

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0063231
APS ID 493063
Authorization ID 1473940

Applicant and Facility Information

Applicant Name	<u>Lehigh Township Municipal Authority</u>	Facility Name	<u>Pennsville Wastewater Treatment Facility</u>
Applicant Address	<u>1069 Municipal Road</u> <u>Walnutport, PA 18088-9718</u>	Facility Address	<u>393 Indian Trail Road</u> <u>Northampton, PA 18067</u>
Applicant Contact	<u>Carl Sharpe, Authority Chairman</u>	Facility Contact	<u>David Getz, Manager</u>
Applicant Phone	<u>(610) 760-2459</u>	Facility Phone	<u>(610) 760-2459</u>
Client ID	<u>78422</u>	Site ID	<u>270983</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Lehigh Township</u>
Connection Status	<u>-</u>	County	<u>Northampton</u>
Date Application Received	<u>February 22, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>February 22, 2024</u>	If No, Reason	<u>-</u>
Purpose of Application	<u>Renewal of NPDES permit for discharge of treated sewage.</u>		

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.06 MGD of treated sewage into Indian Creek, a Cold-Water Fishery, Migratory Fish (CWF, MF) receiving stream in State Water Plan Basin 2-C (Lower Lehigh 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. 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, CBOD₅, Total Suspended Solids (TSS), Fecal Coliform, and Total Residual Chlorine (TRC) are technology-based and carried over from the previous permit.

The latest DRBC Docket No. D-1994-054 CP-4 requires the addition of monitoring/reporting for 85% minimum CBOD₅ Percent Removal at the same monitoring frequency as CBOD₅, quarterly monitoring/ reporting for Total Dissolved Solids with a 1,000 mg/L limit, monthly monitoring/reporting of DO, and a year-round Ammonia-Nitrogen limitation of 20 mg/L.

A BPJ-based limitation of 5.0 mg/L instantaneous minimum for Dissolved Oxygen (DO) has been added to the permit. The new limit will come into effect three years after the permit effective date to allow time for the facility to sample and make any appropriate changes as necessary. Monitoring/reporting will be required before the limitation comes into effect.

WQM 7.0 modeling did not recommend water-quality based Ammonia-Nitrogen limits; however, the year-round 20 mg/L average monthly limitation has been added per the DRBC Docket requirement. A BPJ-based limitation of 50 mg/L IMAX has been added to the permit to remain consistent with other permits for facilities of this size. eDMR data from the previous year shows that the facility is already meeting the 20 mg/L limitation (aside from February 2025, which appears to be an abnormal sample result).

Approve	Deny	Signatures	Date
X		 Allison Seyfried Zukosky / Project Manager	January 16, 2026
X		 Edward Dudick, P.E. / Environmental Engineer Manager	January 16, 2026

Summary of Review

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

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.

Per current Standard Operating Procedures for Publicly Owned Treatment Plants, the raw sewage influent monitoring/reporting for TSS and BOD₅ has been maintained in the permit.

Monitoring frequencies for all parameters with limitations have been updated to the recommended frequencies found in Table 6-3 of DEP's *Technical Guidance for the Development and Specification of Effluent Limitations* (Document No. 362-0400-001).

There are no representative stream gages in the vicinity of the outfall. USGS StreamStats was used to model the flow. River Mile Index (RMI) values were obtained using the Department's eMapPA, drainage areas were delineated using USGS's StreamStats interactive map, and elevations were obtained using the elevation profile tool on StreamStats. Modeling can be seen starting on page 7 of this fact sheet.

WQM Permit 4823403 for construction of an almost completely new WWTP was issued on October 30, 2023. WQM Permit 4819402 for construction of a new pump station, force main, and sewage collection system that discharges to the Pennsville WWTP was issued on May 8, 2020. That WQM permit indicates that an amendment will be necessary for any increased flow rate above the permitted 0.06 MGD. The NPDES Permit renewal application dated February 22, 2024 indicated there may be a "possible new WWTF". The last sewage inspection report dated April 18, 2024 indicates "the newly planned/revised plant upgrades do not yet have a definitive start date.

The existing permit expired on August 31, 2024 and the application for renewal was received on time.

A Water Management System Inspection query indicated a Compliance Evaluation was performed on April 18, 2024.

There is currently one open violation for this client that may need to be resolved before issuance of the final permit:

1. 05/09/2025 - Violation ID 8235082 – Violation Code 92A.44 – NPDES - Violation of effluent limits in Part A of permit (Program Specific ID: PA0063240).

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to the Lehigh County Authority Pre-Treatment Wastewater Facility in Fogelsville, PA and LTMA Danielsville Reed Beds in Danielsville, PA by Allstate Septic Systems.

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)	0.06
Latitude	40° 44' 42.06"	Longitude	-75° 30' 35.05"
Quad Name	Cementon	Quad Code	1341
Wastewater Description: Sewage Effluent			
Receiving Waters	Indian Creek (CWF, MF)	Stream Code	3664
NHD Com ID	26293257	RMI	2.25
Drainage Area	13.7 mi ²	Yield (cfs/mi ²)	0.078
Q ₇₋₁₀ Flow (cfs)	1.07	Q ₇₋₁₀ Basis	USGS StreamStats
Elevation (ft)	443.37	Slope (ft/ft)	-
Watershed No.	2-C	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	LCA Allentown Water System		
PWS Waters	Lehigh River	Flow at Intake (cfs)	-
PWS RMI	17.2	Distance from Outfall (mi)	~ 12.1

Treatment Facility Summary				
Treatment Facility Name: Pennsville Wastewater Treatment Facility				
WQM Permit No.	Issuance Date	Scope		
4823403	October 30, 2023	New/upgraded WWTP		
4819402	May 8, 2020	New PS, force main, sewage collection system to accommodate new development		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Chlorination	0.013 (2021-2023)
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.06	102	Not Overloaded	Digested	Hauled

Compliance History

DMR Data for Outfall 001 (from December 1, 2024 to November 30, 2025)

Parameter	NOV-25	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24
Flow (MGD) Average Monthly	0.0084	0.0085	0.0087	0.0083	0.0075	0.0066	0.0126	0.0100	0.0119	0.0086	0.0080	0.0085
Flow (MGD) Daily Maximum	0.0103	0.0117	0.0124	0.0111	0.0129	0.0151	0.0275	0.0138	0.0413	0.0164	0.0123	0.0134
pH (S.U.) Instantaneous Minimum	6.73	6.96	6.83	6.88	6.91	6.86	6.94	6.90	6.87	6.77	6.84	6.82
pH (S.U.) Instantaneous Maximum	7.59	7.44	7.68	7.71	7.78	7.41	7.49	7.42	7.24	7.46	7.38	7.23
TRC (mg/L) Average Monthly	0.03	0.04	0.02	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.03	0.04
TRC (mg/L) Instantaneous Maximum	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.08	0.09	0.06	0.10	0.09
CBOD5 (lbs/day) Average Monthly	0.5	0.2	0.3	0.2	0.3	0.2	< 0.3	0.5	0.8	1.5	0.9	0.5
CBOD5 (lbs/day) Weekly Average	0.7	0.2	0.3	0.2	0.5	0.2	0.3	0.7	1.2	3.2	1.6	0.6
CBOD5 (mg/L) Average Monthly	5.9	3.1	4.3	3.0	5.1	3.4	< 2.2	8.0	5.9	25.4	11.6	8.2
CBOD5 (mg/L) Weekly Average	9.4	3.4	6.2	3.6	7.5	4.2	2.3	12.3	6.0	58.3	18.6	11.6
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	21	8	14	8	11	7	202	25	15	17	12	31
BOD5 (mg/L) Raw Sewage Influent Average Monthly	268	205	200	109	218	136	1430	330	229	310	221	498
TSS (lbs/day) Average Monthly	< 0.4	< 0.2	< 0.3	< 0.3	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	0.5	< 0.3	< 0.4
TSS (lbs/day) Raw Sewage Influent Average Monthly	17	10	8	2	35	5	20	15	6	11	13	20
TSS (lbs/day) Weekly Average	0.4	< 0.3	< 0.4	< 0.3	< 0.3	0.3	< 0.6	0.3	0.8	0.8	0.4	0.5

**NPDES Permit Fact Sheet
Pennsville Wastewater Treatment Facility**

NPDES Permit No. PA0063231

TSS (mg/L) Average Monthly	< 4.5	< 4.0	< 4.0	< 4.0	< 4.0	< 5.5	< 4.0	< 4.0	< 4.0	9.0	< 4.3	< 6.4
TSS (mg/L) Raw Sewage Influent Average Monthly	217	234	119	26	660	93	140	202	86	194	240	323
TSS (mg/L) Weekly Average	5.0	< 4.0	< 4.0	< 4.0	< 4.0	7.0	< 4.0	4.0	4.0	14.0	4.5	8.8
Total Dissolved Solids (mg/L) Average Monthly	178	430	474	470	482	406	390	372	466	346	518	517
Fecal Coliform (No./100 ml) Geometric Mean	< 8	< 1	7	< 1	< 1	< 1	< 1	< 1	< 19.5	71.8	< 3.9	3
Fecal Coliform (No./100 ml) Instantaneous Maximum	64	< 1	46	< 1	< 1	1	1	1	5400	6600	15	4
Nitrate-Nitrite (mg/L) Average Monthly	11.8	5.3	6.1	5.6	4.7	3.5	3.0	2.8	3.2	0.3	10.3	20.2
Total Nitrogen (mg/L) Average Monthly	15.3	6.8	7.2	6.6	5.6	3.5	4.0	4.2	5.4	51.1	14.6	21.5
Ammonia (mg/L) Average Monthly	2.17	< 0.10	0.16	0.10	< 0.20	< 0.10	0.14	< 0.10	0.93	41.70	2.52	< 0.10
TKN (mg/L) Average Monthly	3.5	1.5	1.1	1.0	0.9	< 0.7	1.1	1.5	2.1	50.8	4.3	1.3
Total Phosphorus (mg/L) Average Monthly	2.29	4.44	4.97	9.37	8.41	2.88	2.28	0.17	1.60	29.9	2.15	5.36

Compliance History

Effluent Violations for Outfall 001, from: January 1, 2025 To: November 30, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	02/28/25	Avg Mo	25.4	mg/L	25.0	mg/L
CBOD5	02/28/25	Wkly Avg	58.3	mg/L	40.0	mg/L

Development of Effluent Limitations

Outfall No. 001
Latitude 40° 44' 42.00"
Wastewater Description: Sewage Effluent

Design Flow (MGD) 0.06
Longitude -75° 30' 36.00"

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)
	40.0	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	50.0	IMAX		
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	60.0	IMAX		
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		
	1.6	IMAX	-	92a.48(b)(2)
Ammonia-Nitrogen	50.0	IMAX	-	BPJ
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:

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen	20.0	Average Monthly	DRBC Docket
Total Dissolved Solids	1,000	Average Quarterly	
CBOD ₅ Minimum % Removal (%)	85%	Minimum Monthly Average	
Biochemical Oxygen Demand (BOD ₅) Raw Sewage Influent	Report	Average Monthly	POTW Requirement
Total Suspended Solids Raw Sewage Influent	Report	Average Monthly	
Nitrate-Nitrite as N	Report	Average Monthly	Previous Permit
Total Nitrogen	Report	Average Monthly	
Total Kjeldahl Nitrogen	Report	Average Monthly	
Total Phosphorus	Report	Average Monthly	

Anti-Backsliding

No limitations were made less stringent.

USGS StreamStats Data:

At Outfall 001 on Indian Creek (3664):

RMI	Elevation (ft)	Drainage Area (mi ²)	Q ₇₋₁₀ Flow (cfs)
2.25	443.37	13.7	1.07

$$\text{Low Flow Yield using StreamStats} = \frac{1.07 \text{ ft}^3/\text{sec}}{13.7 \text{ mi}^2} = 0.078 \frac{\text{ft}^3/\text{sec}}{\text{mi}^2}$$

StreamStats Report

Region ID: PA
 Clicked Point (Latitude, Longitude): 40.74505, -75.50983
 Time: 2026-01-15 08:42:41 -0500



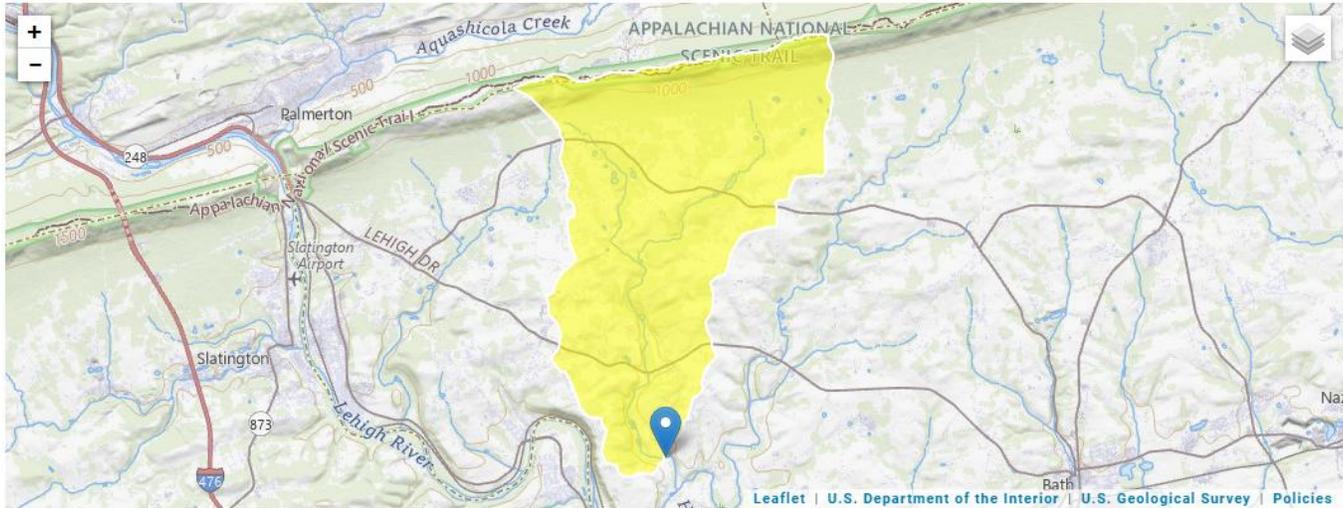
Statistic	Value	Unit	SE	ASEp
DRNAREA	Area that drains to a point on a stream	13.7	square miles	
7 Day 2 Year Low Flow	2.46	ft ³ /s	38	38
30 Day 2 Year Low Flow	3.35	ft ³ /s	33	33
7 Day 10 Year Low Flow	1.07	ft ³ /s	51	51

At confluence with Unnamed Tributary to Indian Creek (3665):

RMI	Elevation (ft)	Drainage Area (mi ²)
2.01	542.06	31

StreamStats Report

Region ID: PA
 Clicked Point (Latitude, Longitude): 40.72962, -75.50545
 Time: 2026-01-15 08:48:46 -0500



DRNAREA Area that drains to a point on a stream 15.2 square miles

WQM 7.0 Effluent Limits

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
02C	3664	INDIAN 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)
2.250	Pennsville	PA0063231	0.060	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

TRC EVALUATION					
Input appropriate values in A3:A9 and D3:D9					
1.07	= Q stream (cfs)			0.5	= CV Daily
0.06	= 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 = 3.696		1.3.2.iii	WLA_cfc = 3.596
PENTOXSD TRG	5.1a	LTAMULT_afc = 0.373		5.1c	LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 1.377		5.1d	LTA_cfc = 2.091
Source	Reference	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	$(.019/e^{-k \cdot AFC_tc}) + [(AFC_Yc \cdot Qs \cdot .019 / Qd \cdot e^{-k \cdot AFC_tc}) \dots + Xd + (AFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$				
LTAMULT_afc	$EXP((0.5 \cdot LN(cvh^2 + 1)) - 2.326 \cdot LN(cvh^2 + 1)^{0.5})$				
LTA_afc	wla_afc * LTAMULT_afc				
WLA_cfc	$(.011/e^{-k \cdot CFC_tc}) + [(CFC_Yc \cdot Qs \cdot .011 / Qd \cdot e^{-k \cdot CFC_tc}) \dots + Xd + (CFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$				
LTAMULT_cfc	$EXP((0.5 \cdot LN(cvd^2 / no_samples + 1)) - 2.326 \cdot LN(cvd^2 / no_samples + 1)^{0.5})$				
LTA_cfc	wla_cfc * LTAMULT_cfc				
AML_MULT	$EXP(2.326 \cdot LN((cvd^2 / no_samples + 1)^{0.5}) - 0.5 \cdot LN(cvd^2 / no_samples + 1))$				
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)				



DRBC Docket
 1994-054 CP-4.pdf



WQM 7.0 -
 Pennsville.pdf