Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal & Transfer**	Application No.	**PA0061786 A-1**
Facility Type	**Non-Municipal**	APS ID	**1140324**
Major / Minor	**Minor**	Authorization ID	**1532182**

Applicant and Facility Information

Applicant Name	**Pennsylvania American Water**	Facility Name	**Manwalamink Wastewater Treatment Plant**
Applicant Address	852 Wesley Drive Mechanicsburg, PA 17055-4436	Facility Address	123 River Road East Stroudsburg, PA 18301
Applicant Contact	James Runzer, Vice President – Operations	Facility Contact	Christopher Karlson, General Manager
Applicant Phone	(717) 215-2148	Facility Phone	(570) 517-2390
Client ID	87712	Site ID	451
Ch 94 Load Status	Not Overloaded	Municipality	Smithfield Township
Connection Status	-	County	Monroe
Date Application Received	June 24, 2025	EPA Waived?	Yes
Date Application Accepted	July 23, 2025	If No, Reason	

Purpose of Application: Renewal of NPDES permit for discharge of treated sewage.

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.7 MGD of treated sewage into Brodhead Creek, a Trout Stocking, Migratory Fish (TSF, MF) receiving stream in State Water Plan Basin 1-E (Brodhead Creek). As per the Department's current existing use list, the receiving stream has an existing use classification of Cold-Water Fishery, Migratory Fish (CSF, MF). This stream segment is designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. This discharge is not expected to affect public water supplies.

This NPDES Permit renewal also incorporates a transfer from Manwalamink Sewer Company (Client ID 39410) to Pennsylvania American Water (Client ID 87712). An "A-1" notation has been added after the NPDES permit to represent the number of transfers since the original permit was issued. WQM permits 4588405 T-1 and 4584403 T-1 were already transferred to Pennsylvania American Water on October 7, 2025.

Limitations for pH, $CBOD_5$, Total Suspended Solids (TSS), and Fecal Coliform are technology-based and carried over from the previous permit.

Limitations for Dissolved Oxygen (DO) and Ammonia-Nitrogen are water quality-based and carried over from the previous permit.

The minimum statewide BPJ IMAX effluent limitation for Ammonia-Nitrogen (50 mg/L) was added to the permit renewal. WQM 7.0 modeling did not recommend stricter limits.

The monthly monitoring and reporting for Total Nitrogen, Total Phosphorous, Total Kjeldahl Nitrogen, and Nitrate-Nitrite as N has been maintained in this permit.

Approve	Deny	Signatures	Date
X		Allison Seyfried Zukosky Allison Seyfried Zukosky / Project Manager	December 8, 2025
X		Edward Dudick, P.E. / Environmental Engineer Manager	December 9, 2025

Summary of Review

The Total Residual Chlorine (TRC) Calculation Spreadsheet did not recommend stricter limitations than the previous permit. The technology-based TRC limits from the previous permit have been maintained in this permit renewal.

Sewage discharges now require monitoring and reporting for E. Coli. 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 will be utilized.

The latest DRBC Docket No. D-1988-034 CP-4 does not require any additional monitoring/reporting or limitations. The monitoring/reporting for Total Dissolved Solids (TDS) and influent $CBOD_5$ has been maintained in this permit.
For this permit renewal, all monitoring frequencies for parameters with limitations are consistent with the Department's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document no. 362-0400-001).

24-hour composite sampling is now required in place of 8-hour composite sampling.

USGS Stream gage 01442500 (Brodhead Creek at Minisink Hills, PA) was used as a reference gage to develop the low flow yield (LFY) of 0.187 cfs/mi^2, which was used to model the discharge. The stream gage data can be observed starting on page 8 of this fact sheet. The RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

The existing permit expired on September 30, 2024 and the application for renewal was received on time.

A Water Management System Inspection query indicated a Compliance Evaluation was performed on January 31, 2024.

There are currently four open violations for this facility and three open violations for the new client (Pennsylvania American Water) in the Clean Water Program that may need to be resolved before issuance of the final permit:

1. 10/16/2023 - Violation ID 8162050 – Violation Code 92A.44 – NPDES - Violation of effluent limits in Part A of permit (Program Specific ID: PA0061786).

2. 10/16/2023 - Violation ID 8162051 – Violation Code 92A.61(C) – NPDES - Failure to monitor pollutants as required by the NPDES permit (Program Specific ID: PA0061786).

3. 10/16/2023 - Violation ID 8162192 – Violation Code CSL201 – CSL - Unauthorized, unpermitted discharge of sewage to waters of the Commonwealth (Program Specific ID: PA0061786).

4. 10/16/2023 - Violation ID 8162193 – Violation Code 92A.41(A)8 – NPDES - Failure to provide information or records required by the permit or otherwise needed to determine compliance (Program Specific ID: PA0061786).

5. 09/26/2025 - Violation ID 8250987 – Violation Code CSL301 – CSL - Unauthorized, unpermitted discharge of industrial wastes to waters of the Commonwealth (SCRO, Program Specific ID: PA0009440).

6. 07/24/2025 - Violation ID 8244926 – Violation Code 92A.41(A)13B – NPDES – Unauthorized bypass occurred (NERO, Program Specific ID: PA0026492).

7. 07/24/2025 - Violation ID 8244927 – Violation Code 92A.47(C) – NPDES - Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO) (NERO, Program Specific ID: PA0026492).

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to the Lehigh County Authority WWTP in Allentown, PA by Allstate Septic.

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

Summary of Review
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)	0.70
Latitude	40º 59' 44.64"	Longitude	-75º 8' 23.73"
Quad Name	Stroudsburg	Quad Code	1144
Wastewater Description:	Sewage Effluent		
Receiving Waters	Brodhead Creek (CWF (existing use))	Stream Code	4750
NHD Com ID	26175238	RMI	1.1
Drainage Area	287 mi^2	Yield (cfs/mi^2)	0.187
Q_{7-10} Flow (cfs)	53.67	Q_{7-10} Basis	USGS Stream Gage 01442500
Elevation (ft)	297.81	Slope (ft/ft)	-
Watershed No.	1-E	Chapter 93 Class.	TSF, MF
Existing Use	CWF (COLD WATER FISHES)	Existing Use Qualifier	Use Attainability Analysis
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	-	Name	-
Nearest Downstream Public Water Supply Intake	Easton Area Water System		
PWS Waters	Delaware River	Flow at Intake (cfs)	-
PWS RMI	110.4	Distance from Outfall (mi)	~ 28.3

DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Treatment Facility Summary

Treatment Facility Name: Manwalamink Wastewater Treatment Plant

WQM Permit No.	Issuance Date	Scope	Transferred
4584403	4/25/1984	WWTP (Equalization tank, SBRs, aerobic digestor, chlorine contact tank	10/7/2025

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	SBR	Chlorination	0.135 (2021-2023)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.7	146	Not Overloaded	Holding Tank	Hauled

Compliance History

DMR Data for Outfall 001 (from November 1, 2024 to October 31, 2025)

Parameter	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24
Flow (MGD) Average Monthly	0.141	0.172	0.219	0.212	0.166	0.193	0.159	0.161	0.153	0.142	0.154	0.145
Flow (MGD) Daily Maximum	0.185	0.291	0.262	0.254	0.248	0.280	0.275	0.252	0.232	0.226	0.255	0.212
pH (S.U.) Instantaneous Minimum	6.86	7.11	6.94	7.0	6.8	6.9	7.0	7.0	6.9	7.0	7.0	7.1
pH (S.U.) Instantaneous Maximum	8.39	7.98	7.82	7.75	7.5	7.4	7.4	7.4	7.4	7.6	7.8	7.7
DO (mg/L) Instantaneous Minimum	6.75	6.89	6.40	6.10	6.61	7.61	7.24	7.9	7.77	7.98	7.96	7.18
TRC (mg/L) Average Monthly	0.09	0.37	0.20	0.10	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3
TRC (mg/L) Instantaneous Maximum	0.65	0.96	0.38	1.30	0.78	0.99	0.86	0.6	0.74	0.59	0.89	1.0
CBOD5 (lbs/day) Average Monthly	2.7	9.1	6.0	5.6	< 4	< 5	< 3	6	6	6	6	< 2
CBOD5 (mg/L) Average Monthly	2.46	6.71	3.03	3.26	< 2.9	< 2.7	< 2.6	4.1	4.7	5.5	4.6	< 2.1
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	103.2	197	151.1	199.88	270	90	139	134	226	175	166	201
CBOD5 (mg/L) Raw Sewage Influent Instantaneous Maximum	154.8	314	177.6	144.00	336	154	152	144	278	220	221	272
TSS (lbs/day) Average Monthly	2.9	6.2	4.1	4.7	< 6	< 7	< 5	< 8	< 5	< 13	< 5	< 5
TSS (mg/L) Average Monthly	3	5.0	2	3.0	< 4	< 4	< 4	< 5	< 4	< 12	< 4	< 4
Total Dissolved Solids (mg/L) Average Quarterly		498			890			906			806	

Fecal Coliform (CFU/100 ml) Geometric Mean	11.85	52.05	13.0	63	6	< 2	< 2	< 2	< 5	< 2	< 8	< 1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	94.7	13666	304.8	24192	36	13	21	10	39	13	4000	< 1
Nitrate-Nitrite (lbs/day) Average Monthly	20.1	12.66	34.0	13.4	0.6	25	31	19	15	11	8	31
Nitrate-Nitrite (mg/L) Average Monthly	15	7.16	19	7	0.56	13.5	22.8	9.26	13.3	12.3	18.2	22.3
Total Nitrogen (lbs/day) Average Monthly	22.6	16.67	42.2	20.6	12	27	33	65	41	19	8	33
Total Nitrogen (mg/L) Average Monthly	17	9.43	22	10	11	14.3	23.9	31.1	35.8	21	19.2	23.8
Ammonia (mg/L) Average Monthly	< 0.100	< 0.1	< 0.10	0.15	15.0	0.2	0.1	16.7	19.5	4.9	8.9	< 0.1
TKN (lbs/day) Average Monthly	2.5	4.01	2.6	2.7	12	2	2	46	26	8	0.4	2
TKN (mg/L) Average Monthly	2	2.27	1	1.4	10.5	0.82	1.11	21.8	22.4	8.69	0.99	1.51
Total Phosphorus (lbs/day) Average Monthly	3.5	6.3	3.0	0.9	0.6	7	6	12	6	3	3	9
Total Phosphorus (mg/L) Average Monthly	3	3.6	2	< 0.5	0.52	3.66	4.2	5.63	5.67	3.51	6.17	6.27

Compliance History

Effluent Violations for Outfall 001, from: December 1, 2024 To: October 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	07/31/25	IMAX	24192	CFU/100 ml	1000	CFU/100 ml
Fecal Coliform	07/31/25	IMAX	24192	CFU/100 ml	1000	CFU/100 ml
Fecal Coliform	09/30/25	IMAX	13666	CFU/100 ml	1000	CFU/100 ml
Fecal Coliform	07/31/25	IMAX	24192	CFU/100 ml	1000	CFU/100 ml

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.7
Latitude 40º 59' 46.00" **Longitude** -75º 8' 21.00"
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
$CBOD_5$	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	50.0	IMAX	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	60.0	IMAX	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)
	1.6	IMAX		
Ammonia-Nitrogen	50.0	IMAX	-	BPJ
E. Coli	Report	IMAX	-	92a.61

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	6.0	Minimum	Previous Permit
Ammonia-Nitrogen	20.0	Average Monthly	Previous Permit / DRBC Requirement
Carbonaceous Biochemical Oxygen Demand (CBOD5) Raw Sewage Influent	Report	Average Monthly	DRBC Requirement
Total Dissolved Solids	Report	Average Quarterly	DRBC Requirement
Nitrate-Nitrite as N	Report	Average Monthly	Previous Permit
Total Nitrogen	Report	Average Monthly	
Total Kjeldahl Nitrogen	Report	Average Monthly	
Total Phosphorus	Report	Average Monthly	

Anti-Backsliding

No limitations were made less stringent.

Modeling Using USGS Stream Gage

Stream Gage: USGS Stream Gage 01442500 – Brodhead Creek at Minisink Hills, PA

Name	Value
USGS Station Number	01442500
Station Name	Brodhead Creek at Minisink Hills, Pa.
Station Type	Gaging Station, continuous record
Latitude	40.99871
Longitude	-75.14268
NWIS Latitude	40.998706
NWIS Longitude	-75.1426788
Is regulated?	false
Agency	United States Geological Survey
NWIS Discharge Period of Record	10/01/1950 - 12/04/2025

Characteristic Name	Value	Units
Drainage Area	259	square miles

Statistic Name	Value	Units	Preferred?	Years of Record	Standard Error, percent	Citation	Comments
1 Day 10 Year Low Flow	44.7	cubic feet per second	✓	57		49	Statistic Date Range 4/1/1951 - 3/31/2008
7 Day 2 Year Low Flow	80.6	cubic feet per second	✓	57		49	Statistic Date Range 4/1/1951 - 3/31/2008
7 Day 10 Year Low Flow	48.4	cubic feet per second	✓	57		49	Statistic Date Range 4/1/1951 - 3/31/2008

$$\boldsymbol{LFY} = \frac{Q_{7-10}}{Stream\ Gage\ Drainage\ Area} \times \frac{48.4\ cfs}{259\ mi^2} = \mathbf{0.187}$$

$$\boldsymbol{Stream\ Flow\ at\ Outfall} = Outfall\ 001\ Drainage\ Area \times LFY = 287\ mi^2 \times 0.187 = \mathbf{53.67\ cfs}$$

USGS StreamStats Data:

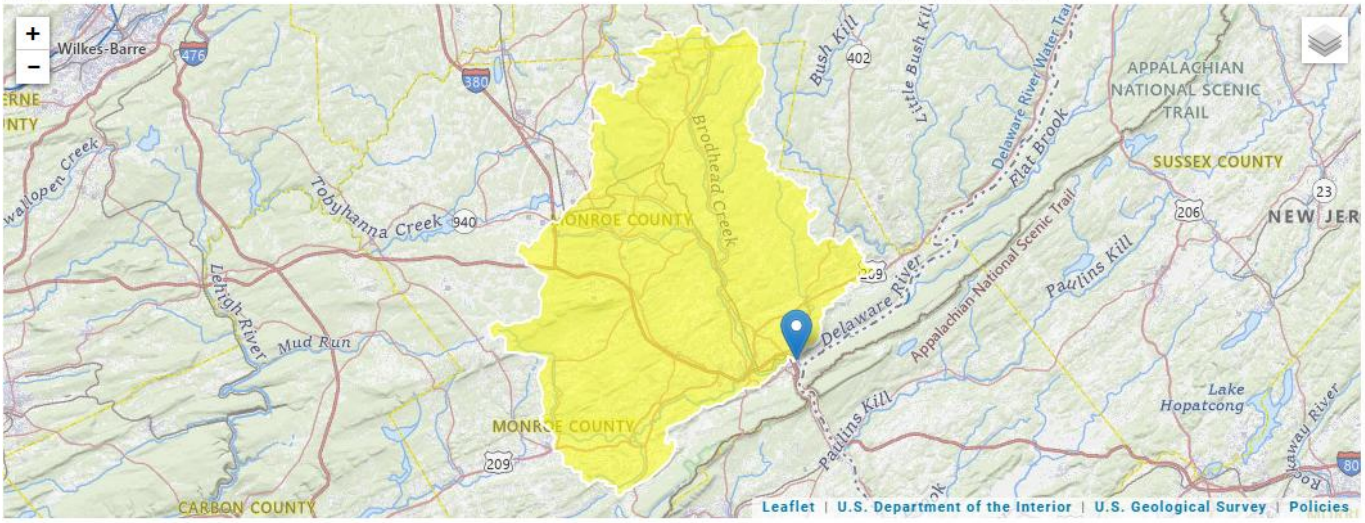
RMI	Elevation (ft)	Drainage Area (mi^2)	Q_{7-10} Flow (cfs)
1.10	297.81	287	35

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{35\ ft^3/sec}{287\ mi^2} = \mathbf{0.122}\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

* StreamStats Q_{7-10} and LFY was not used for modeling.

StreamStats Report

Region ID: PA
Workspace ID: PA20251205161353791000
Clicked Point (Latitude, Longitude): 40.99456, -75.13904
Time: 2025-12-05 11:14:18 -0500



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	287	square miles

At confluence with Delaware River (2):

RMI	Elevation (ft)	Drainage Area (mi^2)
0.0	289.37	4,150

StreamStats Report

Region ID:	PA
Workspace ID:	PA20251205162300153000
Clicked Point (Latitude, Longitude):	40.98142, -75.13262
Time:	2025-12-05 11:23:27 -0500

Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	4150	square miles

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01E	4750	BRODHEAD CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
1.100	Manwalamink	PA0061786	0.700	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

58.67	= Q stream (cfs)	0.5	= CV Daily
0.7	= 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 = 17.302	1.3.2.iii	WLA cfc = 16.861
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 6.447	5.1d	LTA_cfc = 9.802

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

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)

WQM 7.0.pdf

DRBC Docket 1988-034 CP-4.pdf