pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0033821**
Facility Type	**Non-Municipal**	APS ID	**1021000**
Major / Minor	**Minor**	Authorization ID	**1322559**

Applicant and Facility Information

Applicant Name	**University of Pittsburgh**	Facility Name	**Pymatuning Ecology Lab**
Applicant Address	3412 Forbes Avenue Floor 4	Facility Address	11758 Pitt Drive
	Pittsburgh, PA 15213-3203		Espyville, PA 16424
Applicant Contact	Jay Frerotte	Facility Contact	Jay Frerotte
Applicant Phone	(412) 624-9505	Facility Phone	(412) 624-9505
Client ID	81388	Site ID	451518
Ch 94 Load Status	Not Overloaded	Municipality	North Shenango Township
Connection Status		County	Crawford
Date Application Received	August 6, 2020	EPA Waived?	Yes
Date Application Accepted	August 6, 2020	If No, Reason	

Purpose of Application: NPDES renewal application for the discharge of treated sewage.

Summary of Review

Act 14 – Proof of notification were submitted and received.

There are no open violations for subject client no. 81388 as of 9/23/2021.

This facility is currently submitting eDMR reports.

There has been no change to the discharge or receiving stream since the last permit issuance.

A part 2 WQM permit is not required at this time.

Sludge use and disposal description and location(s): Septage must be pumped and hauled off-site by a septage hauler for land application under a general permit authorized by DEP or disposal at an STP.

Public Participation

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

Approve	Deny	Signatures	Date
X		Jon F. Bucha Jonathan F. Bucha / Civil Engineer General	September 23, 2021
X		Justin C. Dickey Justin C. Dickey, P.E. / Environmental Engineer Manager	September 27, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.00855
Latitude	41º 37' 21"	Longitude	-80º 27' 10.75"
Quad Name	Hartstown	Quad Code	0602
Wastewater Description:	Sewage Effluent		
Receiving Waters	Pymatuning Reservoir (Shenango River)	Stream Code	35482
NHD Com ID	130028902	RMI	83.23
Drainage Area	167 mi^2	Yield (cfs/mi^2)	0.067
Q_{7-10} Flow (cfs)	11.21	Q_{7-10} Basis	USGS #03101500 (summer period)
Elevation (ft)	1002 (Google Earth)	Slope (ft/ft)	-
Watershed No.	20-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	-	Name	-

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

Nearest Downstream Public Water Supply Intake	Pymatuning State Park – Tuttle Point		
PWS Waters	Shenango River (Pymatuning Reservoir)	Flow at Intake (cfs)	-
PWS RMI	80.5	Distance from Outfall (mi)	3.0

Changes Since Last Permit Issuance: There are no changes since the previous permit issuance.

Other Comments: This treatment facility is capable of meeting effluent requirements.

Treatment Facility Summary

Treatment Facility Name: Pitt Ecology Laboratory

WQM Permit No.	Issuance Date
2001423	July 1, 2002
2001423 A-1	September 2, 2016

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Phosphorus Reduction	Septic Tank Sand Filter	Hypochlorite	0.00855

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.00855		Not Overloaded	Anaerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: WQM amendment 2001423 A-1 dated September 2, 2016 allows for the addition of sodium sulfite tablet dechlorination, with a 365-gallon dechlorination tank with a sampling chamber.

Other Comments: Treatment consist of two 5000-gallon and one 3000-gallon septic tanks in series, a 3000-gallon dosing tank, four 980 sq ft flooded sand filters, a chlorine tablet feed with a 936-gallon contact tank, and a 365-gallon dechlorination tank with a sampling chamber.

Compliance History

DMR Data for Outfall 001 (from August 1, 2020 to July 31, 2021)

Parameter	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20
Flow (MGD) Average Monthly											0.0001	0.00006
Flow (MGD) Daily Maximum											0.0005	0.0002
pH (S.U.) Minimum											7.06	7.42
pH (S.U.) Maximum											7.76	7.98
DO (mg/L) Minimum											7.06	2.68
TRC (mg/L) Average Monthly											0.11	0.1
TRC (mg/L) Instantaneous Maximum											0.14	0.11
CBOD5 (mg/L) Average Monthly											< 3	< 3
TSS (mg/L) Average Monthly											5	< 3
Fecal Coliform (CFU/100 ml) Geometric Mean											< 1	0.707106
Fecal Coliform (CFU/100 ml) Instantaneous Maximum											< 1	1.0
Total Nitrogen (mg/L) Annual Average								1.69				
Ammonia (mg/L) Average Monthly											< 0.1	< 0.1
Total Phosphorus (mg/L) Annual Average								0.82				

Compliance History

Summary of Inspections: An inspection occurred on 8/24/2017, where no violations were noted.

Other Comments: A review of the past 3 years of eDMR data revealed only two violations, an August 2020 Dissolved Oxygen violation of 2.68 mg/L, and a September 2018 TRC violation of 2.98 mg/L.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .00855
Latitude 41º 37' 21.00" **Longitude** -80º 27' 10.75"
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)

Water Quality-Based Limitations

No water quality modeling is necessary due to discharging to a large reservoir, and past lake modeling did not show the need for phosphorus limits.

Best Professional Judgment (BPJ) Limitations

Comments: A D.O. limit of a minimum of 4 mg/l, a TRC IMAX limit of 1.6 mg/l, and monitoring for ammonia nitrogen, total nitrogen and total phosphorus will remain in the renewed permit, as well as the new addition of E. Coli monitoring in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits".

Monitoring only for ammonia-nitrogen is being continued on this permit renewal based on review of past eDMR data.

All of the limit parameters monitoring frequencies and sample types are being caried over from the previous renewal based on past eDMR data, which demonstrates this facilities treatment system will continue to protect the reservoirs designated uses.

Anti-Backsliding

Anti-backsliding is not applicable since the permit limits are not being relaxed.

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" (362-0400-001), 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		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Grab
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Phosphorus	XXX	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001 after disinfection.

Attachment A – eMAP Stream Designation