pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0103047**
Wastewater Type	**Sewage**	APS ID	**1110192**
Facility Type	**SFTF**	Authorization ID	**1478198**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Jerome M. Laughlin**	Facility Name	**Laughlin Builders SFTF**
Applicant Address	8333 Edinboro Road	Facility Address	8333 Edinboro Road
	Erie, PA 16509-4248		Erie, PA 16509-4265
Applicant Contact	Jerome M. Laughlin (Laughlin.beth@gmail.com)	Facility Contact	Jerome M. Laughlin (Laughlin.beth@gmail.com)
Applicant Phone	(814) 440-1969	Facility Phone	(814) 866-1277
Client ID	44990	Site ID	250298
SIC Code	4952	Municipality	McKean Township
SIC Description	Trans. & Utilities - Sewerage Systems	County	Erie
Date Application Received	March 1, 2024	WQM Required	No
Date Application Accepted	March 26, 2024	WQM App. No.	-

Project Description: Renewal of NPDES Permit for an existing discharge of treated sanitary wastewater.

Summary of Review

Act 14 - Proof of Notification was submitted and received.

A Part II Water Quality Management permit is not required at this time.

The applicant should be able to meet the limits of this permit, which will protect the uses of the receiving stream.

I. OTHER REQUIREMENTS:

A. AMRs
B. DMRs
C. Depth of Septage and Scum Measurement
D. Septic Tank Pumping
E. Effluent Chlorine Optimization and Minimization
F. Stormwater into sewers
G. Right of way
H. Solids handling
I. Public Sewerage Availability

II. SPECIAL CONDITIONS: None.

Permitted treatment consists of: (WQM Permit no. 2573402) Two 1,500 gallon septic tanks, alum feed for phosphorus control, a 500 gallon dosing tank, two surface sand filters, and tablet chlorine disinfection with a 500 gallon chlorine contact tank.

There are no open violations in efacts associated with the subject Client ID (44990) as of 2/19/2025.

Approve	Deny	Signatures	Date
X		Stephen A. McCauley Stephen A. McCauley, E.I.T. / Project Manager	2/19/2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	2/25/2025

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0017
Latitude	42° 1' 22.50"	Longitude	80° 7' 15.10"
Quad Name	-	Quad Code	-
Wastewater Description:	treated sanitary wastewater		
Receiving Waters	Unnamed Tributary to the Elk Creek (CWF, MF)	Stream Code	N/A
NHD Com ID	134205237	RMI	N/A
Drainage Area	0.88	Yield (cfs/mi^2)	0.067
Q_{7-10} Flow (cfs)	0.058	Q_{7-10} Basis	calculated
Elevation (ft)	1066	Slope (ft/ft)	0.00965
Watershed No.	15-A	Chapter 93 Class.	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	-

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

Nearest Downstream Public Water Supply Intake	Pennsylvania - Canada Border		
PWS Waters	Lake Erie	Flow at Intake (cfs)	N/A
PWS RMI	N/A	Distance from Outfall (mi)	42.0

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.

No modeling was performed for this NPDES Permit renewal as septic tank/sand filter systems are capable of meeting CBOD5 and TSS averages of 10 mg/l, which are less than the inputs of the WQ model.

The TRC limits are technology-based using the TRC_Calc Spreadsheet (see Attachment 1). These are new limits set based on the SOP for SFTFs.

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	0.0009	0.0009	0.0009	0.001	0.001	0.001	0.001	0.001	0.001	0.001
TRC (mg/L) Average Monthly	0.26	0.24	0.2	0.56	0.56	0.31	0.32	0.36	0.59	0.26	0.31	0.32
TRC (mg/L) Instantaneous Maximum	0.26	0.24	0.2	0.56	0.56	0.31	0.32	0.36	0.59	0.26	0.31	0.32
BOD5 (mg/L) Average Monthly	2.6	< 2.4	< 2.4	< 2.0	3.1	6.1	< 2.4	< 2.4	10.4	< 2.2	4.1	< 2.4
TSS (mg/L) Average Monthly	10.5	4.5	8.0	< 2.5	7.5	6.5	6.5	6.0	5.5	< 2.5	3	3.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1	< 1.0	307.6	2	14.4	< 1	2.0	< 1.0	< 1	16	135.4	1.0

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	XXX	XXX	XXX	XXX	XXX	1/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/year	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/month	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20	1/month	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20	1/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	1/month	Grab
Total Phosphorus	XXX	XXX	XXX	1.0 Annl Avg	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001, after disinfection.

Flow is monitor only. The limits for pH are technology-based on Chapter 93.7. The Total Residual Chlorine (TRC) limits are technology-based on Chapter 92a.48. The limits for BOD_5 and Total Suspended Solids are technology-based on the SOP for SFTFs. The limits for Fecal Coliform are technology-based on Chapter 92a.47. The limits for Total Phosphorus are technology-based on the 1969 International Joint Committee (IJC) agreement for Lake Erie.

Attachment 1

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.05896	= Q stream (cfs)	0.5	= CV Daily
0.0017	= 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)	0	=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 7.171	1.3.2.iii	WLA cfc = 6.983
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 2.672	5.1d	LTA_cfc = 4.060

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)**