pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES/WQM PERMITS FACT SHEET INDIVIDUAL SFTF/SRSTP

Application Type	**New**	Application No.	**PA0267210 & WQM 3120403**
Wastewater Type	**Sewage**	APS ID	**1021032**
Facility Type	**SRSTP**	Authorization ID	**1322631 & 1322617 WQM**

Applicant, Facility and Project Information

Applicant Name	**Steven C. Stagon**	Facility Name	**Steven Stagon Properties**
Applicant Address	PO Box 7311	Facility Address	3474 McAlevys Ford Road
	Ft. Lauderdale, FL 33338		Petersburg, PA 16669
Applicant Contact	Steven Stagon	Facility Contact	Steven Stagon
Applicant Phone	(954) 815-2550	Facility Phone	(954) 815-2550
Client ID	357770	Site ID	842357
SIC Code	8811	Municipality	Jackson Township
SIC Description	Services - Private Households	County	Huntingdon
Date Application Received	August 4, 2020	WQM Required	
Date Application Accepted	August 13, 2020	WQM App. No.	3120403

Project Description: Installation of single residence sewage treatment plant for NPDES & WQM permits.

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 Jackson Township, Huntingdon County. The annual average design flow is 400 gallons per day. The discharge will be to Unnamed Tributary to Laurel Run which is classified as High-Quality Cold Water & Migratory Fishes (HQ-CWF & MF). The WQM permit for the construction of the treatment system with permit No. 3120403 is concurrently under review. DEP Planning for the project was approved under Code No. A3-31919-113-3s.

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 published in the Pennsylvania Bulletin for public comments for 30 days.

Based on the review outlined in this fact sheet, it is recommended that the NPDES permit be drafted. Also, it is recommended that the WQM permit be issued upon issuance of the NPDES permit.

Approve	Deny	Signatures	Date
X		*Hilaryle* Hilary H. Le / Environmental Engineering Specialist	August 25, 2020 revised September 9, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Clear Water Program Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0004
Latitude	40º 40' 45.09"	Longitude	-77º 52' 41.43"
Quad Name	Pine Grove Mills	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Laurel Run (HQ-CWF, MF)	Stream Code	15462
NHD Com ID	65603490	RMI	0.3600
Drainage Area	2.01 mi.^{2}	Yield (cfs/mi^2)	See comments below
Q_{7-10} Flow (cfs)	See Comments below	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	Approx. 962	Slope (ft/ft)	
Watershed No.	11B	Chapter 93 Class.	High Quality-Cold Water, Migratory Fish
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Huntingdon Borough Water Dept., Huntingdon County		
PWS Waters	Standing Stone Creek	Flow at Intake (cfs)	
PWS RMI	0.2 mile	Distance from Outfall (mi)	Approximate 26 miles

Changes Since Last Permit Issuance: none, because the application type is new.

Drainage Area
The discharge will be to unnamed tributary to Laurel Run to Laurel Run at 0.36 RMI. A drainage area upstream of the point of proposed discharge is estimated to be 2.01 mi.^{2}, according to USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Stream flows
A USGS station Laurel Run at McAlevys Fort, PA (01559200) was used to determine the site stream flow. Based on the recent USGS StreamStats flow report available at https://streamstats.usgs.gov/ss/, the Q_{7-10} and drainage area at the station are 0.69 cfs and 16.9 mi.^{2}, respectively. The Q_{7-10} yield is 0.04 cfs/mi.^{2} (0.69 cfs / 16.9 mi.^{2}) and the Q_{7-10} at discharge is 0.08 cfs (0.04 cfs/mi.^{2} x 2.01 mi.^{2}) for the drainage area at discharge as calculated by StreamStats is 2.01 mi.^{2}.

Unnamed Tributary to Laurel Run to Standing Stone Creek
Under 25 Pa Code §93.9n, Unnamed Tributary to Laurel Run is designated as a High Quality Cold-Water and Migratory Fishes and attaining its uses. The Laurel Run is a tributary to Standing Stone Creek. The discharge from the end of sewer treatment system to reach Unnamed Tributary to Laurel Run is approximately 50 feet. Additionally, the dilution ratio of >100/1 is sufficient to assimilate an effluent without impact (dilution ratio is Q_{stream} / $Q_{discharge}$ = 0.08 cfs / [0.0004 MGD * (1.55 cfs/MGD)] = 129 : 1) [Water Quality Antidegradation Implementation Guidance No. 391-0300-002/November 29, 2003/Page 60]. Therefore, HQ limits do not apply to the discharge.

Based on integrated report 2018, Unnamed Tributary to Laurel Run, assessment IDs 21690 & 812, are not impaired.

No TMDL has been developed yet to address this impairment. Standing Stone Creek does not support a Class A Wild Trout fishery. Therefore, no Class A Wild Trout fishery is impacted by this discharge.

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 Huntingdon Borough Water Department, Huntingdon County located on Standing Stone Creek, approximately 26 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 serve the three-bedroom single family residences (400 GPD) located at 3474 McAlevys Fort Road, Petersburg, PA 16669. The facilities will be owned and maintained by Steven Stagon. The proposed treatment process, according to the application, is as follows:

1000-gallon dual compartment concrete septic tank (or equivalent) → Zabel A300 effluent filter with alarm → Premier Tech EC7-500-C-P Coco filter → DiUV 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 Premier Tech EC7-500-C-P Coco (filter) will be provided, which has been demonstrated to produce effluent that does not exceed 10 mg/L BOD_5 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 July 23, 2020, DEP approved the Act 537 planning as a revision to the Act 537 official sewage facilities plan of Jackson Township (DEP Code No. A3-31919-113-3s).

This is a new facility; therefore, there are no effluent sample results, nor any 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

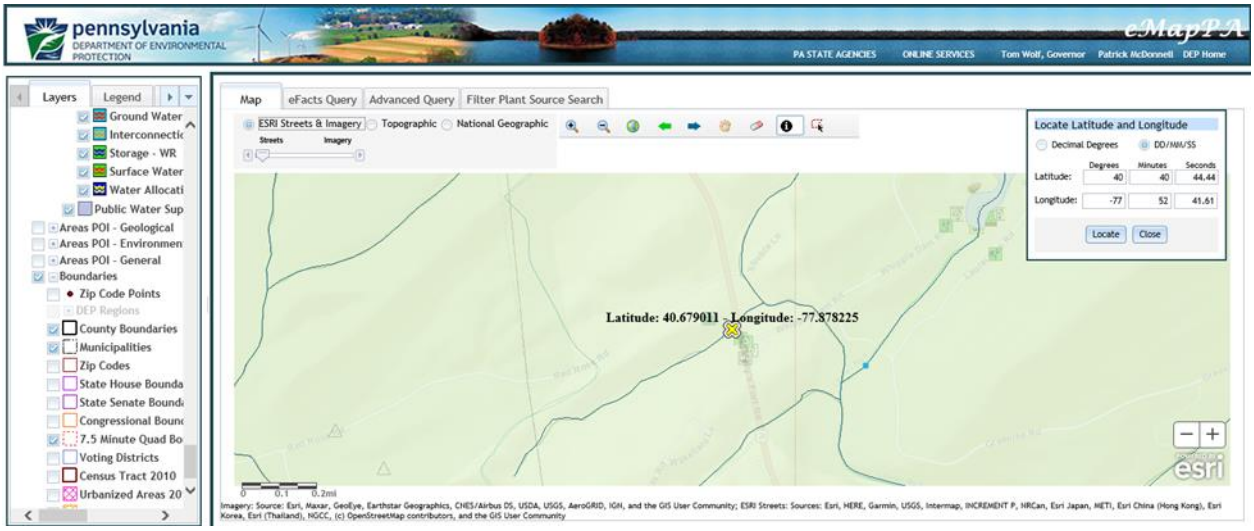
The effluent limitations and monitoring requirements are derived from DEP's Standard Operating Procedure (SOP) for New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications (SOP No. BPNPSM-PMT-003, revised May 17, 2019). Since the facility will utilize ultraviolet (UV) disinfection, monitoring requirements for total residual chlorine are not applicable.

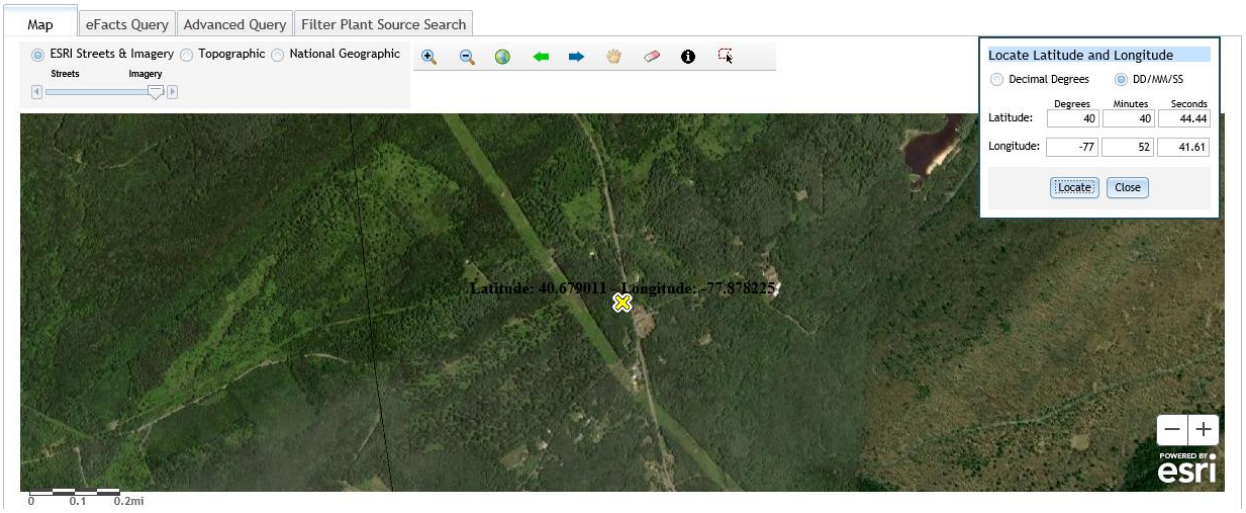
According to the SOP referenced above, water quality monitoring using PentoxSD and/or WQM are not required for SRSTPs. The permittee will be required to submit a completed Annual Maintenance Report (AMR) as part of the permit requirements. No DMR is necessary for any facilities that are required to report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

The draft permit will include the following Part C conditions:

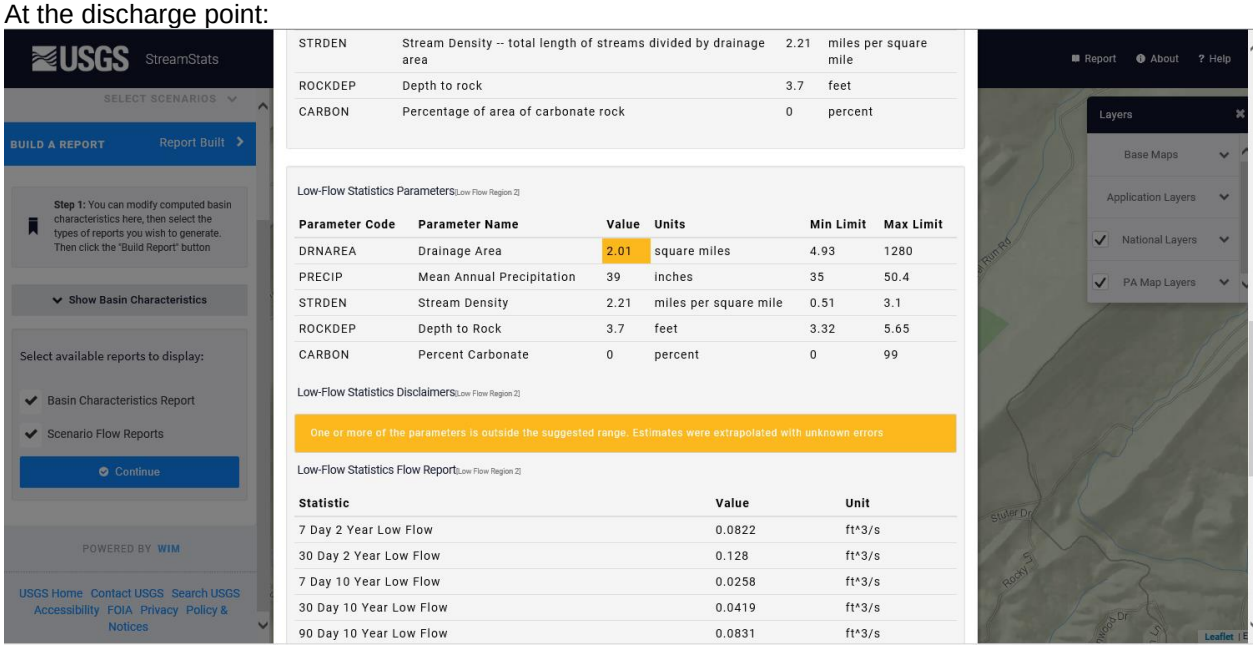
a. Small Flow Treatment Facility Maintenance, including measurement of the depth of septage and scum, 3-year septic tank pumping requirement, reporting requirement of a completed Annual Maintenance Form.
b. Stormwater Prohibition
c. Property Rights
d. Proper Disposal of Solids

This is the topographic map.





At the discharge point:



STRDEN	Stream Density -- total length of streams divided by drainage area	2.21	miles per square mile
ROCKDEP	Depth to rock	3.7	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters[Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.01	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	2.21	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	3.7	feet	3.32	5.65
CARBON	Percent Carbonate	0	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	0.0822	ft^3/s
30 Day 2 Year Low Flow	0.128	ft^3/s
7 Day 10 Year Low Flow	0.0258	ft^3/s
30 Day 10 Year Low Flow	0.0419	ft^3/s
90 Day 10 Year Low Flow	0.0831	ft^3/s

At the station Laurel Run at McAlevys Fort, PA (01559200)

PRECIP	Mean Annual Precipitation	39	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	1.58	miles per square mile
ROCKDEP	Depth to rock	4.3	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters[Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	16.9	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	1.58	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.3	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

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

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	SEp
7 Day 2 Year Low Flow	1.54	ft^3/s	38	38
30 Day 2 Year Low Flow	2.14	ft^3/s	33	33
7 Day 10 Year Low Flow	0.69	ft^3/s	51	51
30 Day 10 Year Low Flow	0.965	ft^3/s	46	46
90 Day 10 Year Low Flow	1.62	ft^3/s	36	36

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
	Annually Average	Average Weekly	Instantaneous Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
BOD_5	XXX	XXX	10.0	XXX	XXX	20.0	1/year	Grab
TSS	XXX	XXX	10.0	XXX	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	200	XXX	XXX	XXX	1/year	Grab

Compliance Sampling Location:

Other Comments: