



Application Type

Renewal

Facility Type

Non-Municipal

Major / Minor

Minor

Application No.

PA0032131

APS ID

615748

Authorization ID

1483683

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Applicant and Facility Information

Applicant Name	PA DCNR	Facility Name	Locust Lake State Park
Applicant Address	Tuscarora State Park	Facility Address	Locust Lake Road
	Barnesville, PA 18214		Barnesville, PA 18214
Applicant Contact	Robert Sweedey	Facility Contact	Robert Sweeney
Applicant Phone	570-467-2404	Facility Phone	570-467-2404
Client ID	52524	Site ID	250627
Ch 94 Load Status	Not Overloaded	Municipality	Ryan Township
Connection Status		County	Schuylkill
Date Application Received	April 29, 2024	EPA Waived?	Yes
Date Application Accepted	May 8, 2024	If No, Reason	
Purpose of Application	Renewal of existing NPDES permit to discharge treated sewage effluent.		

Summary of Review

The applicant is requesting renewal of an NPDES permit to discharge 0.047 MGD of treated sewage to Locust Creek, a Cold-Water Fishes, Migratory Fishes (CWF, MF) designated receiving stream in state water plan basin 03-A (Upper Schuylkill River). 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.

The system for this facility is primary treatment via a comminutor, secondary treatment via an aeration tank, settling tank, and sand filter, and disinfection via chlorine contact. This facility adds in Ferric Chloride for Phosphorus removal and Soda Ash for pH and Alkalinity adjustments.

Locust Creek is designated as a natural trout reproduction stream as per PA Fish & Boat Commission (from headwaters downstream to Tuscarora Lake). This segment of Locust Creek is also designated as a Trout Stocking Stream as designated by the PA Fish & Boat Commission. This discharge is not expected to affect the trout stocking areas.

The default LFY of 0.1 cfs/mi² was used to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA as well as the "measure" tool. Drainage areas were delineated using USGS's StreamStats Interactive Map and elevations were obtained using the elevation profile feature of StreamStats. L₇₋₁₀ flows were obtained using the built in feature in Streamstats.

A Total Maximum Daily Load (TMDL) for the Little Schuylkill River watershed was finalized during February 2014. The TMDL addresses suspended solids, the three primary metals associated with acid mine drainage (Iron, Manganese and Aluminum) and pH. Treated sewage is not considered a major contributor of the primary metals to the affected streams, however, annual monitoring and reporting requirements are included in this permit renewal for these pollutants of concern. There are already Total Suspended Solids limitations established in the permit. No wasteload allocations are assigned to this facility in the TMDL.

Approve	Deny	Signatures	Date
X		William Hon William Hon / Environmental Engineer Specialist	April 30, 2025
X		Edward Dudick, P.E. / Environmental Engineer Manager	July 25, 2025

Summary of Review

Quarterly monitoring and reporting requirements are retained in this permit for Total Nitrogen to monitor total nutrient loadings. To calculate Total Nitrogen, quarterly monitoring and reporting is added to the permit for Total Kjeldahl Nitrogen and Nitrate+Nitrite-Nitrogen. Annual Total Aluminum, Total Iron, and Total Manganese sampling requirements are retained in this permit to satisfy anti-backsliding requirements.

Sampling requirements for pH, Total Suspended Solids, and Fecal Coliform are TBELs carried over from the previous permit. Sampling requirements for Dissolved Oxygen, Ammonia-Nitrogen, CBOD₅, and Total Residual Chlorine are WQBELs and are carried over from the previous permit. All modeling performed resulted in limits equal to or less than stringent than the current limits.

Total Phosphorus (TP) limitations are carried over from the previous permit and are the result of lake trophic study as per 7/27/2011 DEP Biologist memo. It was determined that TP needs to be controlled for flows entering Lake Tuscarora, which is approximately 2.25 miles downstream of Outfall 001.

E. Coli monitoring requirements will be introduced into the new permit according to PA DEP policy for individual sewage effluent limitations. E. Coli requirements for a treatment plant with less than .05mgd discharge is found in the SOP for establishing effluent limitations for individual sewage.

As per agreement between DEP and DCNR, Dissolved Oxygen, TRC, and pH are to be sampled for 3 times per week during the winter months (October through April). The summertime required sampling frequencies for these parameters are in accordance with the guidance document (1/day).

There is no active DRBC docket associated with this facility.

Permittee did not indicate if any sludge was hauled off site on application. Previous fact sheet states "As per the Locust Lake state park manager, sludge/biosolids are hauled from the WWTP by Biros Septic."

Special conditions added into this permit are the following:

- TRC Minimization
- DRBC may have other requirements
- Solids Management

The previous permit expired on April 29, 2024 and was administratively extended due to a late permit renewal application. The previous inspection held at this facility occurred on 6/21/2023 and was a Compliance Evaluation that resulted in zero (0) violations. There are no open violations in the Clean Water Program at this facility that would warrant the withholding of the issuance of this permit. Recommend approval.

Modeling Inputs:

PT1 at Outfall 001, Locust Creek 2254, 3A Upper Schuylkill River, TSF, Trout Reproduction, TMDL – Metals, pH, Siltation, TSS, CWF, MF
RMI (For Modeling): 2.10

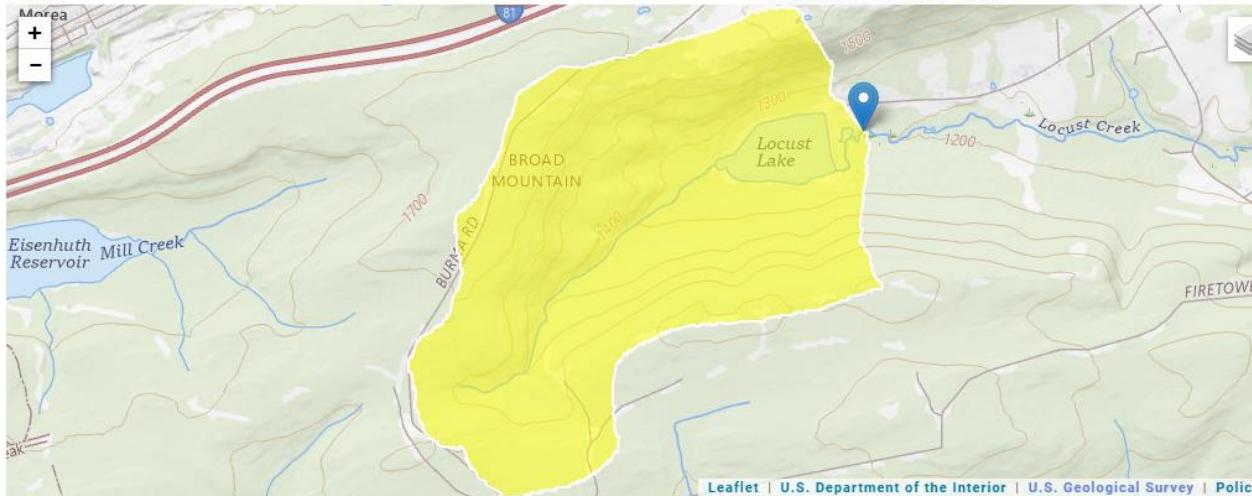
Summary of Review

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2025-04-30 11:08:51 -0400

Time:

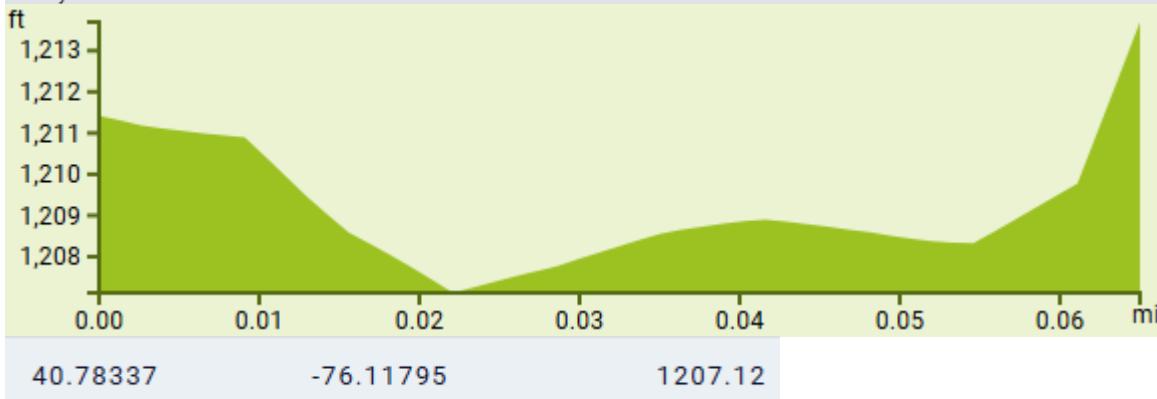


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► Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	0	percent
DRNAREA	Area that drains to a point on a stream	1.77	square miles

7 Day 10 Year Low Flow



PT2 @ conflux w/ Tributary 2265, RMI (For modeling): .01

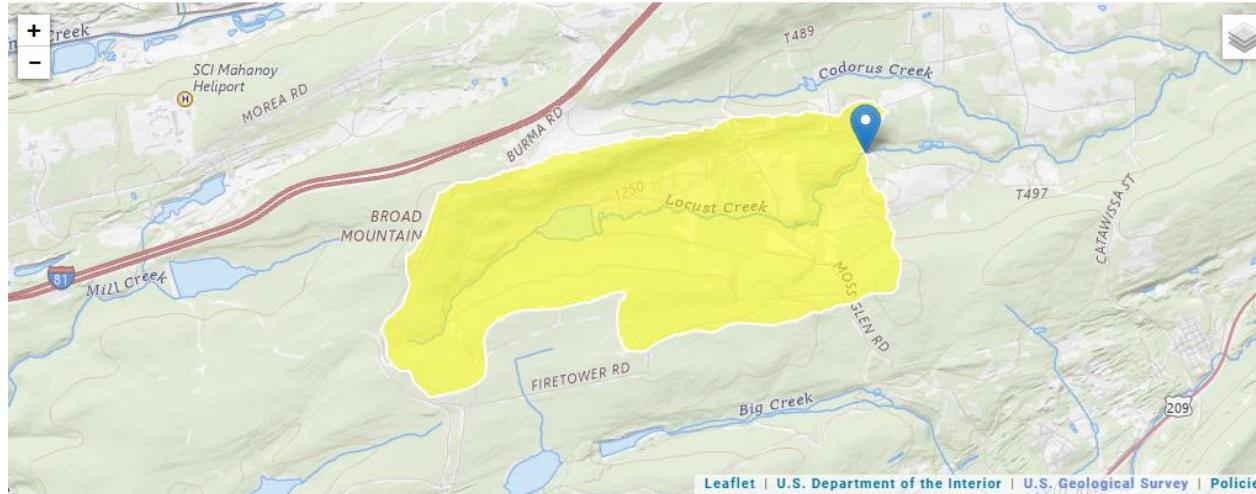
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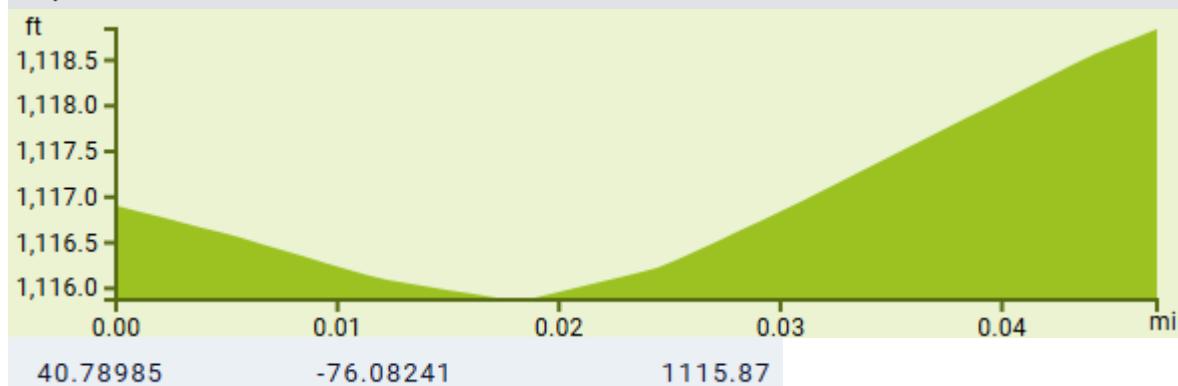


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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	0	percent
DRNAREA	Area that drains to a point on a stream	4.76	square miles

7 Day 10 Year Low Flow 0.819 ft³/s



Summary of Review

Table 9. NPDES permits in the Little Schuylkill River Watershed not receiving individual waste load allocations for metals

NPDES Permit	Facility Name	Sample Point
PA0012742	ICI Explosives USA, Inc. Copperhead Chem Tamaqua PI	LSNR
PA0026476	Coaldale Lansford Summit Hill Sew Auth	LS11
PA0027006	Tamaqua Boro Schuylkill County WWTP	LS11, LSNR
PA0032077	PA DCNR Tuscarora State Park Sew	LS8
PA0032131	PA DCNR Locust Lake State Park	LS8

Analysis Results WQM 7.0

Hydrodynamics NH3-N Allocations D.O. Allocations D.O. Simulation Effluent Limitations

RMI	Discharge Name	Permit Number Disc Flow (mgd)		
2.10	Locust Lake STP	PA0032131	0.0470	
Parameter	Effluent Limit 30 Day Average (mg/L)	Effluent Limit Maximum (mg/L)	Effluent Limit Minimum (mg/L)	
CBOD5	25			
NH3-N	11.53	23.06		
Dissolved Oxygen			3	

Record: 1 of 1

Summary of Review

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.29	= Q stream (cfs)	0.5	= CV Daily
0.047	= 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 = 1.291	1.3.2.iii	WLA_cfc = 1.251
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373	5.1c	LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 0.481	5.1d	LTA_cfc = 0.728

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		

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.29	= Q stream (cfs)	0.5	= CV Daily
0.047	= Q discharge (MGD)	0.5	= CV Hourly
12	= 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 = 1.291	1.3.2.iii	WLA_cfc = 1.251
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373	5.1c	LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 0.481	5.1d	LTA_cfc = 0.728

Effluent Limit Calculations				
PENTOXSD TRG	5.1f	AML MULT = 1.382		
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ	
		INST MAX LIMIT (mg/l) = 1.456		

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.



Pennsylvania
Department of
Environmental Protection