



Application Type

Renewal

Facility Type

Non-Municipal

Major / Minor

Minor

Application No.

PA0060348

APS ID

567498

Authorization ID

1412941

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Applicant and Facility Information

Applicant Name	<u>PA DOT Bureau Of Project Delivery</u>	Facility Name	<u>PA DOT Rest Areas 61 & 62</u>
Applicant Address	Bureau Of Operation, 400 North Street, 6th Floor Harrisburg, PA 17120	Facility Address	I-84 West Palmyra Twp, PA 18426
Applicant Contact	Mark Bowen	Facility Contact	Sean Skeath
Applicant Phone	(215) 397-4055	Facility Phone	(570) 449-4538
Client ID	62162	Site ID	4282
Ch 94 Load Status	Not Overloaded	Municipality	Palmyra Township
Connection Status		County	Pike
Date Application Received	<u>October 6, 2022</u>	EPA Waived?	No
Date Application Accepted		If No, Reason	Lake Wallenpaupack TMDL
Purpose of Application	<u>RENEWAL OF EXISTING NPDES PERMIT.</u>		

Summary of Review

The applicant is requesting renewal of an NPDES permit to discharge 0.015 MGD of treated sewage from PA DOT Rest Area 61 and 62 to an unnamed tributary to Kleinhans Creek. Kleinhans Creek has a designated use of high quality-cold water fishes and migratory fishes (HQ-CWF/MF) and lies in state water plan basin 01-C (Wallenpaupack Creek). Kleinhans Creek does not have an existing use more stringent than the designated use. Outfall 001 discharges into a drainage ditch, so the point of first use is determined to be where the ditch meets Kleinhans Creek. Kleinhans Creek drains into Lake Wallenpaupack, which is currently impaired and not supporting fish consumption due to mercury pollution.

The Ammonia-Nitrogen and Total Phosphorus limits will be carried over from the previous permit. The Total Phosphorus limit was part of the Lake Wallenpaupack TMDL from 2005, and the limit will remain at 22.8 lbs/yr. The Ammonia-Nitrogen limit may only be applied during the summer months (May-Oct).

The limits for CBOD₅, TSS, pH, and Fecal Coliform are technology-based limits and will be carried over from the previous permit. Modeling the discharge in WQM 7.0 (attached) with a default low flow yield (LFY) of 0.1 cfs/mi² did not give a result more stringent than the technology-based standards for CBOD₅, Ammonia-Nitrogen, or Dissolved Oxygen. RMI values, drainage areas, and stream elevations for modeling inputs were found using USGS's StreamStats Interactive Map. The default LFY value was used due to no historical flow data being available for Kleinhans Creek upstream or downstream. E. Coli was also added as a reporting requirement due to a recently added technology based effluent limit. All sewage permits now require E. Coli monitoring, with a sampling frequency of 1/year for design flows between 0.002 MGD and 0.05 MGD.

The Total Residual Chlorine (TRC) limit from the previous permit of 0.5 mg/L avg monthly and 1.1 IMAX will be carried over. This limit is determined from PA Code 92a.47(a)(8) referring to 92a.48(b)(2). The TRC spreadsheet modeling (attached) did not indicate any need for more stringent limits for this discharge.

Approve	Deny	Signatures	Date
X		 Luca Jordache, Environmental Engineer Trainee	April 24, 2025
X		 Edward Dudick, P.E. / Environmental Engineer Manager	May 5, 2025

Summary of Review

Total Nitrogen will continue to be monitored and reported as previously done so, including monitoring and reporting Nitrate+Nitrite-N and Total Kjeldahl Nitrogen to calculate Total Nitrogen.

For this permit, all monitoring frequencies are consistent with the Department's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document no. 362-0400-001)

The previous permit expired on March 31, 2023, and the renewal application was not received at least 180 days before the expiration. An extension has been provided by the DEP via letter while the renewal is being processed.



[WQM 7.0 Results
PA0060348.pdf](#)



[StreamStats Info
PA0060348 PA DOT I](#)



[PA0060348 TRC
Calc.pdf](#)

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.015
Latitude	41° 21' 27.59"	Longitude	-75° 14' 17.09"
Quad Name	Promised Land	Quad Code	0844
Wastewater Description: Sewage Effluent			
Receiving Waters	Kleinhans Creek (HQ-CWF, MF) (Point of First Use)		
NHD Com ID	25935892	Stream Code	64049
Drainage Area	2.62	RMI	1.07 (Point of First Use)
Q ₇₋₁₀ Flow (cfs)	0.262	Yield (cfs/mi ²)	0.1
Elevation (ft)	1314	Q ₇₋₁₀ Basis	Default LFY
Watershed No.	1-C	Slope (ft/ft)	0.024
Existing Use	-	Chapter 93 Class.	HQ-CWF, MF
Exceptions to Use	-	Existing Use Qualifier	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	-	Name	-
Background/Ambient Data			
pH (SU)	-	Data Source	
Temperature (°F)	-	-	
Hardness (mg/L)	-	-	
Other:	-	-	
Nearest Downstream Public Water Supply Intake		Easton Area Water System	
PWS Waters	Delaware River	Flow at Intake (cfs)	1105
PWS RMI	109.8	Distance from Outfall (mi)	123

Changes Since Last Permit Issuance: None

Other Comments: There is no TMDL for the receiving stream, but there is a TMDL for Lake Wallenpaupack. Kleinhans Creek drains into Lake Wallenpaupack about 1 mile downstream from the point of first use and 2.25 miles from outfall 001.

Treatment Facility Summary				
Treatment Facility Name: PA DOT - Rest Area 62				
WQM Permit No.		Issuance Date		
5280401		9/26/1980		
5290403		8/14/1990		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Aeration	Chlorine Contact	0.0033
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.015	30	Not Overloaded	Sludge Holding	Hauled

Changes Since Last Permit Issuance: None

Other Comments: N/A

Compliance History	
Summary of DMRs:	Facility has a history of compliance with few spots of non-compliance spread throughout years, such as pH in July 2024 and CBOD ₅ in August 2024. This site has displayed the capability to maintain compliance.
Summary of Inspections:	The WWTP has been inspected regularly throughout its permit lifetime.

Other Comments: N/A

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.0022	0.0028	0.0034	0.0032	0.0031	0.0030	0.0038	0.0037	0.0030	0.0036	0.0034	0.0032
Flow (MGD) Daily Maximum	0.0040	0.0043	0.0076	0.0064	0.0053	0.0049	0.0061	0.0068	0.0049	0.0054	0.0064	0.0087
pH (S.U.) Minimum	7.1	7.1	6.5	6.7	6.7	6.8	6.7	3.1	6.7	6.5	6.7	6.9
pH (S.U.) Instantaneous Maximum	7.9	8.1	8.1	8.3	8.1	8.2	8.1	8.1	7.7	8.0	8.0	8.2
TRC (mg/L) Average Monthly	< 0.02	< 0.01	< 0.02	< 0.04	< 0.05	< 0.03	< 0.03	< 0.03	< 0.02	< 0.04	< 0.02	< 0.02
TRC (mg/L) Instantaneous Maximum	0.04	0.05	0.05	0.3	0.8	0.3	0.29	0.28	0.08	0.5	0.06	0.1
CBOD5 (mg/L) Average Monthly	< 9.3	< 10.6	< 6.0	< 6.0	< 6.0	23.4	26.7	< 7.5	7.7	< 6.0	< 6.6	< 7.5
TSS (mg/L) Average Monthly	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1	< 1	< 1	< 2	58	< 1	33	< 1	176	< 1	< 4	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	< 1	< 1	< 1	5.2	101.7	< 1	148.3	2	260.3	< 1	196.8	< 1
Nitrate-Nitrite (mg/L) Average Monthly	< 51.5	< 73.7	< 66.9	< 91.5	< 80.27	< 84.1	< 89	< 101.5	< 81.84	< 91.3	< 61.1	< 43.7
Total Nitrogen (mg/L) Average Monthly	< 52.5	< 74.7	< 67.9	< 92.5	< 80.77	< 85.1	< 90	< 102.5	< 82.84	< 92.3	< 62.1	< 44.7
Ammonia (mg/L) Average Monthly	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.9	< 0.2	< 0.3	< 0.2	< 0.3	< 0.2
TKN (mg/L) Average Monthly	< 1	< 1	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total Phosphorus (mg/L) Average Monthly	0.2	0.3	0.1	0.1	0.3	< 0.1	0.3	0.4	0.3	0.2	0.3	0.3

NPDES Permit Fact Sheet
PA DOT Rest Areas 61 & 62

NPDES Permit No. PA0060348

Total Phosphorus (lbs)	0.1	0.008	0.1	0.08	0.2	< 0.08	0.2	0.4	0.3	0.3	0.4	0.3
Total Monthly												
Total Phosphorus (lbs)			3.0									
Total Annual												

Development of Effluent Limitations

Outfall No. 001
Latitude 41° 21' 29.00"

Design Flow (MGD) .015
Longitude -75° 13' 23.00"

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	IMAX	-	-
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	60	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)
	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)
	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (TRC)	0.5	Average Monthly	-	92a.48(b)(2)
	1.1	IMAX	-	-
E. Coli	Report	IMAX	-	92a.61

Comments: N/A

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen (May – Oct)	9	Average Monthly	Previous Modeling
	18	IMAX	
Total Phosphorus	0.5	Average Monthly	Lake Wallenpaupack TMDL and HQ protected waters
	1	IMAX	
	22.8 (lbs)	Total Annual	

Comments: N/A

Best Professional Judgment (BPJ) Limitations

Comments: N/A

Anti-Backsliding

The Lake Wallenpaupack TMDL has been completed, however due to anti-backsliding policy the phosphorus limits can not be removed or loosened on this permit.

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" (386-0400-001), 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
TRC	XXX	XXX	XXX	0.5	XXX	1.1	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
E. Coli	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	Calculation
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)			Instant. Maximum	Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum			
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	0.5	XXX	1	2/month	8-Hr Composite
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Other Comments: N/A

Tools and References Used to Develop Permit	
<input type="checkbox"/>	 WQM 7.0 Results PA0060348.pdf)
<input type="checkbox"/>	 PA0060348 TRC Calc.pdf)
<input type="checkbox"/>	WQM for Windows Model (see Attachment)
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment)
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 386-2000-002, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
<input type="checkbox"/>	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
<input type="checkbox"/>	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
<input type="checkbox"/>	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
<input type="checkbox"/>	Design Stream Flows, 386-2000-003, 9/98.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.



Individual NPDES
SOP - Sewage (Versi
SOP:



Individual Sewage
SOP - Effluent Limits

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