



Application Type New
Wastewater Type Sewage
Facility Type SRSTP

**NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP**

Application No. PA0281999
APS ID 1137413
Authorization ID 1527341

Applicant, Facility and Project Information

Applicant Name	<u>David A Murphy</u>	Facility Name	<u>2845 Stoney Point Rd, SRSTP</u>
Applicant Address	<u>184 Lake Meade Drive</u>	Facility Address	<u>184 Lake Meade Drive</u>
	<u>East Berlin, PA 17316-9388</u>		<u>East Berlin, PA 17316-9388</u>
Applicant Contact	<u>David Murphy</u>	Facility Contact	<u>David Murphy</u>
Applicant Phone	<u>(717) 968-8582</u>	Facility Phone	<u>(717) 968-8582</u>
Client ID	<u>392837</u>	Site ID	<u>878218</u>
SIC Code	<u>8811</u>	Municipality	<u>Reading Township</u>
SIC Description	<u>Services - Private Households</u>	County	<u>Adams</u>
Date Application Received	<u>May 15, 2025</u>	WQM Required	
Date Application Accepted	<u>May 16, 2025</u>	WQM App. No.	<u>WQG01012502</u>
Project Description	<u>NPDES & WQG01 permits applications for a new SRSTP.</u>		

Summary of Review

This fact sheet supports the issuance of new NPDES and WQM permits for discharge of treated sewage from the Single Residence Sewage Treatment Plant (SRSTP) located in Reading Township, Adams County. The single family SRSTP for on-lot proposed discharge to Mud Run to Bermudian Creek, has sewage flow of 400-gallon per day (0.0004 MGD). The SRSTP is owned and operated by David & Linda Murphy.

The WQM permit for the construction of the treatment system with permit No. WQG01012502 is concurrently under review. DEP Planning for the project was approved under Code No. A3-01928-305-3S on 5/13/2025.

DEP has prepared this report for the applications for both NPDES and WQG01 permits.

Based on the review outlined in this report, it is recommended that the NPDES permit be drafted and publish in the Pennsylvania Bulletin for public comments for 30 days.

Approve	Deny	Signatures	Date
X		Hilaryle Hilary H. Le / Environmental Engineering Specialist	June 6, 2025
X		/s/ Daniel W. Martin, P.E. / Environmental Engineer Manager	July 11, 2025

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0004
Latitude	39° 59' 47.0"	Longitude	-77° 1' 44.0"
Quad Name	Hampton	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Mud Run (WWF, MF)	Stream Code	8622
NHD Com ID	57468713	RMI	3.80 miles
Drainage Area	10.6 mi. ²	Yield (cfs/mi ²)	0.02
Q ₇₋₁₀ Flow (cfs)	0.2	Q ₇₋₁₀ Basis	USGS StreamStats
Elevation (ft)	500	Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Algae, Siltation		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers		
TMDL Status	Name		
Nearest Downstream Public Water Supply Intake	Wrightsville Borough Municipal Authority, York County		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	28.51 miles	Distance from Outfall (mi)	Approximate 50.0 miles

Changes Since Last Permit Issuance: new

Drainage Area/Stream Flows

The discharge is to Mud Run at RMI 3.80 mile. A drainage area upstream of the discharge is estimated to be 10.6 mi.², according to USGS StreamStats available at <https://streamstats.usgs.gov/ss/>. USGS StreamStats also produced a Q₇₋₁₀ flow of 0.2 cfs at the point of proposed discharge.

Mud Run to Bermudian Creek

Under 25 Pa Code §93.90, Mud Run to Bermudian Creek is designated as Warm-Water & Migratory Fishes (WWF & MF). TMDLs have not been developed to address these impairments. Bermudian Creek does not support a Class A Wild Trout fishery. Therefore, no Class A Wild Trout fishery is impacted by this discharge.

303d Listed Streams

The discharge from this facility is in Mud Run at 3.80 RMI which is impaired for Aquatic Life use due to algae, siltation (agricultural, Urban Runoff/Storm Sewers). The discharge from this facility is expected not to contribute to the existing impairment.

Public Water Supply Intake

According to DEP's eMapPA available at <http://www.depgis.state.pa.us/emappa/>, the nearest downstream public water supply intake is Wrightsville Borough Municipal Authority, York County located on Susquehanna River, approximately 50 miles from the point of proposed discharge. Given the nature and distance, the proposed discharge is not expected to impact the water supply.

Treatment Facility Summary

The facility is proposed to replace a failed on-lot septic disposal system which serves the 3-bedroom single family residence and will discharge 400 gallons per day of treated effluent to Mud Run to Bermudian Creek, located at 2845 Stoney Point Road, East Berlin, PA 17316. The facilities will be owned and maintained by David & Linda Murphy. The proposed treatment process, according to the application, is as follows:

One (1) 1,000-gallon two (2)-compartment septic tanks → Ecoflo (EC7-600-P-P-Pack) filters → UV disinfection system → outfall 001 to Mud Run to Bermudian Creek.

The proposed septic tanks will have enough capacity to handle the proposed design flow. An effluent filter will be provided at the end of the septic tank to reduce settleable and floatable solids in the effluent. The Ecoflo EC7-600-P-P-Pack filters will be provided, which has been demonstrated to produce effluent that does not exceed 10 mg/L CBOD₅ and 10 mg/L TSS. The proposed UV disinfection system will be able to provide an effluent fecal coliform concentration less than or equal to 200 No./100 mL.

The primary treatment tank sludge levels will be monitored yearly and pumped out no longer than 3-year intervals. The outlet of the tank will have an effluent filter, preventing solids from leaving the tank. The UV unit will be accessible from the ground surface, allowing the UV bulb to be replaced or cleaned. The UV unit has an alarm-light system to alert for a treatment malfunction, and one or more spare bulbs will be kept on site for emergency replacement.

Compliance History

On May 13, 2025, DEP approved the Act 537 planning as a revision to the Act 537 official sewage facilities plan of Reading Township (DEP Code No. A3-01928-305-3S).

This is a new facility; therefore, there are no effluent sample results / inspection reports associated with this facility. The Department's database indicates that there is currently no open violation associated with the facility or the applicant.

Development of Effluent Limitations and Monitoring Requirements

The effluent limitations and monitoring requirements are derived from DEP's Standard Operating Procedure (SOP) for New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications (SOP No. BPNPSM-PMT-003, revised November 9, 2023). Since the facility will utilize ultraviolet (UV) disinfection, monitoring requirements for total residual chlorine are not applicable.

According to the SOP referenced above, water quality monitoring using PentoxSD and/or WQG-01 are not required for SRSTPs. The permittee will be required to submit a completed Annual Maintenance Report (AMR) as part of the permit requirements. No DMR is necessary for any facilities that are required to report effluent monitoring results on AMRs annually.

The draft permit will include the following Part C conditions:

- a. Small Flow Treatment Facility Maintenance, including measurement of the depth of septege and scum, 3-year septic tank pumping requirement, reporting requirement of a completed Annual Maintenance Form.
- b. Stormwater Prohibition
- c. Property Rights
- d. Proper Disposal of Solids

Proposed Effluent Limitations and Monitoring Requirements

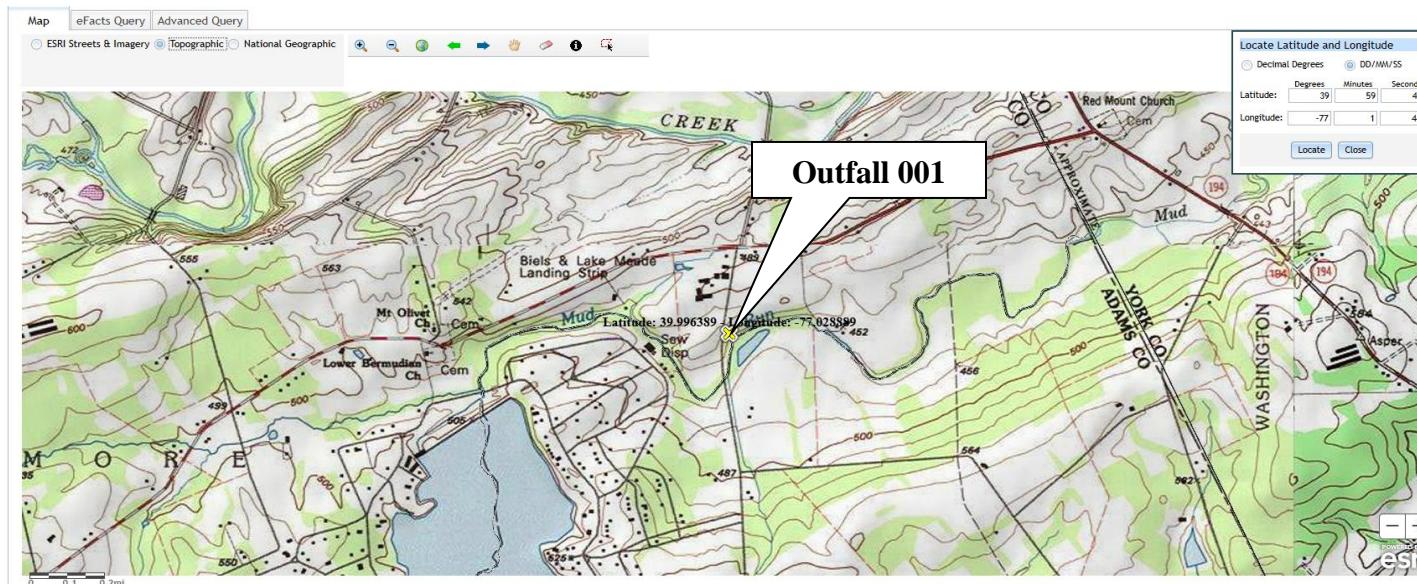
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). 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	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
CBOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Compliance Sampling Location: 

Other Comments: 



NPDES Permit Fact Sheet

NPDES Permit No. PA0281999

USGS StreamStats

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BUILD A REPORT Report Built ▶

Step 1: You can modify computed basin characteristics here, then select the types of reports you wish to generate. Then click the "Build Report" button

Exploration Tools

▲ Hide Basin Characteristics

Basin Characteristics can be edited here

Parameter	Value
DRNAREA	10.6
BSLOPD	1.7564
ROCKDEP	4.6
URBAN	6.8783

Select available reports to display:

- Basin Characteristics Report
- Scenario Flow Reports
- Hydrologic Features Report

◀ Open Report

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▶ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	1.7564	degrees
DRNAREA	Area that drains to a point on a stream	10.6	square miles
ROCKDEP	Depth to rock	4.6	feet
URBAN	Percentage of basin with urban development	6.8783	percent

▶ Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	1.7564	degrees	1.7	6.4
DRNAREA	Drainage Area	10.6	square miles	4.78	1150
ROCKDEP	Depth to Rock	4.6	feet	4.13	5.21
URBAN	Percent Urban	6.8783	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.611	ft ³ /s	46	46
30 Day 2 Year Low Flow	0.999	ft ³ /s	38	38
7 Day 10 Year Low Flow	0.201	ft ³ /s	51	51
30 Day 10 Year Low Flow	0.343	ft ³ /s	46	46
90 Day 10 Year Low Flow	0.865	ft ³ /s	41	41