pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0032433**
Facility Type	**Non-Municipal**	APS ID	**520176**
Major / Minor	**Minor**	Authorization ID	**1313557**

Applicant and Facility Information

Applicant Name	**PA DCNR, Frances Slocum State Park**	Facility Name	**Frances Slocum State Park**
Applicant Address	565 Mount Olivet Road Wyoming, PA 18644-9333	Facility Address	565 Mount Olivet Road Wyoming, PA 18644-9333
Applicant Contact	Kevin Koflanovich, Park Manager	Facility Contact	Kevin Koflanovich, Park Manager
Applicant Phone	(570) 696-3525	Facility Phone	(570) 696-3525
Client ID	52524	Site ID	448218
Ch 94 Load Status	-	Municipality	Kingston Township
Connection Status	-	County	Luzerne
Date Application Received	April 24, 2020	EPA Waived?	Yes
Date Application Accepted	May 7, 2020	If No, Reason	-

Purpose of Application: Renewal of existing NPDES Permit for treated sewage.

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.08 MGD of treated sewage into Abrahams Creek, a Cold-Water Fishery, Migratory Fish (CWF, MF) receiving stream in State Water Plan Basin 5-B (Wapwallopen Creeks). 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 not 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, $CBOD_5$, Total Suspended Solids (TSS), and Fecal Coliform are technology-based and carried over from the previous permit. A BPJ-based limitation for Dissolved Oxygen (DO) has been added to the permit.

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

As per PA Code 92a.47(a)(8) (which refers to PA Code 92a.48(b)(2)), a monthly average TRC facility-specific BAT effluent limit of 0.5 mg/L and an IMAX limit of 1.6 mg/L has been applied to this permit renewal. The TRC Calculation Spreadsheet did not recommend more stringent water quality-based limitations. The permittee will be required to meet the new technology-based limits for TRC starting three years after the effective date of the permit. TRC limitations from the previously issued permit are in effect for the first three years after the permit effective date.

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

pH, DO, and TRC have 1/day monitoring/reporting requirements between May 1 and September 30 and 3/week monitoring/ reporting requirements between October 1 and April 30 (as per agreement between DCNR and DEP Central Office).

All remaining monitoring frequencies for parameters with limitations are consistent with the Department's *Technical*

Approve	Deny	Signatures	Date
X		Allison Seyfried (signed) Allison Seyfried / Environmental Engineering Specialist	December 18, 2020
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	12-22-20

Summary of Review

Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (document no. 362-0400-001).

There are no representative stream gages in the vicinity of the outfall and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values. Therefore, the default Low Flow Yield (LFY) of 0.1 cfs/mi^2 was used to model the discharge. For modeling inputs, 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 latest Sewage Compliance Inspection Report indicates there are many issues with the plant including: broken comminutor, air control valves to the aeration basin do not work (either stuck on, cannot be adjusted, or broken completely), broken clarifier skimmer, dilapidated roof covering over treatment plant, "catwalk" is unsafe, and no alarms.

The permit renewal application states that the DCNR Bureau of State Parks intends to eventually decommission the Frances Slocum State Park Sewage Treatment Plant.

The Sewage Compliance Inspection Report dated August 6, 2019 indicated that the facility has never hauled sludge off site.

From December 1, 2019 to October 31, 2020 there has been 4 effluent limit violations for Fecal Coliform and 4 effluent limit violations for Ammonia-Nitrogen.

The existing permit expired on October 31, 2020 and the application for renewal was received on time.

A Water Management System Inspection query indicated that on 8/06/2019 a Compliance Evaluation was performed.

There are currently 2 open violations in the Clean Water Program and 1 open violation in the Safe Drinking Water Program for this client. The open violations in the Clean Water Program may need to be resolved before issuance of the final permit:

1. 08/06/2019 - Facility: Frances Slocum State Park - Violation ID 863003 – Violation Code 92A.41(A)5 – NPDES- Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance (Program Specific ID: PA0032433).

2. 09/03/2020 – Facility: Ricketts Glen State Park – Violation ID 893343 – Violation Code 92A.41(A)5 – NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance (Program Specific ID: PA0032115).

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)	0.08
Latitude	41º 19' 59.68"	Longitude	-75º 52' 58.37"
Quad Name	Kingston	Quad Code	0838
Wastewater Description:	Sewage Effluent		
Receiving Waters	Abrahams Creek (CWF, MF)	Stream Code	28361
NHD Com ID	65632219	RMI	6.81
Drainage Area	6.16 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.616	Q_{7-10} Basis	State-wide default
Elevation (ft)	1,104.5	Slope (ft/ft)	-
Watershed No.	5-B	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	-
Nearest Downstream Public Water Supply Intake	Danville Borough Water Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	-
PWS RMI	61.2	Distance from Outfall (mi)	~ 122

Treatment Facility Summary

Treatment Facility Name: Frances Slocum State Park

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Aeration	Chlorine	0.0047 (2017-2019)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.08	255	-	Holding Tank	Hauled

Modeling Results:

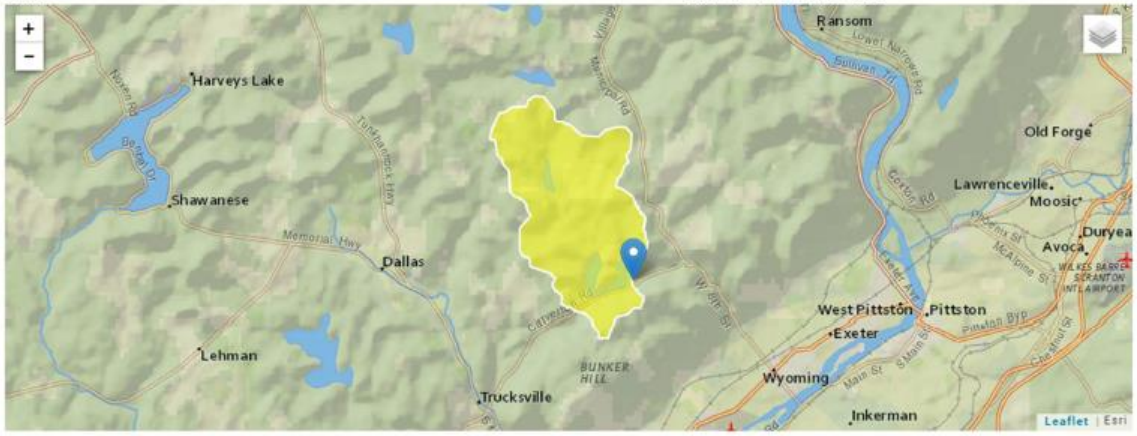
At Outfall 001 on Abrahams Creek:

RMI	Elevation (ft)	Drainage Area (mi²)	Q_{7-10} Flow (cfs)
6.81	1,014.5	6.16	-

The drainage area at the discharge point is below the threshold for using USGS StreamStats to estimate the Q_{7-10}.

StreamStats Report

Region ID: PA
Workspace ID: PA20201217155049707000
Clicked Point (Latitude, Longitude): 41.33322, -75.88300
Time: 2020-12-17 10:51:06 -0500



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	6.16	square miles

At confluence with Unnamed Tributary 28366 to Abrahams Creek:

RMI	Elevation (ft)	Drainage Area (mi²)
5.72	869	9.14

StreamStats Report

Region ID: PA
Workspace ID: PA20201217155745607000
Clicked Point (Latitude, Longitude): 41.33718, -75.86583
Time: 2020-12-17 10:58:01 -0500

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	9.14	square miles

Using State-wide Low-Flow Yield (LFY) of 0.1 cfs/mi²:

$$\frac{0.1\ ft^3/sec}{mi^2} \times 6.16\ mi^2 = \frac{0.616\ ft^3}{sec}$$

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
05B	28361	ABRAHAMS 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)
6.810	Frances Slocum	PA0032433	0.080	CBOD5	25		
				NH3-N	14.22	28.44	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.616	= Q stream (cfs)	0.5	= CV Daily
0.08	= 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 = 1.607	1.3.2.iii	WLA cfc = 1.559
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.599	5.1d	LTA_cfc = 0.906

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	

2010 Pollution Report - Frances Slo

WQM 7.0 Modeling - Frances Slocum.pd

Watershed Info - FrancesSlocum.pdf

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.08
Latitude 41º 20' 22.00" **Longitude** -75º 52' 55.00"
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)
	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		
Dissolved Oxygen	5.0	Minimum	-	BPJ

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen Nov 1 - Apr 30	6.0	Average Monthly	2010 Pollution Report
	12.0	IMAX	
Ammonia-Nitrogen May 1 - Oct 31	2.0	Average Monthly	
	4.0	IMAX	

Anti-Backsliding

No limitations were made less stringent.