

Application Type New
Wastewater Type Sewage
Facility Type SRSTP

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

Application No. PA0281832
APS ID 1037334
Authorization ID 1351543

Applicant, Facility and Project Information

Applicant Name	<u>Buddy & Dorianne Murtiff</u>	Facility Name	<u>Buddy & Dorianne Murtiff SRSTP</u>
Applicant Address	<u>4721 Briggs Lane</u> <u>Alexandria, PA 16611</u>	Facility Address	<u>6932 Hungry Hollow Road</u> <u>Alexandria, PA 16611</u>
Applicant Contact	<u>Buddy Murtiff</u>	Facility Contact	<u>Dorianne Murtiff</u>
Applicant Phone	<u>(814) 669-4092</u>	Facility Phone	<u>(814) 669-4092</u>
Client ID	<u>362555</u>	Site ID	<u>849125</u>
SIC Code	<u>8811</u>	Municipality	<u>Morris Township</u>
SIC Description	<u>Services - Private Households</u>	County	<u>Huntingdon</u>
Date Application Received	<u>April 28, 2021</u>	WQM Required	<u></u>
Date Application Accepted	<u>May 4, 2021</u>	WQM App. No.	<u>3121401</u>
Project Description	<u>NPDES permit applications for new SRSTP.</u>		

Summary of Review

This fact sheet supports the issuance of a new NPDES permit for discharge of treated sewage from the single residence sewage treatment plant (SRSTP) located in Morris Township, Huntingdon County. The annual average design flow is 400 gallons per day. The discharge will be to Unnamed Tributary to Frankstown Branch which is classified as Warm Water Fishes & Migratory Fishes (WWF & MF).

The WQM permit for the construction of the treatment system with permit No. 3121401 is concurrently under review. DEP Planning for the project was approved under Code No. A3-31927-051-3s.

DEP has prepared this report for the applications for both NPDES and WQM 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		<i>Hilaryle</i> Hilary H. Le / Environmental Engineering Specialist	May 19, 2021
X		/s/ Daniel W. Martin, P.E. / Environmental Engineer Manager	June 1, 2021

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.0004</u>
Latitude	<u>40° 34' 17.79"</u>	Longitude	<u>-78° 8' 42.95"</u>
Quad Name	<u>Spruce Creek</u>	Quad Code	<u></u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Unnamed Tributary of Frankstown Branch Juniata River (WWF, MF)</u>	Stream Code	<u>16090</u>
NHD Com ID	<u>65606014</u>	RMI	<u>0.8200 mile</u>
Drainage Area	<u>2.52 mi.²</u>	Yield (cfs/mi ²)	<u>0.048</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.121</u>	Q ₇₋₁₀ Basis	<u>USGS StreamStats</u>
Elevation (ft)	<u>795</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>11-A</u>	Chapter 93 Class.	<u>WWF, MF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>SILTATION</u>		
Source(s) of Impairment	<u>HIGHWAY/ROAD/BRIDGE RUNOFF (NON-CONSTRUCTION RELATED)</u>		
TMDL Status	<u>Name</u>		
Nearest Downstream Public Water Supply Intake	<u>Mapleton Municipal Water Authority, Huntingdon County</u>		
PWS Waters	<u>Juniata River</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u>85 miles</u>	Distance from Outfall (mi)	<u>Approximate 24 miles</u>

Changes Since Last Permit Issuance: it is new.

Drainage Area/Stream Flows

The discharge is to Unnamed Tributary to Frankstown Branch at RMI 0.82 mile. A drainage area upstream of the discharge is estimated to be 2.52 mi.², according to USGS StreamStats available at <https://streamstats.usgs.gov/ss/>. USGS StreamStats also produced a Q₇₋₁₀ flow of 0.121 cfs at the point of proposed discharge.

Unnamed Tributary to Frankstown Branch to Juniata River

Under 25 Pa Code §93.9n, Unnamed Tributary to Frankstown Branch is designated as Warm-Water & Migratory Fishes (WWF & MF). No TMDL has been developed yet to address this stream. Frankstown Branch does not support a Class A Wild Trout fishery. Therefore, no Class A Wild Trout fishery is impacted by this discharge.

Based on integrated report 2018, Unnamed Tributary to Frankstown Branch, assessment ID 463, is impaired for highway/road/bridge runoff (non-construction related) from siltation.

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 Mapleton Municipal Water Authority, Huntingdon County located on Juniata River, approximately 24 miles. Given the nature and distance, the proposed discharge is not expected to impact the water supply.

Treatment Facility Summary

The facility is proposed to serve the three-bedroom single family residence (400 GPD) located at 6932 Hungry Hollow Road, Alexandria, PA 16611. The facilities will be owned and maintained by Buddy & Dorianne Murtiff. The proposed treatment process, according to the application, is as follows:

One (1) 1000-gallon dual compartment concrete septic tank (or equivalent) → Dosing chamber → Waterloo Biofilter Treatment System (Model I-10) → Orenco UV-OSI-1 UV disinfection unit → Outfall.

The proposed septic tank 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. A Waterloo Biofilter Treatment System (filter) will be provided, which has been demonstrated to produce effluent that does not exceed 10 mg/L BOD₅ 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 surface filter will be inspected annually. 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 18, 2018, DEP approved the Act 537 planning as a revision to the Act 537 official sewage facilities plan of Reading Township (DEP Code No. A3-31927-051-3s).

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.

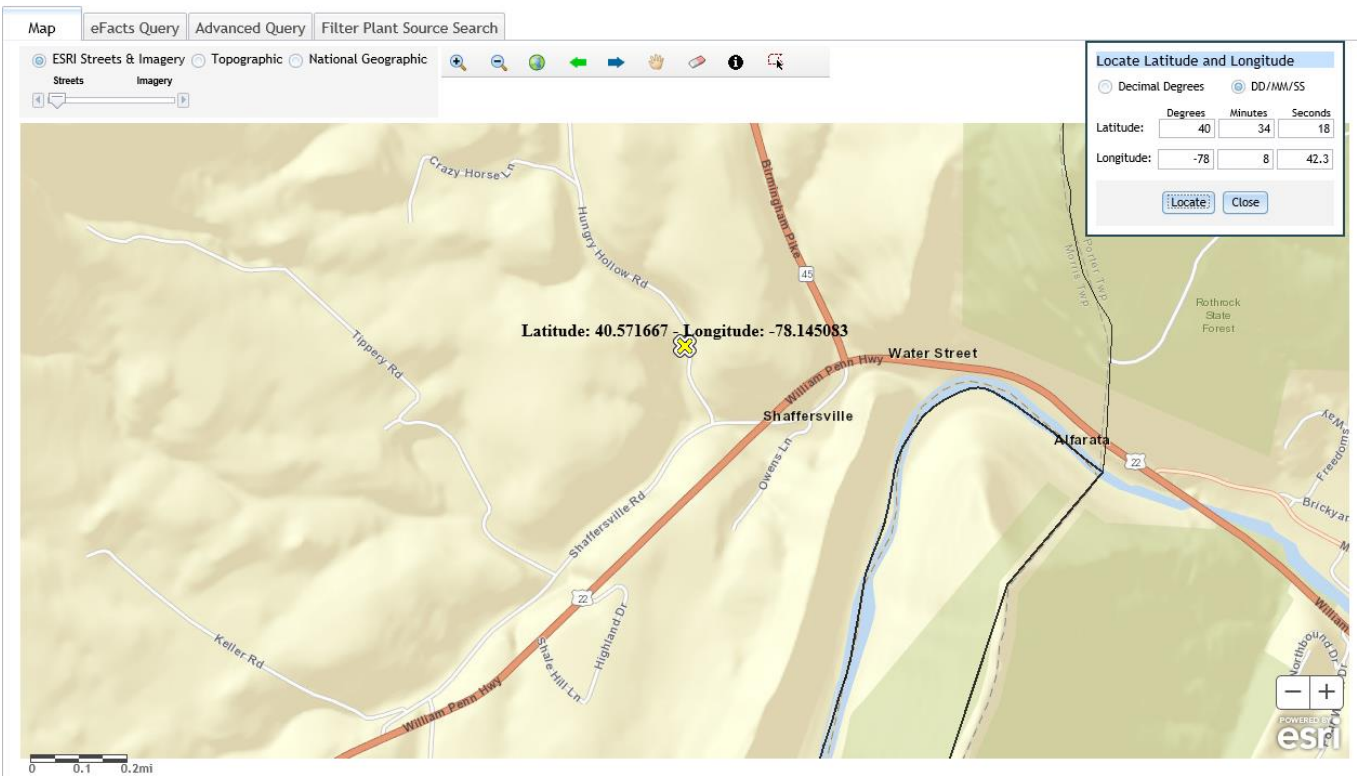
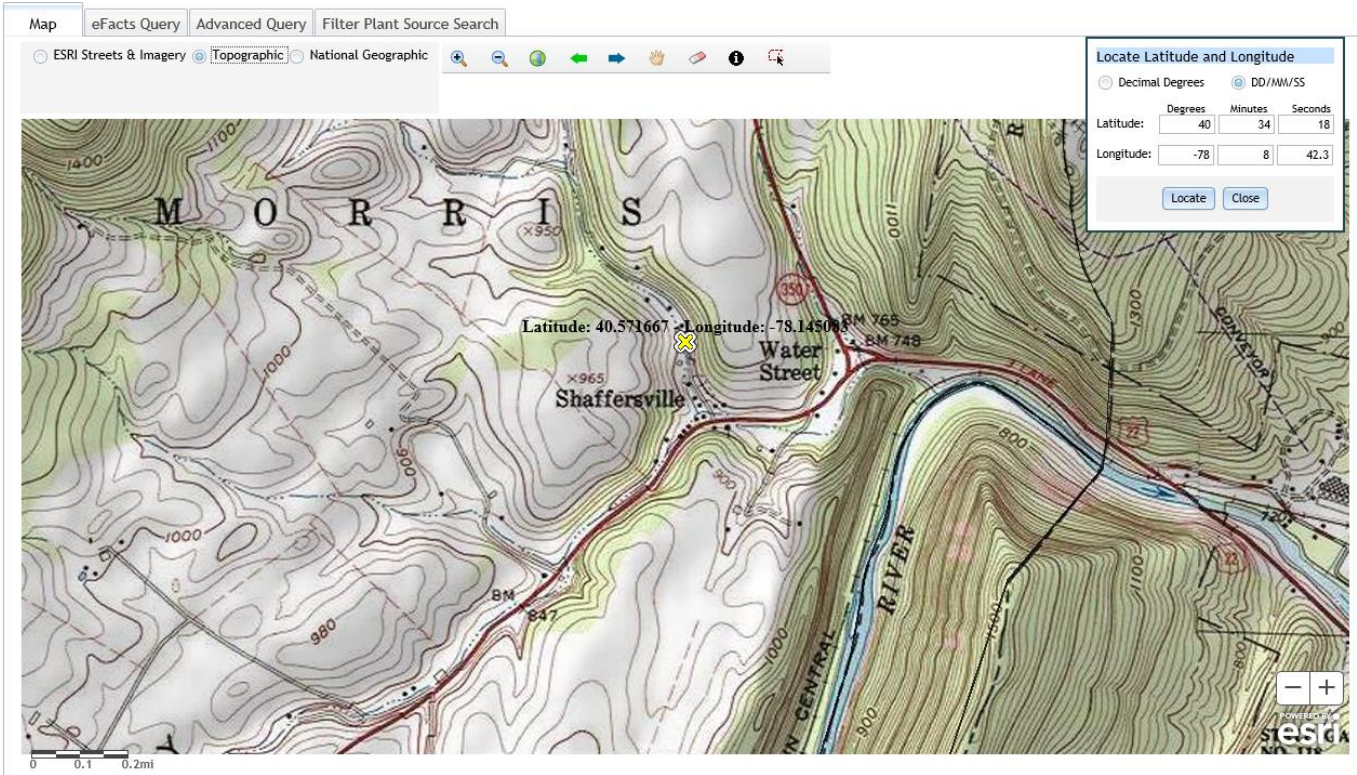
Development of Effluent Limitations and Monitoring Requirements

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 May 17, 2019). 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 Toxic Management Spreadsheet and/or WQM 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 septage 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



USGS StreamStats

IDENTIFY A STUDY AREA
 Basin Delineated

SELECT SCENARIOS

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.

Show Basin Characteristics

Select available reports to display:

- Basin Characteristics Report
- Scenario Flow Reports

Continue

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Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	2.52	square miles
PRECIP	Mean Annual Precipitation	39	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	1.91	miles per square mile
ROCKDEP	Depth to rock	4.7	feet
CARBON	Percentage of area of carbonate rock	24.43	percent

Low-Flow Statistics Parameters [Low Flow Region 2]

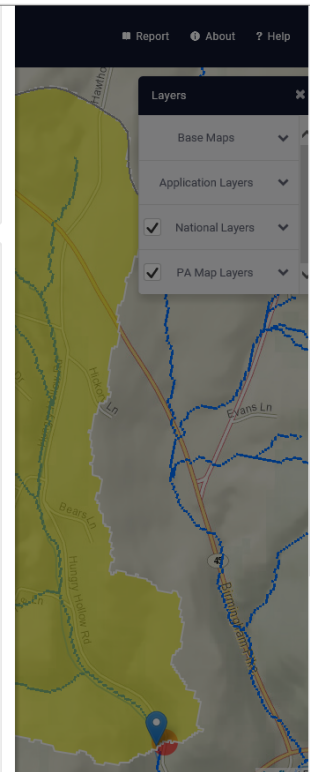
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.52	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	1.91	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.7	feet	3.32	5.65
CARBON	Percent Carbonate	24.43	percent	0	99

Low-Flow Statistics Disclaimers [Low Flow Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.257	ft ³ /s
30 Day 2 Year Low Flow	0.34	ft ³ /s
7 Day 10 Year Low Flow	0.121	ft ³ /s
30 Day 10 Year Low Flow	0.159	ft ³ /s
90 Day 10 Year Low Flow	0.239	ft ³ /s



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
BOD5	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: