Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0001473**
Facility Type	**Non-Municipal**	APS ID	**1112243**
Major / Minor	**Minor**	Authorization ID	**1481793**

Applicant and Facility Information

Applicant Name	**Monongahela River Sewage Association**	Facility Name	**Mon River STP**
Applicant Address	1466 Delberts Drive	Facility Address	1462 Delberts Drive
	Monongahela, PA 15063-9752		Monongahela, PA 15063-9752
Applicant Contact	Alan Citron	Facility Contact	Barbara Gigliotti
Applicant Phone	(724) 258-6622	Facility Phone	(724) 350-0401
Client ID	385392	Site ID	243263
Ch 94 Load Status	Not Overloaded	Municipality	Forward Township
Connection Status		County	Allegheny
Date Application Received	September 15, 2014	EPA Waived?	Yes
Date Application Accepted	September 24, 2014	If No, Reason	

Purpose of Application: Application for the Renewal/Transfer of a NPDES permit for the discharge of treated Sewage.

Summary of Review

The Applicant has applied for a renewal of NPDES Permit No. PA0001473, which was previously issued by the Department on August 7, 2008. That permit expired on August 31, 2013.

WQM Permit No. 9159-S A-1 was issued on June 28, 2024, authorizing the construction of a new STP to treat an annual average design flow of 0.005 MGD, as the existing STP was oversized and no longer functioning as designed.

The existing STP is an Infilco Aero-Accelator treatment facility, which will be replaced by a new Mack Industries package extended aeration STP consisting of an aeration tank, secondary clarifier, aerated sludge holding tank, and UV disinfection.

The Applicant entered into a COA with the Department (December 28, 2023, and later amended August 6, 2024) that requires the Applicant to complete construction of the new facility within three hundred sixty-five (365) days of issuance of the WQM permit amendment, or June 28, 2025. The most recent semi-annual progress report is attached (Attachment 3) and list a substantial completion date of August 1, 2025.

There will be interim and final effluent limits placed in this permit. The interim effluent limits will be based upon the existing design flow of 0.014 MGD, and the final effluent limits will be based upon the new facility's proposed design flow of 0.005 MGD.

The treated effluent discharges to the Monongahela River (WWF), which is located in State Watershed No. 19-C.

The Applicant has complied with Act 14 Notifications and no comments were received.

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Project Manager	February 24, 2025
X		Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	February 28, 2025

Summary of Review

Changes since the last permit include:

- A BPJ minimum Dissolved Oxygen limit of 4.0 mg/L will be established (Final Limits)
- Addition of Ammonia-Nitrogen monitoring (Final Limits)
- Addition of *E.Coli* monitoring
- Addition of Total Nitrogen & Total Phosphorus monitoring
- Addition of UV Transmittance monitoring (Final Limits)
- Removal of TRC limit (Final Limits), as UV will be used for disinfection

Sludge use and disposal description and location(s): Sludge was not being properly wasted from the old STP and the Application did not document where it was to be disposed of. The Applicant will be asked during the Draft Permit Comment Period to provide an update on sludge use and disposal of the new STP approved under WQM Permit No. 9159-S A-1.

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.014 (Interim) & 0.005 (Final)
Latitude	40º 11' 55.00"	Longitude	-79º 54' 45.00"
Quad Name	Monongahela	Quad Code	1706
Wastewater Description:	Sewage Effluent		
Receiving Waters	Monongahela River (WWF)	Stream Code	37185
NHD Com ID	99409240	RMI	32.6
Drainage Area	5240	Yield (cfs/mi^2)	0.105
Q_{7-10} Flow (cfs)	550	Q_{7-10} Basis	USGS StreamStats & US Army Corp of Engineers
Elevation (ft)	731	Slope (ft/ft)	0.0001
Watershed No.	19-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Monongahela River TMDL

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

Nearest Downstream Public Water Supply Intake		PA American Water Company - Aldrich	
PWS Waters	Monongahela River (WWF)	Flow at Intake (cfs)	550
PWS RMI	25.34	Distance from Outfall (mi)	7.26

Changes Since Last Permit Issuance: N/A

Other Comments: The STP directly discharges to the Monongahela River which has an EPA Approved TMDL and is impaired by PCBs and Chlordane. No WLAs have been developed for this sewage discharge, as neither PCB nor Chlordane is typically found in sewage, but instead found in legacy sediments. No additional monitoring requirements for these pollutants will be placed on this facility at this time.

Treatment Facility Summary

Treatment Facility Name: Mon River STP

WQM Permit No.	Issuance Date
9159-S	01/09/1959
9159-S A-1	06/28/2024

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	UV	0.014 & 0.005

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.014 & 0.005	9.6	Not Overloaded	Aerated Sludge Holding Tank	Hauled to a regional WWTP

Changes Since Last Permit Issuance: A new extended aeration package STP is under construction, and the existing STP will be decommissioned. Disinfection will change from tablet chlorination to UV disinfection.

Other Comments: The new STP has been designed to treat a reduced Annual Average Design Flow and Organic Design Capacity to better serve the current needs of the Mon Center Industrial Park.

Compliance History

Operations Compliance Check Summary Report

Facility: Mon River STP

NPDES Permit No.: PA0001473

Compliance Review Period: 2/1/20-2/20/25

Inspection Summary:

INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
09/04/2024	Administrative/File Review	PA Dept of Environmental Protection	Violation(s) Noted
08/21/2024	Administrative/File Review	PA Dept of Environmental Protection	Violation(s) Noted
10/24/2023	Compliance Evaluation	County Health Dept	Violation(s) Noted
04/20/2022	Compliance Evaluation	County Health Dept	Violation(s) Noted
03/23/2021	Compliance Evaluation	County Health Dept	Violation(s) Noted
03/04/2020	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted

Violation Summary:

VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
09/04/2024	91.21	CSL - Failure to apply for and/or obtain a WQM permit for the construction of sewage or industrial waste facilities	09/04/2024
08/21/2024	CSL201	CSL - Unauthorized, unpermitted discharge of sewage to waters of the Commonwealth	08/21/2024
10/24/2023	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	02/13/2024

10/24/2023	92A.41(A)12A	NPDES - Failure to notify DEP of planned physical changes to a facility	02/13/2024
04/20/2022	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	01/26/2024
04/20/2022	92A.41(A)12A	NPDES - Failure to notify DEP of planned physical changes to a facility	01/26/2024
04/20/2022	92A.44	NPDES - Violation of effluent limits in Part A of permit	01/26/2024
03/23/2021	92A.41(A)12A	NPDES - Failure to notify DEP of planned physical changes to a facility	10/29/2021
03/23/2021	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	10/29/2021
03/04/2020	92A.44	NPDES - Violation of effluent limits in Part A of permit	10/28/2021
03/04/2020	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	10/28/2021
03/04/2020	92A.41(A)12A	NPDES - Failure to notify DEP of planned physical changes to a facility	10/28/2021

Open Violations by Client ID:

- No open violations for Client ID 112400

Enforcement Summary:

ENF TYPE	ENF TYPE DESC	EXECUTED DATE	VIOLATIONS	PENALTY AMOUNT	AMOUNT RECEIVED	TOTAL AMOUNT DUE	ENF FINALSTATUS	ENF CLOSED DATE	ENF COMMENT
COA	Consent Order and Agreement	08/06/2024	91.21	$5,000.00	$5,000.00	$0.00			FIRST AMENDMENT TO 2023 COA
COA	Consent Order and Agreement	12/28/2023	CSL201						
NOV	Notice of Violation	05/31/2022	92A.41(A)12A; 92A.41(A)5; 92A.44				Administrative Close Out	03/12/2024	
NOV	Notice of Violation	04/09/2021	92A.41(A)12A; 92A.41(A)5				Administrative Close Out	02/02/2024	

NOV	Notice of Violation	04/24/2020	92A.41(A)12A; 92A.41(A)5; 92A.44				Administrative Close Out	12/29/2023	

Effluent Violation Summary:

MON PD	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT BASE CODE	FACILITY COMMENTS
Feb-22	Carbonaceous Biochemical Oxygen Demand (CBOD5)	28.25	25.0	mg/L	Average Monthly	During the month of February this facility will have an CBOD violation. This violation was caused by cold weather reducing the treatment process. With warmer months ahead we do not expect a violation moving forward.
Jun-21	Fecal Coliform	1120	200	No./100 ml	Geometric Mean	The operator has increased the chlorine dosage in order to more effectively disinfect the effluent.
May-21	Fecal Coliform	256	200	No./100 ml	Geometric Mean	- This facility will have a max fecal coliform violation. This violation was caused by not adjusting the disinfection enough for the reduced fecal coliform limits in May. Chlorine levels have been increase the and the results since have been below effluent limitations.

Compliance Status: Facility is generally in compliance with no open violations or pending enforcements.

Completed by: Amanda Illar **Completed date:** 2/20/25

Compliance History

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

Parameter	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24
Flow (MGD) Average Monthly	0.001	0.001	0.001	0.001	0.001	0.014	0.001	0.0010	0.001	0.001	0.001	0.0010
pH (S.U.) Daily Minimum	7.06	7.16	7.02	7.09	7.01	7.03	7.07	7.03	7.14	7.14	7.01	7.07
pH (S.U.) Daily Maximum	7.60	7.54	7.34	7.49	7.59	7.28	7.37	7.38	7.39	7.44	7.35	7.49
TRC (mg/L) Average Monthly	0.12	0.14	0.20	0.10	0.14	0.08	0.30	0.26	0.19	0.12	0.12	0.32
TRC (mg/L) Instantaneous Maximum	0.28	0.24	0.34	0.38	0.20	0.31	0.35	0.31	0.38	0.21	0.35	0.88
CBOD5 (mg/L) Average Monthly	3.2	3.0	3.0	< 3.0	3.0	3.0	3.0	3.0	3.0	3.00	3.45	4.0
TSS (mg/L) Average Monthly	3.50	3.5	3.0	< 3.0	3.0	3.0	3.0	3.0	10.50	7.00	6.0	7.0
Fecal Coliform (No./100 ml) Geometric Mean	5.0	1.0	2.0	< 1	1.0	1	1.0	1.0	1.00	1	1.0	1.0

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.014 & 0.005
Latitude 40º 11' 55.00" **Longitude** -79º 54' 45.00"
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)

Comments: A new STP with a reduced annual average design flow is to be constructed by June 28, 2025. Final Limits were re-evaluated at the lower design flow of 0.005 MGD. The facility will be given its existing effluent limits/monitoring requirements (2008 Permit) from effective date through June 30, 2025, and will be given the new final limits/monitoring requirements discussed below from July 1, 2025, through expiration.

The discharge was evaluated using WQM 7.0 Version 1.1 (Attachment 2) to evaluate $CBOD_5$, Ammonia Nitrogen, and Dissolved Oxygen. The modeling results show the above technology based effluent limitations are appropriate.

For existing discharges, if WQM modeling results for summer indicates that an average monthly limit of 25 mg/L (ammonia-nitrogen) is acceptable, the application manager will generally establish a year-round monitoring requirement for ammonia-nitrogen, per Section I.A, Note 5, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Water Quality-Based Limitations

Comments: Based upon module output files (WQM 7.0 Version 1.1), no WQBELs will be established at this time for this facility.

Best Professional Judgment (BPJ) Limitations

Comments: A minimum Dissolved Oxygen (DO) limit of 4.0 mg/L will be established based on BPJ to ensure adequate operation and maintenance per Section I.A, Note 6, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

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 40 CFR 122.44 (l) 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.

The facility is not seeking to revise the previously permitted effluent limits.

Additional Considerations

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 386-0400-001).

Ultraviolet (UV) disinfection will replace the existing tablet chlorine system and UV monitoring is required. Part A will contain, at a minimum, routine monitoring of UV transmittance (%) at the same monitoring frequency that would be used for TRC per Section I.A, Note 4, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Sewage dischargers will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/year for design flows 0.002 – 0.05 MGD per 25 Pa. Code § 92a.061, and Section I.A, Note 12, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Nutrient monitoring is required 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 discharge is to waters not impaired for nutrients. A 1/year monitoring requirement for Total N & Total P has been added to the permit per 25 Pa. Code § 92a.061, and Section I.A, Note 7 & 8, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

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 June 30, 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	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/month	Grab
TRC	XXX	XXX	XXX	1.4	XXX	3.3	1/week	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	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

Compliance Sampling Location: Outfall 001

Other Comments: N/A

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: July 1, 2025 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	Instant. Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	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
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab

Compliance Sampling Location: Outfall 001

Other Comments: N/A

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	Maximum	Instant. Maximum		
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
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

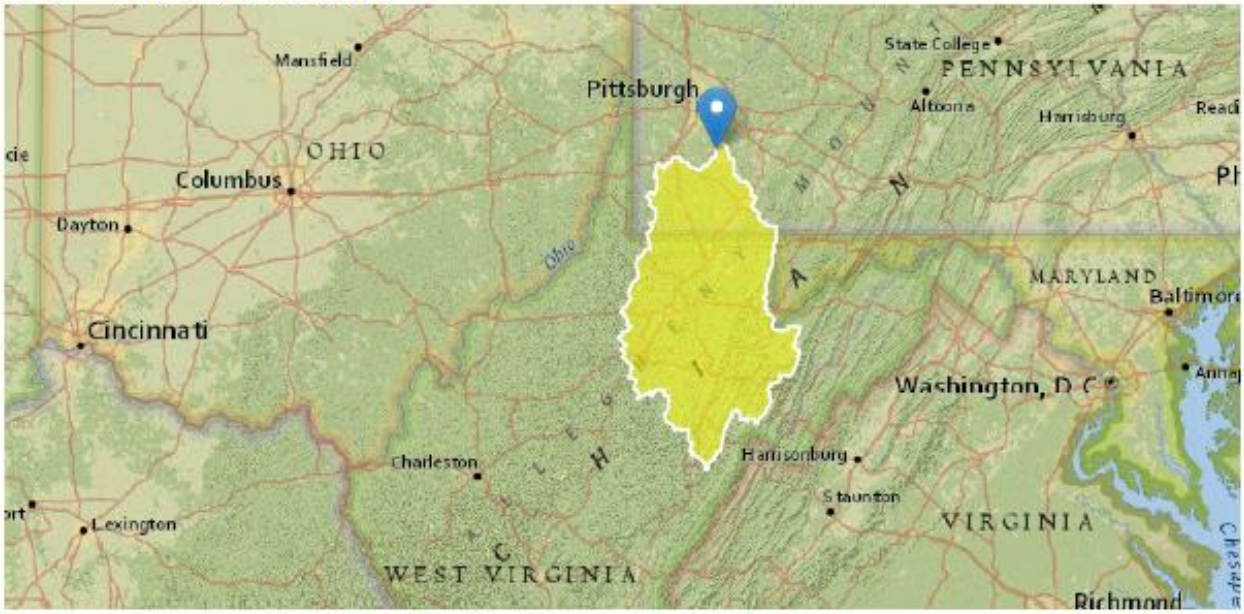
Compliance Sampling Location: Outfall 001

Other Comments: N/A

Attachment 1 – USGS StreamStats Report

PA0001473_StreamStats Report

Region ID: PA
Workspace ID: PA20250221145336855000
Clicked Point (Latitude, Longitude): 40.19756, -79.91350
Time: 2025-02-21 09:54:10 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	5240	square miles
ELEV	Mean Basin Elevation	1838	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	5240	square miles	2.26	1400
ELEV	Mean Basin Elevation	1838	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	692	ft^3/s
30 Day 2 Year Low Flow	918	ft^3/s
7 Day 10 Year Low Flow	404	ft^3/s
30 Day 10 Year Low Flow	472	ft^3/s
90 Day 10 Year Low Flow	701	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: 4.27.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment 2 – WQM 7.0 Version 1.1 – Summer Period

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	37185	MONONGAHELA RIVER	32.600	731.00	5240.00	0.00010	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	0.105	0.00	0.00	0.000	0.000	0.0	828.00	10.00	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 (°C)	Disc pH
Mon River STP	PA0001473	0.0000	0.0050	0.0050	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	3.00	8.38	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
19A	37185	MONONGAHELA RIVER	32.240	730.00	5320.00	0.00010	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	0.105	0.00	0.00	0.000	0.000	0.0	871.00	10.00	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 (°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	37185	MONONGAHELA 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												
32.600	549.68	0.00	549.68	.0077	0.00010	10	828	82.8	0.07	0.331	25.00	7.00
Q1-10 Flow												
32.600	351.79	0.00	351.79	.0077	0.00010	NA	NA	NA	0.04	0.518	25.00	7.00
Q30-10 Flow												
32.600	747.56	0.00	747.56	.0077	0.00010	NA	NA	NA	0.09	0.244	25.00	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	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19A	37185	MONONGAHELA 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
32.600	Mon River STP	11.07	50	11.07	50	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
32.600	Mon River STP	1.37	25	1.37	25	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)		
32.60	Mon River STP	25	25	25	25	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19A	37185	MONONGAHELA RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
32.600	0.005	25.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
828.000	10.000	82.800	0.066
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.00	0.000	0.00	1.029
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.380	0.118	O'Connor	5
Reach Travel Time (days)			
0.331			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.033	2.00	0.00	7.54
0.066	2.00	0.00	7.54
0.099	2.00	0.00	7.54
0.133	2.00	0.00	7.54
0.166	2.00	0.00	7.54
0.199	2.00	0.00	7.54
0.232	2.00	0.00	7.54
0.265	2.00	0.00	7.54
0.298	2.00	0.00	7.54
0.331	2.00	0.00	7.54

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19A	37185	MONONGAHELA 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)
32.600	Mon River STP	PA0001473	0.000	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

Attachment 3 – Semi-Annual Progress Report

MON RIVER SEWAGE TREATMENT PLANT
WQM PERMIT NO. 9159-S A-1
NPDES PERMIT NO. PA0001473
CONSENT ORDER & AGREEMENT
SEMI-ANNUAL PROGRESS REPORT
FOR THE PERIOD FROM JULY 1, 2024 THROUGH DECEMBER 31, 2024

Submitted to
THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
on behalf of
THE MONONGAHELA RIVER SEWAGE ASSOCIATION
December 31, 2024

Submitted via PADEP Public Upload at
https://www.dep.pa.gov/DataandTools/Pages/Application-Form-Upload.aspx

In compliance with the December 28, 2023 Consent Order & Agreement (COA) and Amendment No. 1, the following is a summary of the actions taken by the Monongahela River Sewage Association (the Association) in the period from July 1, 2024 through December 31, 2024. More specifically, per the requirements of the COA, this report includes:

A. *A description of the actions including sampling and monitoring, that have been taken toward achieving compliance with this Consent Order and Agreement.*

B. *A description of all activities scheduled for the next six (6) months.*

C. *A description of any problems or delays encountered or anticipated regarding performance of the activities required by this Consent Order and Agreement.*

A. ACTIONS TAKEN JULY 1, 2024 TO DECEMBER 31, 2024

No.	Date	Action
1.	7/1/2024 through 11/30/2024	Discharge samples were collected by the plant operator and analyzed to prepare electronic discharge monitoring reports (eDMRs) in compliance with the NPDES permit. PADEP's summary of eDMR results for this period is attached. Note that, at the time this report was prepared, eDMRs were only available through 11/30/2024 on PADEP's website.
2.	7/3/2024	On 6/28/2024, PADEP issued the Water Quality Management Permit Amendment which authorized construction of the WWTP improvements. With the WQM

		Permit Amendment from PADEP in hand, the Association solicited interest in this project from four contractors. Three expressed potential interest. Mack Industries, the primary supplier/installer of equipment in the PADEP approved design, was contacted regarding their schedule for supplying/installing components of the proposed treatment system. Mack indicated that, at that time, the soonest they could provide equipment and installation would be in early 2025.
3.	7/12/2024	On 4/24/2024, PADEP issued a letter to the Association demanding stipulated penalties under the COA for alleged failure to comply with Paragraphs 3 and 4 of the COA. On 4/30/2024, the Association filed an appeal of the demand for stipulated penalties with the Environmental Hearing Board. On 7/12/2024, the Association and the PADEP resolved the underlying issue on appeal to the Environmental Hearing Board.
4.	7/12/2024	The Association issued the WWTP Construction Bid Package to potential bidders.
5.	7/15/2024	The Association held a mandatory, on-site, pre-bid meeting with potential bidders. Two potential bidders participated. One potential bidder expressed concern about the possibility of asbestos and lead based paint at the facility due to the age of the treatment plant.
6.	7/17/2024	The Association withdrew the appeal to the Environmental Hearing Board (see No. 3 above).
7.	7/17/2024	The Association issued a COA Schedule extension request letter to PADEP based on Mack Industries' availability and the need for an asbestos and lead based paint investigation as discussed above. The Association continued to forward with the project while awaiting a response from PADEP.
8.	7/19/2024	Field work and sampling for an asbestos and lead based paint assessment was completed.
9.	7/25/2024	The Asbestos & Lead Based Paint Reports were received by the Association's Engineer and were forward to the Bidders via an addendum.

10.	8/5/2024	Two bids were received by the Association. The bids exceeded the costs anticipated by the Association by more than $450,000.00.
11.	8/6/2024	Amendment No. 1 to the COA was executed thereby revising the compliance schedule.
12.	8/30/2024	To assist with managing the cost of the project, the Association submitted a grant application for a Gaming Economic Development Tourism Fund (GEDTF) grant administered by the Redevelopment Authority of Allegheny County.
13.	10/7/2024	The Association Board met to discuss the significant budgeting issues including how to raise the additional $450,000.00 in necessary funds to complete the work.
14.	10/28/2024	The Association began approaching ways to "value engineer" the bids.
15.	11/21/2024	While awaiting the announcement of the GEDTF grant award, the Association met with the low bidder and the Association's engineer to discuss project scheduling and possible cost savings.
16.	12/12/2024	The low bidder provided specific cost savings to the Association. Additionally, the low bidder provided a revised project schedule received from Mack Industries, the primary equipment supplier for the project. Mack anticipates site installation of equipment from mid-June through mid-July 2025. Mack's most recent schedule is attached.
17.	12/16/2024	The Association met again with the low bidder and the Association's engineer to finalize project scheduling and cost reductions.
18.	12/19/2024	The low bidder provided a revised bid.
19.	12/30/2024	The Association issued Notice of Award to the low bidder, Lone Pine Construction.
20.	12/31/2024	Semi-Annual Progress report submitted to PADEP.

B. ACTIVITIES SCHEDULED FOR THE NEXT SIX (6) MONTHS

The following activities fall into the period from January 2025 through June 2025.

1.	1/6/2025	Notice to proceed anticipated to be to Lone Pine Construction. Commencement of construction.
2.	1/2025	Lone Pine will order equipment.
3.	1/21/2025	Lone Pine will deliver equipment submittals to the Association's Engineer for review.

4.	3/3/2025	Main construction will begin.
5.	6/23/2025	Mack Industries will deliver equipment and begin installation.
6.	7/18/2025	Mack Industries will complete equipment installation.
7.	7/30/2025	Mack Industries will perform commissioning, start-up and operator training.
8.	7/31/2025	Semi-Annual Progress report to be submitted to PADEP.
9.	8/1/2025	Substantial Completion.
10.	9/5/2025	Lone Pine will compete demolition of the existing WWTP, perform final grading and seeding and demobilize.

C. PROBLEMS OR DELAYS ENCOUNTERED OR ANTICIPATED

The pursuit of a GEDTF grant to assist with funding has delayed progress on the project.

Mack Industries, the primary supplier/installer of equipment in the PADEP approved WWTP design, has advised that, at this time, their earliest available schedule to supply and begin installing components of the proposed treatment system would be in Mid-June 2025.

The Association will issue another request to extend the COA deadlines on January 15, 2025, based on Mack Industries' current availability and on Lone Pine Construction's overall project schedule.

The Association will move forward with the project while awaiting a response from PADEP.