Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0060704**
Facility Type	**Non-Municipal**	APS ID	**609837**
Major / Minor	**Minor**	Authorization ID	**1424823**

Applicant and Facility Information

Applicant Name	**Pleasant Valley Manor Inc**	Facility Name	**Pleasant Valley Manor Sewage Treatment Plant**
Applicant Address	4227 Manor Drive	Facility Address	4227 Manor Drive
	Stroudsburg, PA 18360-9451		Snydersville, PA 18360
Applicant Contact	Drew Lutton, Administrator	Facility Contact	David Scholtz, Operator
Applicant Phone	(570) 992-4172	Facility Phone	(570) 629-2981
Client ID	54338	Site ID	237058
Ch 94 Load Status	-	Municipality	Hamilton Township
Connection Status	-	County	Monroe
Date Application Received	January 19, 2023	EPA Waived?	Yes
Date Application Accepted	February 9, 2023	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 0.085 MGD of treated sewage into McMichael Creek, a High Quality, Cold-Water Fishery, Migratory Fish (HQ-CWF, MF) receiving stream in State Water Plan Basin 1-E (Brodhead Creek). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. 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.

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

Limitations for Ammonia-Nitrogen are water quality-based and carried over from the previous permit.

WQM 7.0 modeling did not recommend stricter limits.

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

The facility utilizes Ultraviolet (UV) disinfection as the primary disinfection method and uses TRC to kill off bacteria in the two sand filters. The TRC Calculation Spreadsheet did not recommend stricter limitations.

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.

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	September 3, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	9-9-24

Summary of Review

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).

USGS stream gage 01441000 - McMichael Creek near Stroudsburg, PA is in the vicinity of Outfall 001. The Stream Gage data was obtained from USGS StreamStats and can be observed on page 7 of this fact sheet. However, USGS StreamStats indicates that the Statistic Date Range for the data provided for the stream gage is from 9/30/1911 – 9/28/1938, which is very outdated. Therefore, USGS StreamStats was used to model the discharge at Outfall 001. Modeling can be observed on pages 8 and 9 of this fact sheet. 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 July 31, 2023 and the application for renewal was received on time.

A Water Management System Inspection query indicated that on July 3, 2024 a Compliance Evaluation was performed.

There are currently no open violations for this client that warrant withholding issuance of this permit.

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to the West Hazleton Sewage Plant in West Hazleton, PA by Newhart Hauling.

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)	0.085
Latitude	40º 56' 53.64"	Longitude	-75º 17' 4.84"
Quad Name	Saylorsburg	Quad Code	1143
Wastewater Description:	Sewage Effluent		
Receiving Waters	McMichael Creek (HQ-CWF, MF)	Stream Code	4778
NHD Com ID	26171216	RMI	8.68
Drainage Area	35.3 mi^2	Yield (cfs/mi^2)	0.046
Q_{7-10} Flow (cfs)	1.61	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	488.64	Slope (ft/ft)	-
Watershed No.	1-E	Chapter 93 Class.	HQ-CWF, MF
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	-	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)	~ 53.53

Treatment Facility Summary

Treatment Facility Name: Pleasant Valley Manor Sewage Treatment Plant

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	SBRs with post-aeration	Ultraviolet (and chlorine for the sand filters)	0.085 (2020-2022)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.085	140	Not overloaded	Sludge Digestion	Hauled

Compliance History

DMR Data for Outfall 001 (from August 1, 2023 to July 31, 2024)

Parameter	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23
Flow (MGD) Average Monthly	0.058	0.060	0.059	0.066	0.065	0.056	0.069	0.066	0.055	0.052	0.052	0.064
Flow (MGD) Daily Maximum	0.078	0.087	0.088	0.101	0.1	0.088	0.136	0.111	0.075	0.07	0.081	0.106
pH (S.U.) Instantaneous Minimum	6.2	7.2	7.4	6.9	7.37	7.11	6.53	6.16	6.86	6.86	7.04	7.02
pH (S.U.) Instantaneous Maximum	7.8	8.6	8.3	8.6	8.45	8.1	8.08	7.47	7.69	7.44	7.7	7.41
DO (mg/L) Daily Minimum	6.6	6.1	6.3	7.40	6.57	6.1	6.07	6.17	6.4	7.56	6.1	6.28
TRC (mg/L) Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
TRC (mg/L) Instantaneous Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
CBOD5 (mg/L) Average Monthly	9.7	< 12.7	< 6.40	< 5.8	< 6.8	16.8	< 5.8	7.4	< 6.2	< 2.0	< 2.2	2.9
TSS (mg/L) Average Monthly	< 4.0	< 4.5	< 4.0	< 9.0	< 4.5	< 4.0	< 4.0	< 7.3	< 4.0	< 4.0	< 4.0	< 6.5
Fecal Coliform (No./100 ml) Geometric Mean	7.0	5.0	< 1.0	< 1.0	< 26	< 2	< 1	573	< 1	< 1	< 1	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	24.3	11.0	< 1.0	< 1.0	691	3.1	1.0	> 2419.6	< 1	< 1	2	< 1
Nitrate-Nitrite (lbs/day) Annual Average								0.6				
Nitrate-Nitrite (mg/L) Annual Average								0.9				
Total Nitrogen (lbs/day) Annual Average								7				
Total Nitrogen (mg/L) Annual Average								9.5				
Ammonia (mg/L) Average Monthly	1.50	1.30	< 1.4	1.40	2.4	1.5	0.6	1.5	1.3	1.3	1.7	1.4

TKN (lbs/day) Annual Average								6				
TKN (mg/L) Annual Average								8.7				
Total Phosphorus (lbs/day) Annual Average								0.8				
Total Phosphorus (mg/L) Annual Average								1.12				

Compliance History

Effluent Violations for Outfall 001, from: September 1, 2023 To: July 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	12/31/23	IMAX	> 2419.6	No./100 ml	10000	No./100 ml

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.085
Latitude 40º 56' 53.00" **Longitude** -75º 17' 6.00"
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	Average Weekly	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	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)
	1.6	IMAX		-
Dissolved Oxygen	5.0	Minimum	-	BPJ
E. Coli	Report	IMAX	-	92a.61

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen (May 1 - Oct 31)	3.0	Average Monthly	Previous Modeling/Permits
	6.0	IMAX	
Ammonia-Nitrogen (Nov 1 - Apr 30)	9.0	Average Monthly	
	18.0	IMAX	
Nitrate-Nitrite as N	Report	Annual Average	Previous Permit
Total Nitrogen	Report	Annual Average	
Total Kjeldahl Nitrogen	Report	Annual Average	
Total Phosphorus	Report	Annual Average	

Anti-Backsliding

No limitations were made less stringent.

USGS Stream Gage Data – 1441000 – McMichael Creek near Stroudsburg, PA

Name	Value
USGS Station Number	01441000
Station Name	McMichael Creek near Stroudsburg, Pa.
Station Type	Gaging Station, continuous record
Latitude	40.97926
Longitude	-75.20101
NWIS Latitude	40.9792609
NWIS Longitude	-75.2010138
Is regulated?	false
Agency	United States Geological Survey
NWIS Discharge Period of Record	09/30/1911 - 09/28/1938

Characteristic Name	Value	Units
Drainage Area	65.3	square miles

Statistic Name	Value	Units	Preferred?	Years of Record	Standard Error, percent	Citation	Comments
1 Day 10 Year Low Flow	13.3	cubic feet per second	✓	26		49	Statistic Date Range 4/1/1912 - 3/31/1938
7 Day 2 Year Low Flow	24.3	cubic feet per second	✓	26		49	Statistic Date Range 4/1/1912 - 3/31/1938
7 Day 10 Year Low Flow	16.2	cubic feet per second	✓	26		49	Statistic Date Range 4/1/1912 - 3/31/1938

Modeling Using USGS StreamStats:

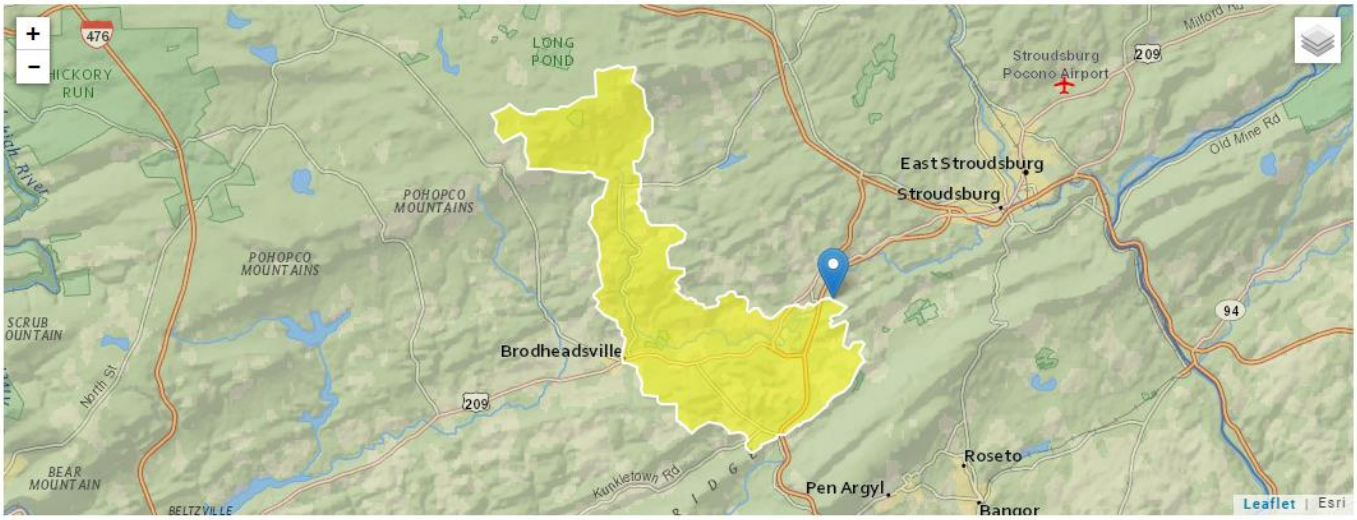
At Outfall 001 on McMichael Creek:

RMI	Elevation (ft)	Drainage Area (mi^2)	Q_{7-10} Flow (cfs)
8.68	488.64	35.3	1.61

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{1.61\ ft^3/sec}{35.3\ mi^2} = \mathbf{0.046}\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240903134618257000
Clicked Point (Latitude, Longitude):	40.94804, -75.28497
Time:	2024-09-03 09:46:43 -0400



Parameter Code	Parameter Description	Value
DRNAREA	Area that drains to a point on a stream	35.3

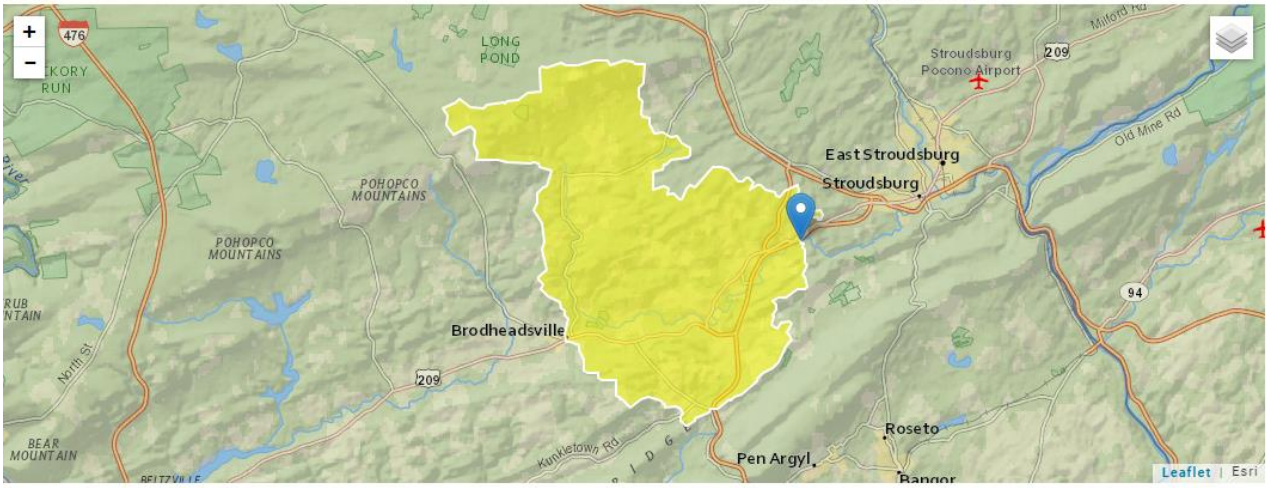
Statistic	Value	Unit
7 Day 2 Year Low Flow	4.11	ft^3/s
30 Day 2 Year Low Flow	5.9	ft^3/s
7 Day 10 Year Low Flow	1.61	ft^3/s

At confluence with Unnamed Tributary to McMichael Creek (4844):

RMI	Elevation (ft)	Drainage Area (mi^2)
6.54	466.39	61.6

StreamStats Report

Region ID: PA
Workspace ID: PA20240903140826456000
Clicked Point (Latitude, Longitude): 40.96597, -75.26300
Time: 2024-09-03 10:08:50 -0400



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	61.6	square miles

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01E	4778	McMICHAEL 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)
8.680	Pleasant Valley	PA0060704	0.085	CBOD5	25		
				NH3-N	18.84	37.68	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

1.61	= Q stream (cfs)	0.5	= CV Daily
0.085	= 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 =	3.925	1.3.2.iii	WLA cfc =	3.819
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	1.462	5.1d	LTA_cfc =	2.220

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)

Pennsylvania
Department of
Environmental Protection

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	September 3, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	9-9-24