pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0272256**
Wastewater Type	**Sewage**	APS ID	**992630**
Facility Type	**SRSTP**	Authorization ID	**1272295**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Steven Croud**	Facility Name	**Steven Croud SRSTP**
Applicant Address	416 Western Avenue	Facility Address	11050 Route 62
	Beaver, PA 15009		Tidoute, PA 16351
Applicant Contact	Steven Croud	Facility Contact	Steven Croud
Applicant Phone	(724) 775-3395	Facility Phone	(724) 775-3395
Client ID	349650	Site ID	834492
SIC Code	8800	Municipality	Limestone Township
SIC Description	Private Households	County	Warren County
Date Application Received	April 30, 2019	WQM Required	Yes
Date Application Accepted	May 7, 2019	WQM App. No.	6219407 will be issued concurrently

Project Description: Single Residence Sewage Treatment Plant.

Summary of Review

Act 14 - Proof of Notification was submitted and received.

The applicant should be able to meet the limits of this permit, which will protect the uses of the receiving stream.

I. OTHER REQUIREMENTS:

A. AMRs
B. DMRs
C. Depth of Septage and Scum Measurement
D. Septic Tank Pumping
E. Effluent Chlorine Optimization and Minimization
F. Stormwater into sewers
G. Right of way
H. Solids handling
I. Public Sewerage Availability

SPECIAL CONDITIONS: None.

Proposed treatment will consist of: (WQM Permit no. 6219407) A 1,000 gallon dual compartment septic tank, a Premier Tech EC7-500-C coco filter, and a Salcor 3G Ultraviolet (UV) disinfection unit.

There are no open violations in efacts for Client ID 349650 as of 7/24/2019.

Approve	Deny	Signatures	Date
X		Stephen A. McCauley, E.I.T. / Environmental Engineering Specialist	
X		Justin C. Dickey, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0004
Latitude	41º 42' 40.39"	Longitude	-79º 20' 47.86"
Quad Name	-	Quad Code	-
Wastewater Description:	Sewage Effluent		
Receiving Waters	Allegheny River (WWF)*	Stream Code	42122
NHD Com ID	100469509	RMI	172.0
Drainage Area	-	Yield (cfs/mi^2)	-
Q_{7-10} Flow (cfs)	-	Q_{7-10} Basis	-
Elevation (ft)	-	Slope (ft/ft)	-
Watershed No.	16-F	Chapter 93 Class.	Warm Water Fishes
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	Mercury		
Source(s) of Impairment	Source Unknown		
TMDL Status	-	Name	-

Background/Ambient Data		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake	-		
PWS Waters	-	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	-

* - See page 3 for the freshwater mussel evaluation

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.

This SFTF was designed where applicable in accordance with the SFTF Manual, but it does not qualify for the PAG-04 General Permit due to the use of a Premier Tech EC7-500 coco filter.

No modeling was performed for this NPDES Permit as the Premier Tech EC7-500 coco filter is capable of meeting CBOD5 averages of 8 mg/l and TSS averages of 6 mg/l, which are less than the inputs of the WQ model.

Planning was approved on May 17, 2019.

Threatened and Endangered Mussel Species Concerns and Considerations

The Allegheny River is known to contain state and federally listed threatened and endangered mussel species. Due to the vicinity of this discharge to the Allegheny River, potential impacts to endangered mussel species were evaluated.

The USFWS has indicated in comment letters on other NPDES permits that in order to protect threatened and endangered mussel species, wastewater discharges containing ammonia-nitrogen (NH_3-N), chloride (Cl^-) and nickel, where mussels or their habitat exist, can be no more than 1.9 mg/l, 78 mg/l and 7.3 ug/l, respectively.

This proposed 400 gallon per day discharge from a single residence sewage treatment plant (SRSTP) will flow directly to the Allegheny River. Attachment 1 illustrates the approximate discharge pipe length from the SRSTP to the point of discharge to the Allegheny River.

NPDES permits for SRSTPs do not generally, include monitoring requirement for pollutants such as ammonia-nitrogen, chloride, and nickel. Therefore, aside from the SRSTP treatment plant manufacturer performance data (NORWECO and others) the Department lacked sufficient data to support its assumption that a properly constructed, operated and maintained SRSTP is expected to produce an effluent that would be protective of all the uses of the receiving stream including threatened and endangered mussels. Accordingly, a sampling study was completed on 2/14/2017 by the Erie County Department of Health at the Garth Mathe SRSTP (PA0264041) located in Harborcreek Township, Erie County, Pennsylvania.

At the Garth Mathe SRSTP, Health Department staff along with DEP staff collected a sample of the discharge effluent and a sample in the small stream, where the effluent contacts and mixes with the stream. The effluent sampling result for ammonia-nitrogen (NH_3-N) was 6.52 mg/l, chloride (Cl^-) was 121.9 mg/l, and nickel was <4.0µg/l (non-detect). The sample taken at the point which the treated effluent entered the stream had an ammonia-nitrogen (NH_3-N) concentration of 0.11 mg/l, a chloride (Cl^-) concentration of 19 mg/l, and a nickel concentration of <4.0µg/l (non-detect).

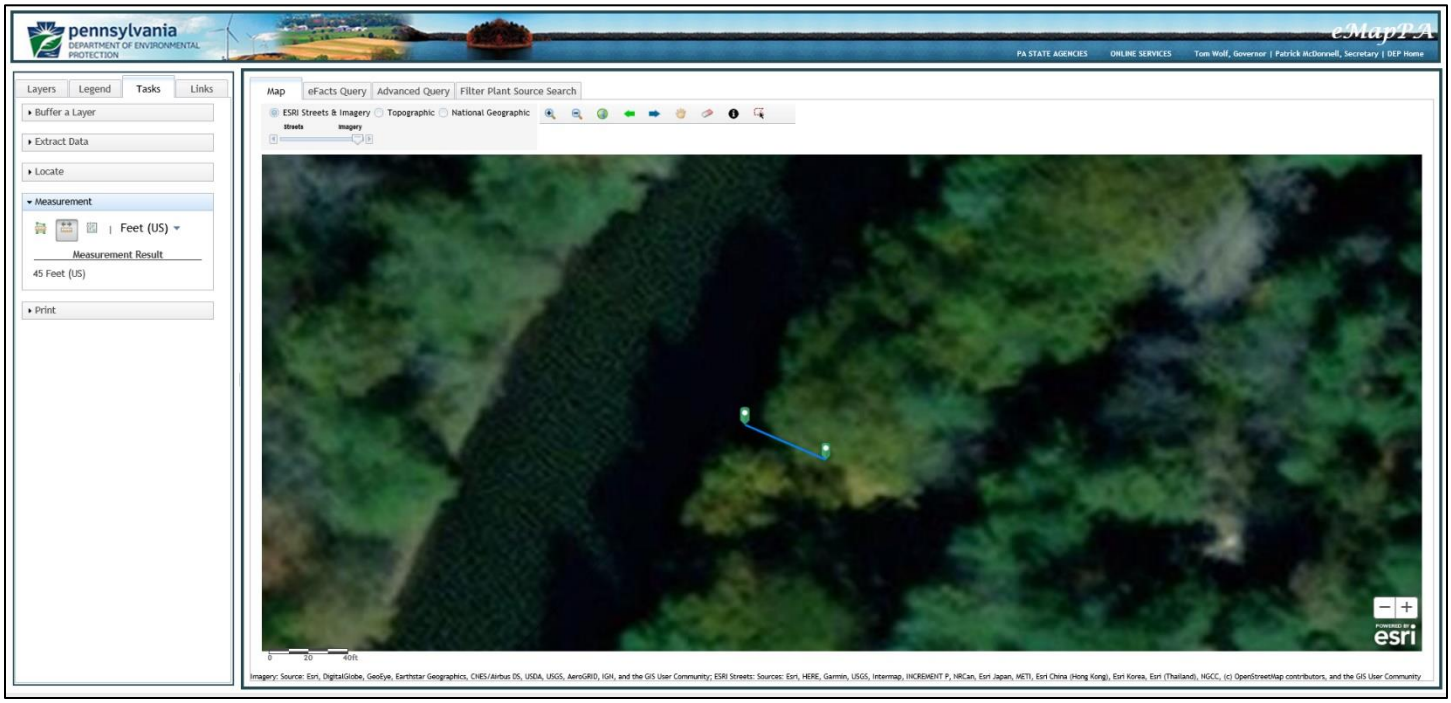
Since the proposed treatment technology at this SRSTP is similar to the Mathe SRSTP, it is not expected to adversely affect threatened or endangered mussel species in the Allegheny River considering the expected effluent quality from the proposed wastewater treatment facility, the size of the proposed discharge, and the assimilative capacity of the Allegheny River once the effluent reaches it.

A summary of the Garth Mathe SRSTP (PA0264041) sampling is as follows:

NPDES PERMIT NO.	PA0264041	
WQM PERMIT NO.	2515406	
PERMITTEE	GARTH MATHE	
FACILITY NAME	GARTH MATHE SRSTP	
STREET ADDRESS	3749 WILLIAMS RD	
CITY	ERIE	
ZIP CODE	16510	
MUNICIPALITY	HARBORCREEK TOWNSHIP	
COUNTY	ERIE	
TREATMENT TYPE	Coco	
DATE SAMPLE(S) COLLECTED	2/14/2017	
EFFLUENT SAMPLING RESULTS	Sample ID: 0682 005	
Ammonia-Nitrogen (NH_3-N)	**6.52**	**mg/L**
Chloride (Cl^-)	**121.9**	**mg/L**
Nickel	**<4.0**	**µg/L**
MIXING ZONE SAMPLING RESULTS	Sample ID: 0682 105	
Ammonia-Nitrogen (NH_3-N)	**0.11**	**mg/L**
Chloride (Cl^-)	**19**	**mg/L**
Nickel	**<4.0**	**µg/L**

Attachment 1

Approximate Discharge Pipe Flow path from the SRSTP to the Point of Discharge to the Allegheny River from the PA DEP eMapPA website (http://www.depgis.state.pa.us/emappa/)



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
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Upon Request	Grab
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: Outfall 001, after Ultraviolet (UV) light disinfection.

Flow is monitor only based on Chapter 92a.61. The limits for pH are technology-based on Chapter 93.7. The limits for BOD5, Total Suspended Solids, and Fecal Coliforms are technology-based on Chapter 92a.47.