pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0259942**
Wastewater Type	**Sewage**	APS ID	**599165**
Facility Type	**SRSTP**	Authorization ID	**1448326**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Steven E. Nye**	Facility Name	**Steve Nye Subdivision**
Applicant Address	38 Harmon Road	Facility Address	38 Harmon Road
	Newburg, PA 17240-9115		Newburg, PA 17240-9115
Applicant Contact	Steven Nye	Facility Contact	Steven Nye
Applicant Phone	(717) 422-4939	Facility Phone	(717) 422-4939
Client ID	252420	Site ID	673194
SIC Code	4952	Municipality	Upper Mifflin Township
SIC Description	Trans. & Utilities - Sewerage Systems	County	Cumberland
Date Application Received	July 21, 2023	WQM Required	
Date Application Accepted	August 8, 2023	WQM App. No.	

Project Description: This is an NPDES Renewal

Summary of Review

The application submitted requests a NPDES renewal permit for the **Steven Nye Subdivision**. The NPDES Permit expired on September 30, 2023. The application has been processed as a Small Flow Treatment Facility (SFTF) due to the type of sewage and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Cumberland County Commissioners and Upper Mifflin Township and the notice was received by the parties on July 14, 2023 and June 2, 2023, respectively. A planning approval letter was not necessary as the facility is neither new or expanding.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes the following information:

1. A description of the facility
2. Type and Quantity of Wastewater or Pollutants Evaluated in the Permit
3. Facility NPDES Compliance History
4. Receiving Waters and Water Supply Information Detail Summary
5. Development of Effluent Limitations and Monitoring Requirements
6. NPDES Parameter Details

Based on the review in this report, it is recommended that the permit be drafted. The proposed permit will expire five (5) years from the effective date.

Approve	Deny	Signatures	Date
x		Steven C. Roselle, P.E. / Environmental Engineer *Steven C. Roselle*	January 9, 2024
x		*Daniel W. Martin* Daniel W. Martin, P.E. / Environmental Engineer Manager	January 10, 2024

Summary of Review

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.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1. Description of the Facility

1.1 Site location

A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

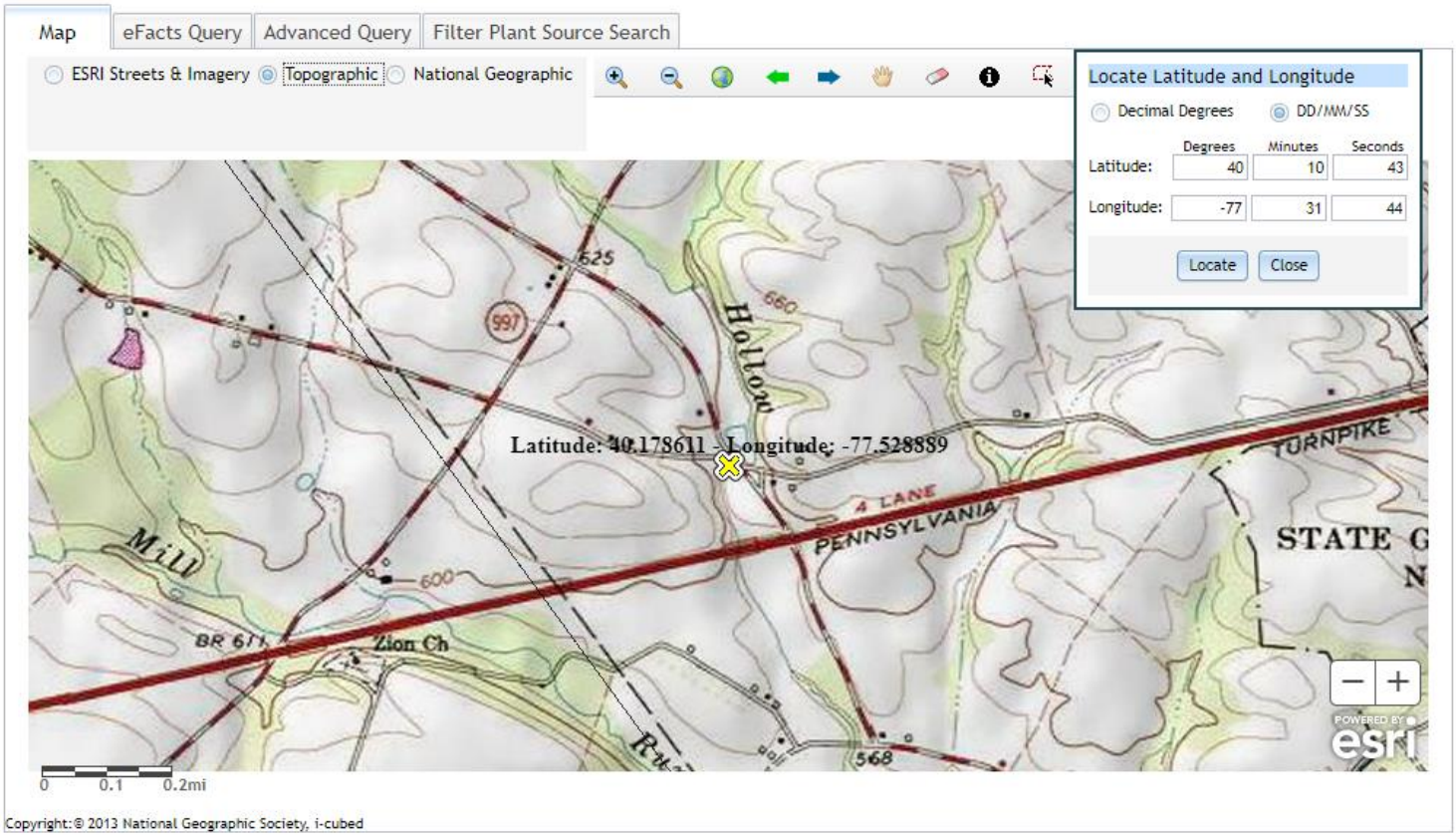
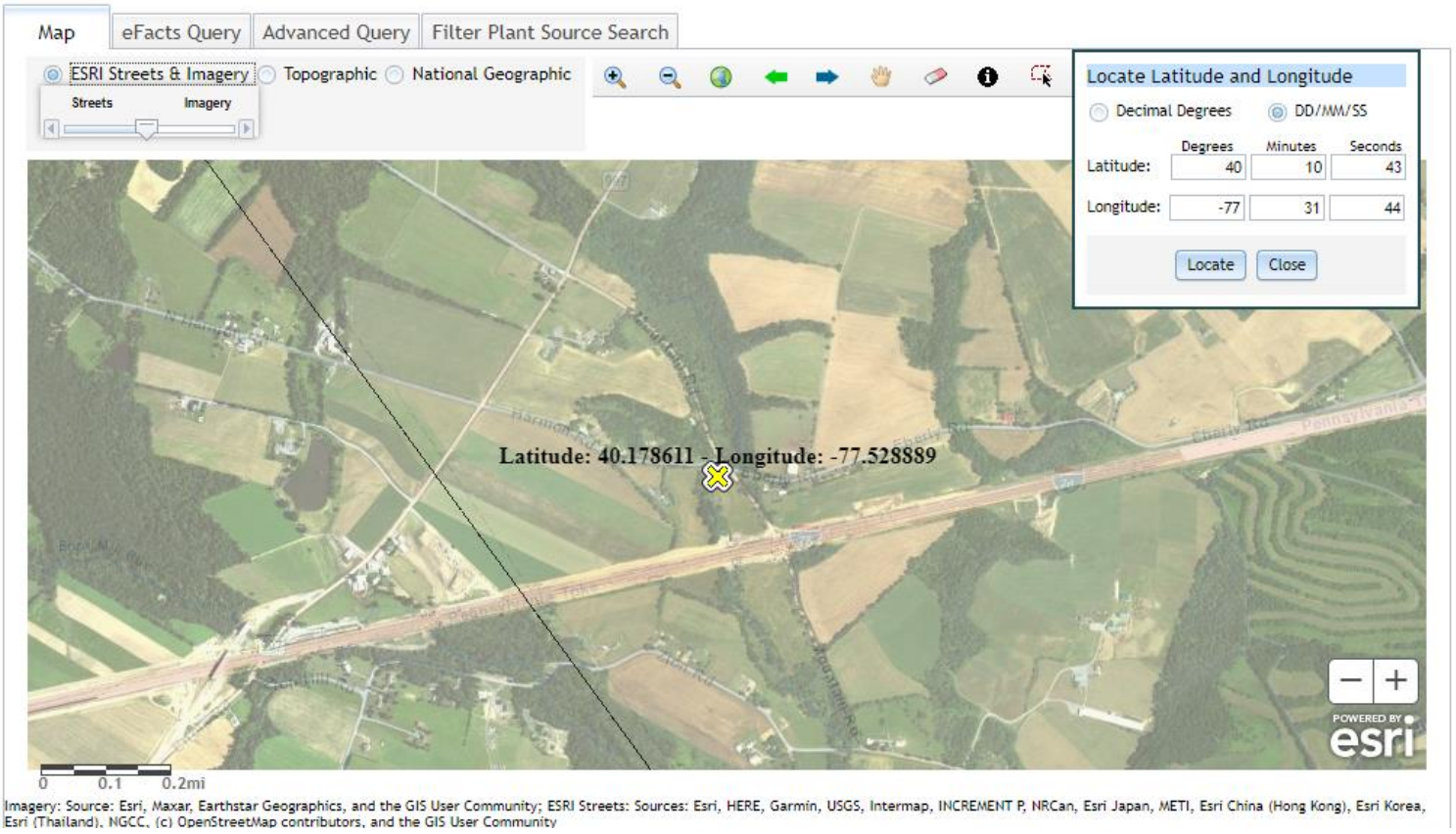


Figure 2: Aerial Photograph of the subject facility



1.2 Description of Wastewater Treatment Process

The subject facility is a 0.0004 MGD (400 GPD) design flow system which will serve a 3-bedroom single residence, consisting of the following:

- 1,000-gallon septic tank
- STB-650 Ecoflo peat filter
- Tablet chlorinator,
- 450-gallon chlorine contact tank
- Outfall structure.

The WQM permit no. 2106408 was issued on April 10, 2007.

The facility is being evaluated for flow, pH, TRC, BOD, TSS and fecal coliform. The existing permits limits for the facility is summarized in Section 2.2.

2. Type and Quantity of Wastewater or Pollutants Evaluated in the Permit

2.1 Facility Outfall Information

The facility has the following outfall information.

Outfall No.	001	**Design Flow (MGD)**	0.0004
Latitude	40º 10' 43.00"	**Longitude**	-77º 31' 44.00"
Wastewater Description:	Sewage Effluent		

2.2 Existing NPDES Permits Limits

The existing NPDES permit limits are summarized in the table.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40º 10' 43.00" , **Longitude** 77º 31' 44.00" , **River Mile Index** 3.0 , **Stream Code** 10459

Receiving Waters: Three Square Hollow Run

Type of Effluent: Sewage Effluent

1. The permittee is authorized to discharge during the period from **October 1, 2018** through **September 30, 2023**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

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
Total Residual Chlorine (TRC)	XXX	XXX	XXX	Report Avg Mo	XXX	XXX	1/month	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
Total Suspended Solids	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

A summary of the most recent inspections during the existing permit review cycle is as follows:

Administrative inspections by DEP Inspector, Mr. Michael Benham, were held on June 9, 2020, and September 10, 2020. These administrative inspections were conducted by telephone and email communications. No problems were reported. The September 10, 2020 DEP report indicates that Mr. Nye utilized Rosenberry's Septic Services to last inspect the system on May 29, 2020.

The latest septic tank pumping record was performed on May 21, 2021 by Rosenberry's Septic Services.

3.2 Summary of DMR Data

A summary of the results for the parameters below over the past two years were provided in the application, and are included in the following table. Effluent testing information was reported by Franklin Analytical, Inc. The reported data complies with permitted values.

Summary of DMR Data				
	$CBOD_5$ (mg/l)	TSS (mg/l)	Fecal (MPN/100 mL)	TRC (mg/l)
No. Samples	4	4	4	24
Maximum Monthly Value	10.2	7.0	<1	0.5
Average Monthly Value	4.05	4.0	<1	0.5

3.3.1 Non-Compliance- NPDES Effluent

The reported data complies with permitted values. No non-compliances were reported.

3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

There were no reported enforcement action for the time frame beginning 10/08/2018 – 11/13/2023.

3.5 Open Violations

No open violations existed as of 11/13/2023.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Three Square Hollow Run. The sequence of receiving streams that Three Square Hollow Run discharges are Conodoguinet Creek, and the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

According to the fact sheet developed for the original permit, and reconfirmed as part of this present analysis, the nearest downstream public water supply intake is Carlisle Borough, located on the Conodoguinet Creek at RMI 35.95, approximately 30 miles from the point of discharge. Considering nature and dilution, the PWS should not be impacted.

4.3 Class A Wild Trout Streams

Three Square Hollow Run: Under Pa Code §93.9o, the entire basin of the Three Square Hollow Run is designated as warm water – migratory fishes. No special protection water is therefore impacted by this discharge. The stream is not designated as a Class A Trout Stream; therefore, no Class A Wild Trout fishery is impacted by this discharge.

DEP's latest integrated report prepared in 2016 showed Three Square Hollow Run is not impaired and the discharge is located in a stream segment listed as attaining uses.

4.4 2022 Integrated List of All Waters (303d Listed Streams):

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

4.5 Low Flow Stream Conditions:

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 year time period. The facility discharge is based upon a known design capacity of the subject facility.

Streamflow: USGS StreamStats produces an estimated Q7-10 flow of 0.0686 cfs at the point of discharge.

Outfall No.	001	Design Flow (MGD)	.0004
Latitude	40º 10' 43"	Longitude	-77º 31' 44""
Quad Name	Newburg	Quad Code	1725
Wastewater Description:	Sewage Effluent		
Receiving Waters	Three Square Hollow Run	Stream Code	10459
NHD Com ID	56407947	RMI	3.0
Drainage Area	4.32	Yield (cfs/mi^2)	0.0158
Q_{7-10} Flow (cfs)	0.0686	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	581	Slope (ft/ft)	N/A
Watershed No.	07B	Chapter 93 Class.	Warm Water Fishes
Existing Use	None	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Carlisle Borough		
PWS Waters	Conodoguinet Creek	Flow at Intake (cfs)	48
PWS RMI	35.95	Distance from Outfall (mi)	30

Notes

1. Drainage Area: The discharge is to Three Square Hollow Run at RMI 3.0. A drainage area upstream of the point of discharge is estimated to be 4.32 sq.mi. according to USGS StreamStats available at https://streamstats.usgs.gov/ss/.

5. Development of Effluent Limitations and Monitoring Requirements

The proposed effluent limitations and monitoring requirements listed in section 6 of this fact sheet are unchanged from the current permit limits. The permit limits 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).

The system is equipped with STB-650 Ecoflo peat filter. According to an alternate technology classification letter issued by DEP Bureau of Point and Non-Point Source Management on February 24, 2014, DEP classified the Ecoflo peat fiber biofilter for use as an alternate on-lot sewage treatment system (Alternate Technology no. A2014-0015-0002). The letter documented that the system has demonstrated that it can produce effluent CBOD5 and TSS of less than 10 mg/L as monthly averages. Therefore, the system should be, if installed properly, able to meet proposed effluent limits for both TSS and CBOD5. Based on a review of AMRs, the system is capable of meeting these effluent limits if proper maintenance and operation is performed (i.e., periodic septic tank pumping, unit cleaning, and annual inspection).

Facilities that are designed based on a flow of less than 2,000 GPD or considered as SRSTPs are exempt from the Bay requirements. Accordingly, it is not necessary for the permittee to perform nutrient monitoring.

6. Proposed NPDES Parameter Details

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
Total Residual Chlorine (TRC)	XXX	XXX	XXX	Report Avg Mo	XXX	XXX	1/month	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
Total Suspended Solids	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001