiler and Richard Spear, the Aquatic Biologists of Clean Water Program. The study identified that Tributary 42546 to Allegheny River is capable of supporting an Aquatic Life Use as defined in 25 Pennsylvania Code §93.9q, where water quality standards must be met.

The client has 3 open violations by client ID. Additionally, there are significant effluent violations for Ammonia-Nitrogen, CBOD5, and TSS in the DMR reports.

Act 14 notifications were provided on May 5, 2025

Public Participation

Approve	Return	Deny	Signatures	Date
x			 Sam Mahsoob, EIT / Environmental Engineering Trainee	9/3/2025
x			 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	9/18/2025

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.026
Latitude	40º 37' 24"	Longitude	-79º 41' 41"
Quad Name	New Kensington East	Quad ID	40079E6
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Allegheny River (WWF)	Stream Code	42546
NHD Com ID	123972443	RMI	0.96
Drainage Area	0.0435	Yield (cfs/mi^2)	0.00377
Q_{7-10} Flow (cfs)	0.000164	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1030.25	Slope (ft/ft)	0.03247
Watershed No.	18-A	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	**None**	Name	**None**

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake		PWS ID: 5020108 System Name: HARRISON TWP WATER AUTH	
PWS Waters	Allegheny River	Flow at Intake (cfs)	2070
PWS RMI	24.5	Distance from Outfall (mi)	1.5

Treatment Facility Summary

Treatment Facility Name: High Meadows MHP STP

WQM Permit No.	Issuance Date
6569433	12/09/1969
6569433 A-2	05/24/2004

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	RBC	UV	0.026

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.026	79.14	Not Overloaded	Holding Tank	Allegheny Valley Joint Sewer Authority

Compliance History

A compliance check was requested.

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	0.018	0.014	0.019	0.011	0.011	0.009	0.007	0.009113	0.00667	0.00637	0.008275	0.01660
pH (S.U.) Instantaneous Minimum	7.2	7.3	7.2	7.2	7.2	7.1	7.1	7.03	7.5	7.6	7.6	7.6
pH (S.U.) Instantaneous Maximum	7.3	7.3	7.4	7.3	7.3	7.3	7.8	7.7	7.7	7.7	7.8	7.8
DO (mg/L) Instantaneous Minimum	5.2	5.4	5.2	5.1	5.2	5.2	5.3	5.1	5.0	5.0	5.1	5.1
TRC (mg/L) Average Monthly	0.01	0.01	0.01	0.01	0.01	0.01	0.01	< 0.001	< 0.001	< 0.001	0.001	0.001
TRC (mg/L) Instantaneous Maximum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	< 0.001	< 0.001	< 0.001	0.001	0.001
CBOD5 (mg/L) Average Monthly	37.0	18.3	26.5	16.6	7.3	11	12	6.85	6.8	4.7	8.5	11.85
CBOD5 (mg/L) Instantaneous Maximum	57.1	19.3	32.2	23.6	10.2	12	17	7.6	7.0	6.4	8.9	14.2
TSS (mg/L) Average Monthly	17.5	8.5	22	7.5	6	7	12	5.5	3	3.5	32.33	10
TSS (mg/L) Instantaneous Maximum	26.0	10.0	26	10	10	8	18	8	3	4	74	18
Fecal Coliform (No./100 ml) Geometric Mean	389	48	180	511	43	116	47	16.61	< 1	22.5	286.59	40.69
Fecal Coliform (No./100 ml) Instantaneous Maximum	1011	54	2420	1046	140	387	2420	276	< 1	25	871	69
UV Transmittance (%) Daily Minimum	66	54	51	48	38	39	32					
Total Nitrogen (mg/L) Daily Maximum					25.1							

Ammonia (mg/L) Average Monthly	23.2	14.6	17.4	15.0	15.7	16.6	9.0	10.25	11.825	23.4	20.27	17.75
Ammonia (mg/L) Instantaneous Maximum	31.9	17.3	25.2	26.9	16.3	19.0	10.2	10.6	16.9	25.1	27.4	25.5
Total Phosphorus (mg/L) Daily Maximum					4.4							

Compliance History

Effluent Violations for Outfall 001, from: June 1, 2024 To: April 30, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	02/28/25	Avg Mo	26.5	mg/L	25	mg/L
CBOD5	04/30/25	Avg Mo	37.0	mg/L	25	mg/L
CBOD5	04/30/25	IMAX	57.1	mg/L	50	mg/L
TSS	06/30/24	Avg Mo	32.33	mg/L	30	mg/L
TSS	06/30/24	IMAX	74	mg/L	60	mg/L
Fecal Coliform	06/30/24	Geo Mean	286.59	No./100 ml	200	No./100 ml
Ammonia	12/31/24	Avg Mo	15.7	mg/L	3.0	mg/L
Ammonia	02/28/25	Avg Mo	17.4	mg/L	3.0	mg/L
Ammonia	03/31/25	Avg Mo	14.6	mg/L	3.0	mg/L
Ammonia	10/31/24	Avg Mo	9.0	mg/L	2.0	mg/L
Ammonia	04/30/25	Avg Mo	23.2	mg/L	3.0	mg/L
Ammonia	11/30/24	Avg Mo	16.6	mg/L	3.0	mg/L
Ammonia	01/31/25	Avg Mo	15.0	mg/L	3.0	mg/L
Ammonia	02/28/25	IMAX	25.2	mg/L	6.0	mg/L

Ammonia	10/31/24	IMAX	10.2	mg/L	4.0	mg/L
Ammonia	04/30/25	IMAX	31.9	mg/L	6.0	mg/L
Ammonia	03/31/25	IMAX	17.3	mg/L	6.0	mg/L
Ammonia	12/31/24	IMAX	16.3	mg/L	6.0	mg/L
Ammonia	11/30/24	IMAX	19.0	mg/L	6.0	mg/L
Ammonia	01/31/25	IMAX	26.9	mg/L	6.0	mg/L

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .026
Latitude 40º 37' 24.00" **Longitude** -79º 41' 41.00"
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
Flow	Report	Average Monthly	-	§§ 92a.27, 92a.61
Flow	Report	Max Daily	-	§§ 92a.27, 92a.61
$CBOD_5$	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)
Total Nitrogen	Report	Average Monthly	-	92a.61(7)
Total Phosphorus	Report	Average Monthly	-	92a.61(8)
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)
E. Coli (No./100 ml)	-	Report		93a.61(11)(12)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)
Total Residual Chlorine	1.6	IMAX	-	92a.47-48(3)(4)
Ammonia-Nitrogen	25	Average Monthly	-	BPJ (5)
Ammonia-Nitrogen	50	IMAX	-	BPJ (5)
Dissolved Oxygen	4.0	IMIN	-	BPJ (6)

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (See Attachments 3, 4, & 5):

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen (May 1 to Oct 31)	1.4	Average Monthly	WQM 7.0
Ammonia-Nitrogen (May 1 to Oct 31)	2.8	IMAX	WQM 7.0
Ammonia-Nitrogen (Nov 1 to Apr 30)	1.98	Average Monthly	WQM 7.0
Ammonia-Nitrogen (Nov 1 to Apr 30)	3.96	IMAX	WQM 7.0
Dissolved Oxygen	6	Minimum	WQM 7.0

Comments: Stricter limits will be imposed for Dissolved Oxygen and Ammonia-Nitrogen in the summer and winter. In looking at the DMR data, it appears that the permittee will not be able to immediately comply with these limits. Therefore, a three-year compliance schedule has been implemented for NH3-N and DO.

Additional Considerations

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation. Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(40 CFR 122.44 (l)(2) Establishing limitations, standards, and other permit conditions., 40 CFR Ch. I (7-1-21 Edition))

No permits limits have been made less stringent in the renewal draft permit.

E. Coli

Sewage discharges will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD.

(*Note 12 SOP-Establishing Effluent Limitations for Individual Sewage Permits Final November 9, 2012, Revised February 5, 2024, Version 2.0.* and *25 PA Code 92a.61(b).)*

Effluent Multipliers

Section 2.C of the Permit Writers Manual contains the procedure for converting average monthly effluent limitations to average weekly, maximum daily, and instantaneous maximum effluent limitations. The average monthly limit is multiplied according to the following chart:

Discharge Solution	Parameters	Average Weekly	Maximum Daily	Instantaneous Maximum Multiplier
Sewage	All	1.5		2.0
Industrial	All		2.0	2.5*

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Rounding Off

Section 5 C.2. of the Permit Writers Manual contains general guidelines for rounding conventional and toxic pollutants, with instructions to round down to the nearest decimal place indicated.

General Magnitude	Conventional Pollutants	Toxic Pollutants
<0.01	to nearest 0.001	to nearest 0.001
0.01 - 0.1	to nearest 0.01	to nearest 0.01
0.1 - 1.0	to nearest 0.1	to nearest 0.01
1.0 - 10.0	to nearest 0.5	to nearest 0.01
10.0 - 60.0	to nearest 1.0	to nearest 0.01
60.0 or greater	to nearest 5.0	to nearest 0.10

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Ultraviolet Disinfection

Ultraviolet (UV) disinfection is used. Routine monitoring of UV intensity is at the same monitoring frequency that is used for TRC.

(*Section I.A, Note 4, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9* and *25 PA Code 92a.61(b)*.)

Nutrient Monitoring

Nutrient monitoring is required by the SOP for Effluent Limitations for Individual Sewage Permits. Monitoring is included to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). The receiving stream is not listed as impaired for nutrients, therefore at the discretion of the application manager, a monitoring frequency less than the equivalent of conventional pollutants in Table 6-3 of the Permit Writer's Manual has been selected.

(*Section I.A, Note 7 & 8, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9* and *25 PA Code 92a.61(b)*.)

Table 6-3 – Self-Monitoring Requirements for SEWAGE Discharges

Plant Design Flow (MGD)	Flow Monitoring	C-BOD_5 or BOD_5	Suspended Solids	pH	Fecal Coliform	Chlorine Residual	NH_3-N	Phosphorus	DO	Toxics
Single Residence (Individual Permit)	2/year by estimate	2/year*	2/year*	1/month*	2/year*	1/month*	2/year*	2/year*	2/year*	N/A
.0005 to .002	weekly, using average pump rate or weir (a)	1/month*	1/month*	daily*	1/month*	daily*	1/month*	1/month*	daily*	N/A
.002 to .01	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	daily*	N/A
0.01 to 0.1	**weekly, using average pump rate or weir (a)**	**2/month***	**2/month***	**daily***	**2/month***	**daily***	**2/month***	**2/month***	**Daily***	**1/week***
0.1 to 1.0	meter	1/week**	1/week**	daily*	1/week*	daily*	1/week**	1/week**	daily*	1/week****
1.0 to 5.0	meter	2/week***	2/week***	daily*	2/week*	daily*	2/week***	2/week***	daily*	1/week****
5.0 to 25.0	meter	daily***	daily***	daily*	daily*	1/shift*	daily***	daily***	daily*	1/week****
over 25.0	meter	daily***	daily***	1/shift*	daily*	1/shift*	1/shift***	1/shift***	1/shift*	1/week****

* Grab sample-these should be most representative of the effluent and are to be taken at a time when the normal daily maximum flow would reach the sampling point.

** 8-hour composite sample.

*** 24-hour composite sample.

**** Same sample type as for Industrial Process Wastewater (See Table 6-4).

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	Daily Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Max Daily	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	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	XXX	Report	1/year	Grab
UV Transmittance (%)	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Recorded
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001

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 End of Interim Period 1.

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		
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	3.0	XXX	6.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	2.0	XXX	4.0	2/month	Grab

Compliance Sampling Location: Outfall 001

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: End of Interim Period 1 through Permit Expiration Date.

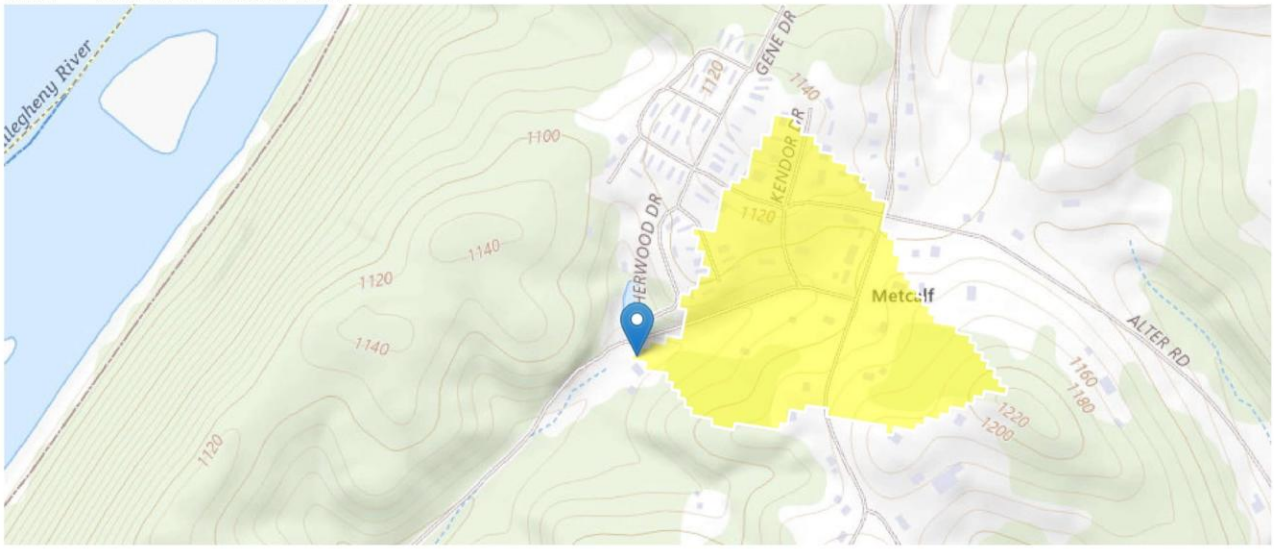
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	1.98	XXX	3.96	1/day	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	1.4	XXX	2.8	1/day	Grab

Compliance Sampling Location: Outfall 001

Attachment 1
USGS StreamStats
Upstream

StreamStats Report - US

Region ID: PA
Workspace ID: PA20250624145136926000
Clicked Point (Latitude, Longitude): 40.62250, -79.69431
Time: 2025-06-24 10:52:00 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.0435	square miles
ELEV	Mean Basin Elevation	1106	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	0.0435	square miles	2.26	1400
ELEV	Mean Basin Elevation	1106	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	0.000738	ft^3/s
30 Day 2 Year Low Flow	0.00164	ft^3/s
7 Day 10 Year Low Flow	0.000164	ft^3/s
30 Day 10 Year Low Flow	0.000442	ft^3/s

Statistic	Value	Unit
90 Day 10 Year Low Flow	0.00103	ft^3/s

Low-Flow Statistics Citations

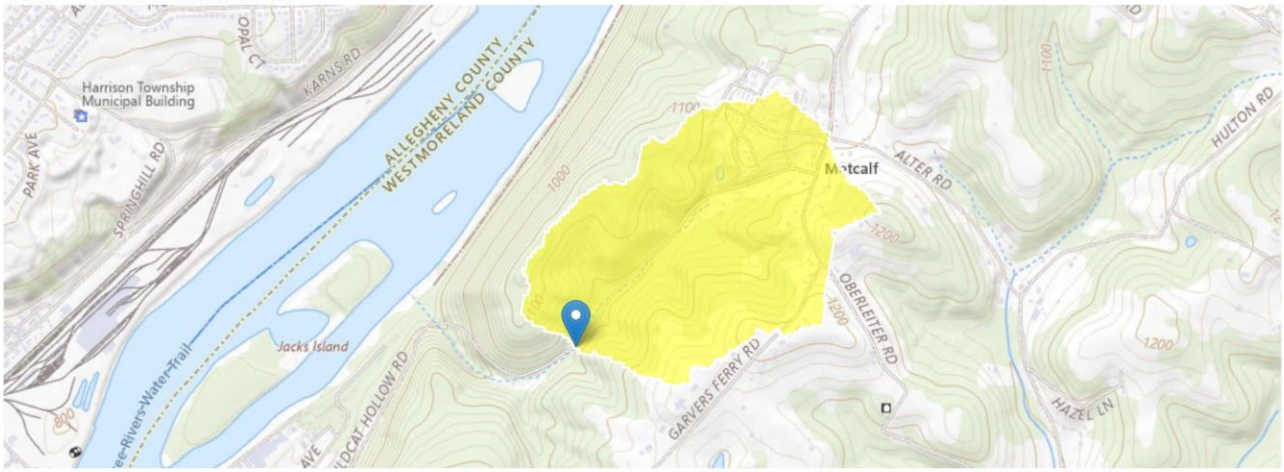
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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

Attachment 2
USGS StreamStats Downstream

StreamStats Report - Downstream

Region ID: PA
Workspace ID: PA20250624145631410000
Clicked Point (Latitude, Longitude): 40.61832, -79.69974
Time: 2025-06-24 10:56:56 -0400



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.24	square miles
ELEV	Mean Basin Elevation	1088	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	0.24	square miles	2.26	1400
ELEV	Mean Basin Elevation	1088	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	0.00509	ft^3/s
30 Day 2 Year Low Flow	0.0104	ft^3/s
7 Day 10 Year Low Flow	0.00134	ft^3/s
30 Day 10 Year Low Flow	0.00316	ft^3/s
90 Day 10 Year Low Flow	0.00678	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

Attachment 3
WQM 7.0 Model - Summer

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
18A	42546	Trib 42546 to Allegheny River	**0.960**	1030.25	0.04	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 (ºC)	Tributary pH	Stream Temp (ºC)	Stream pH
Q7-10	0.004	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	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 (ºC)	Disc pH
Outfall 001	PA0034185	0.0260	0.0260	0.0260	0.000	20.00	7.50

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	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
18A	42546	Trib 42546 to Allegheny River	**0.580**	965.31	0.24	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 (ºC)	Tributary pH	Stream Temp (ºC)	Stream pH
Q7-10	0.006	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	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 (ºC)	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 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5.5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

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												
0.960	0.00	0.00	0.00	.0402	0.03237	.35	1.42	4.07	0.08	0.287	20.02	7.50
Q1-10 Flow												
0.960	0.00	0.00	0.00	.0402	0.03237	NA	NA	NA	0.08	0.287	20.01	7.50
Q30-10 Flow												
0.960	0.00	0.00	0.00	.0402	0.03237	NA	NA	NA	0.08	0.286	20.03	7.49

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

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
0.960	Outfall 001	9.26	9.28	9.26	9.28	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
0.960	Outfall 001	1.4	1.4	1.4	1.4	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)		
0.96	Outfall 001	25	25	1.4	1.4	6	6	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
0.960	0.026	20.020	7.496
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.423	0.350	4.065	0.081
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.91	1.499	1.40	0.701
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.009	28.105	Owens	5.5
Reach Travel Time (days)			
0.287			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.029	23.86	1.37	6.59
0.057	22.85	1.34	6.89
0.086	21.89	1.32	7.07
0.115	20.97	1.29	7.20
0.143	20.09	1.27	7.29
0.172	19.24	1.24	7.38
0.201	18.43	1.22	7.45
0.229	17.66	1.19	7.52
0.258	16.91	1.17	7.59
0.287	16.20	1.14	7.65

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

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)
0.960	Outfall 001	PA0034185	0.026	CBOD5	25		
				NH3-N	1.4	2.8	
				Dissolved Oxygen			6

Attachment 4
WQM 7.0 Model - Winter

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
18A	42546	Trib 42546 to Allegheny River	**0.960**	1030.25	0.04	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 (ºC)	Tributary pH	Stream Temp (ºC)	Stream pH
Q7-10	0.008	0.00	0.00	0.000	0.000	0.0	0.00	0.00	5.00	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 (ºC)	Disc pH
Outfall 001	PA0034185	0.0260	0.0260	0.0260	0.000	15.00	7.50

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	12.54	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
18A	42546	Trib 42546 to Allegheny River	**0.580**	965.31	0.24	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 (ºC)	Tributary pH	Stream Temp (ºC)	Stream pH
Q7-10	0.011	0.00	0.00	0.000	0.000	0.0	0.00	0.00	5.00	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 (ºC)	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 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5.5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

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												
0.960	0.00	0.00	0.00	.0402	0.03237	.35	1.42	4.07	0.08	0.286	14.92	7.49
Q1-10 Flow												
0.960	0.00	0.00	0.00	.0402	0.03237	NA	NA	NA	0.08	0.286	14.95	7.50
Q30-10 Flow												
0.960	0.00	0.00	0.00	.0402	0.03237	NA	NA	NA	0.08	0.285	14.89	7.49

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

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
0.960	Outfall 001	13.38	13.45	13.38	13.45	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
0.960	Outfall 001	1.95	1.98	1.95	1.98	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)		
0.96	Outfall 001	25	25	1.98	1.98	6	6	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
0.960	0.026	14.919	7.492
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.425	0.350	4.066	0.081
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.81	1.499	1.96	0.473
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.053	24.904	Owens	5.5
Reach Travel Time (days)			
0.286			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.029	23.99	1.93	7.15
0.057	23.19	1.91	7.72
0.086	22.41	1.88	8.03
0.114	21.66	1.86	8.21
0.143	20.94	1.83	8.33
0.172	20.24	1.81	8.41
0.200	19.57	1.78	8.48
0.229	18.92	1.76	8.54
0.257	18.28	1.74	8.59
0.286	17.67	1.71	8.64

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18A	42546	Trib 42546 to Allegheny River

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)
0.960	Outfall 001	PA0034185	0.026	CBOD5	25		
				NH3-N	1.98	3.96	
				Dissolved Oxygen			6