pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0255459**
Wastewater Type	**Sewage**	APS ID	**1092151**
Facility Type	**SRSTP**	Authorization ID	**1446075**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Bradley w Peters**	Facility Name	**Peters SRSTP**
Applicant Address	157 Barr Road	Facility Address	157 Barr Road
	Finleyville, PA 15332-3708		Finleyville, PA 15332
Applicant Contact	Bradley Peters	Facility Contact	Bradley Peters
Applicant Phone	(412) 551-5234	Facility Phone	(412) 551-5234
Client ID	350060	Site ID	830632
SIC Code	8811	Municipality	Nottingham Township
SIC Description	Services - Private Households	County	Washington
Date Application Received	July 3, 2023	WQM Required	No
Date Application Accepted	August 8, 2023	WQM App. No.	

Project Description: NPDES application to discharge from existing Single Residence Sewage Treatment Plant (SRSTP)

Summary of Review

The PA Department of Environmental Protection received an application to renew an NPDES permit for the Peters Properties SRSTP. The facility has a design flow of 400 GPD and serves an existing dwelling. The facility discharges to an unnamed tributary to Mingo Creek. Both the tributary and Mingo Creek are classified as High-Quality Trout Stocked Fishery. The facility is located in Nottingham Township, Washington County.

The NPDES application was reviewed according DEP Policies, including the SOP for New and Reissued Individual SFTF NPDES Permits. Changes to monitoring requirements were made to bring the NPDES permit into conformance with current DEP policies.

This facility discharges into an unnamed tributary to Mingo Creek, a High-Quality Trout Stock Fishery in watershed 19-C.

The facility consists of:

- One Norweco Singulair Bio-Kinetic Model 960-500 Three-Chamber Extended Aeration treatment system. This package plant is rated to treat 500 gpd of domestic wastewater.
- One Norweco Hydro-Kinetic Bio-Film Reactor for further treatment, with dosing chamber. This package plant is rated to treat 800 gpd of domestic wastewater.
- One Norweco Model AT 1500 UV Disinfection system within the dosing chamber.

The Singulair Hydro-Kinetic Bio-Film Reactor is approved by DEP for replacement of onlot systems

Act 14 notification was provided to Nottingham Township and Washington county on August 17 and August 22 respectively.

Approve	Deny	Signatures	Date
x		John Price Jack Price / Environmental Engineering Specialist	February 22, 2024
x		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E./Environmental Engineer Manager	February XX, 2024

Summary of Review
There are no open violations by Client ID. The last compliance evaluation inspection resulted in no violations noted. Issuance of the permit is recommended. 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.

Discharge and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0004
Latitude	40º 13' 55.92"	Longitude	-80º 3' 5.82"
Quad Name	Hackett	Quad Code	40080B1
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Mingo Creek (HQ-TSF)	Stream Code	UNT 39593
NHD Com ID	99409104	RMI	0.2200
Drainage Area	0.81	Yield (cfs/mi^2)	0.008
Q_{7-10} Flow (cfs)	0.006	Q_{7-10} Basis	USGS
Elevation (ft)	1135.17	Slope (ft/ft)	
Watershed No.	19-C	Chapter 93 Class.	HQ-TSF
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	

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

Nearest Downstream Public Water Supply Intake		PA Amer Water Co-Pittsburgh, PWSID 5020039 (70 MGD)	
PWS Waters	Monongahela River	Flow at Intake (cfs)	550
PWS RMI	25.71	Distance from Outfall (mi)	7.09 Linear Miles 11.01 River Miles

Changes Since Last Permit Issuance:

Several changes to monitoring requirements were made to bring the NPDES permit to current DEP standards. Where backsliding is proposed, a justification is given as provided for in Section 402(o)(2) of the Clean Water Act. The list of proposed monitoring changes are as follows:

Proposed Change	Justification
Change minimum measurement frequency for all parameters from "1/6 months" to "2/year".	Table 6-3 of the Permit Writer's Manual. More details may be found under the "Additional Considerations" section of this fact sheet.
Remove the "UV Transmittance (%)" parameter.	Previous limit was issued under a technical mistake or mistaken interpretation of law. UV Transmittance was not necessary per the SOP for SFTFs in effect at the time and is not necessary as of this date. More details may be found under the "Development of Effluent Limitations" section of this fact sheet.
Add seasonal effluent limits for the "Ammonia-Nitrogen" parameter. Summer NH_3-N: 5.0 mg/L Winter NH_3-N: 15.0 mg/L	Previous limit was issued under a technical mistake or mistaken interpretation of law. The fact sheet for the previous NPDES permit does not provide a rigorous justification for implementation of a year-round monthly average limit of 5 mg/L. Chapter 9 and Appendix B prescribe a Winter seasonal limit of 15 mg/L Ammonia-Nitrogen for SRSTPs. This guidance was in effect at the time effluent limitations were established for this NPDES permit. More details may be found under the "Development of Effluent Limitations" section of this fact sheet.

Other Comments:

Technology-Based Limitations (TBELs)

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SFTF permits based on the requirements of DEP's "Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application" (SOP No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised May 17, 2019).

Parameter	Avg	IMAX	Sample Type	Frequency: SFTFs	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate (SRSTPs) Measured (SFTFs)	1/month	1/year
BOD5 (mg/L)	10	20	Grab	1/month	1/year
TSS (mg/L)	10	20	Grab	1/month	1/year
pH*	6.0 S.U. Inst. Min.	9.0 S.U.	Grab	1/month	1/year
TRC (mg/L)	Report for SRSTPs; Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L for SFTFs		Grab	1/month	1/year
Fecal Coliform (No./100 ml)	200 Geometric Mean (SFTFs) / Average (SRSTPs)		Grab	1/month	1/year

***** Technology-Based effluent limits for pH will be imposed based upon Federal Regulation 133.102(c) and State Regulation 95.2(1).

Comments: This is a new SRSTP with UV disinfection. The facility will not be required to measure TRC due to the absence of chlorination facilities.

Anti-Degradation Best Available Combination of Technology (ABACT) TBELs

Outfall 001 discharges to an unnamed tributary to Mingo Creek, a HQ-TSF stream. The discharge for this SRSTP is a treated residential sewage flow of 400 GPD.

The following Antidegradation Best Available Combination of Technologies (ABACT) effluent limits, at a minimum, will be established based on the requirements in Chapter 9 and Appendix B of DEP's "Water Quality Antidegradation Implementation Guidance" (Doc. No. 391-0300-002; November 29, 2003).

Parameter	Treatment Process Performance Expectations (mg/L)		
	<2,000 gpd	2,000-50,000 gpd	>50,000 gpd
$CBOD_5$ (May 1 – Oct. 31)	**10**	10	10
$CBOD_5$ (Nov. 1 – Apr. 30)	**20**	20	10
Suspended Solids	**20**	10	10
NH_3-N (May 1 – Oct. 31)	**5.0**	3.0	1.5
NH_3-N (Nov. 1 – Apr. 30)	**15.0**	9.0	4.5
Effective disinfection	Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encouraged and must be considered.		
Other parameters, as needed	*Determined by the size and characteristics of the proposed discharge, may include – NO_2/NO_3-N, Total Phosphorus, Copper, Lead, Zinc*		

Development of effluent limitations:

Effluent limitations were derived from ABACT in the Antidegradation Implementation Guidance and from SFTF SOP BCW-PMT-003; for each parameter, the more stringent of either document was selected as the limitation.

Flow monitoring:
Flow monitoring will be placed in this permit in accordance with BCW-PMT-003. The reporting frequency set forth is once a year and sample type is “Estimate” (for SRSTP.)

Biochemical Oxygen Demand (BOD_5)
An average annual BOD_5 limit of 10 mg/l and IMAX limit of 20 mg/l will be placed in this permit. These limits are consistent with the SOP and are more stringent than antidegradation guidance.

Total Suspended Solids (TSS)
An average annual BOD_5 limit of 10 mg/l and IMAX limit of 20 mg/l will be placed in this permit. These limits are consistent with the SOP and are more stringent than the antidegradation ABACT.

Fecal Coliform:
A year-round annual average and IMAX limit of 200 No./100 ml will be placed in this permit. This limit is consistent with the SOP and antidegradation ABACT.

Ammonia Nitrogen:
An average annual Summer limit of 5.0 mg/l and IMAX limit of 10.0 mg/l will be placed in this permit. An average annual Summer limit of 5.0 mg/l and IMAX limit of 10.0 mg/l will be placed in this permit. The SOP for SFTFs does not require monitoring of Ammonia-Nitrogen. Antidegradation ABACT sets a limit of 5.0 mg/L in summer months, and 15.0 mg/L in winter months. The ABACT is the more stringent, therefore ABACT is chosen.

pH:
Daily minimum pH of 6.0 and Daily Maximum pH of 9.0 S.U. will be applied in this permit per Pa Code 25 Ch. 95.2(1).

UV:
The SOP indicates that it is not necessary to require UV intensity or transmittance monitoring in the permit for SRSTPs/SFTFs. This is also consistent with Antidegradation ABACT requirements for effective disinfection.

Additional Considerations:

Monitoring Frequency

Chapter 6.B. of the Permit Writer's Manual (DEP Document No. 386-0400-001, Revised June 28, 2023) describes the self-monitoring requirements for NPDES Permits. Table 6-3 outlines minimum flow-based monitoring frequencies. The SOP does not list a minimum frequency for Ammonia-Nitrogen monitoring, so Table 6-3 was used to determine 2/yr monitoring frequency.

Chapter 6.B. lists impact of discharge on receiving stream and the expense of monitoring as a factor that should be considered in establishing self-monitoring requirements. For this discharge to a High-Quality stream, the 2/yr monitoring of $CBOD_5$, Total Suspended Solids, Fecal Coliform, pH, and Flow was selected.

2/yr monitoring is established for $CBOD_5$, Total Suspended Solids, pH, Flow, and Fecal Coliform based on the following factors:

- The impact and quality of the receiving stream.
- The fact that an effluent sample will be collected at least twice per year due to Ammonia-Nitrogen monitoring per Table 6-3.

Table 6-3 – Self-Monitoring Requirements for SEWAGE Discharges

Plant Design Flow (MGD)	Flow Monitoring	C-BOD_5 or BOD_5	Suspended Solids	pH	Fecal Coliform	Chlorine Residual	NH_3-N	Phosphorus	DO	Toxics
Single Residence *(Individual Permit)*	2/year by estimate	2/year*	2/year*	1/mont h*	2/year*	1/month*	2/year*	2/year*	2/year*	N/A
.0005 to .002	weekly, using average pump rate or weir (a)	1/month*	1/month*	daily*	1/month*	daily*	1/month*	1/month*	daily*	N/A
.002 to .01	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	daily*	N/A
0.01 to 0.1	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	Daily*	1/week*
0.1 to 1.0	meter	1/week**	1/week**	daily*	1/week*	daily*	1/week**	1/week**	daily*	1/week****
1.0 to 5.0	meter	2/week***	2/week***	daily*	2/week*	daily*	2/week***	2/week***	daily*	1/week****
5.0 to 25.0	meter	daily***	daily***	daily*	daily*	1/shift*	daily***	daily***	daily*	1/week****
over 25.0	meter	daily***	daily***	1/shift*	daily*	1/shift*	1/shift***	1/shift***	1/shift*	1/week****

* Grab sample-these should be most representative of the effluent and are to be taken at a time when the normal daily maximum flow would reach the sampling point.

** 8-hour composite sample.

*** 24-hour composite sample.

**** Same sample type as for Industrial Process Wastewater (See Table 6-4).

DEP Classification of Technology

The technical specifications for the Singulair Bio-Kinetic Model 960-500 and the Hydro-Kinetic Bio-Film systems are NSF approved to treat 500 gpd and 800 gpd respectively. Furthermore, this combination of systems is classified by the DEP for use as an alternative onlot sewage systems when constructed and operated for flows ranging between 400 gpd and 800 gpd. The alternate technology listings may be found on the following web page: https://www.dep.pa.gov/Business/Water/CleanWater/WastewaterMgmt/Act537/OnlotDisposal/Pages/OnlotAlternateTechnologyListings.aspx

Facility: **Peters Properties SRSTP**

NPDES Permit No.: **PA0255459**

Inspection Summary:

	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR
3237900	08/18/2021	Compliance Evaluation	No Violations Noted	MILSOP, LISA
3240200	08/18/2021	Administrative/File Review	No Violations Noted	MILSOP, LISA

Violation Summary:
None on record.

Open Violations by Client ID:
None on record.

Enforcement Summary:
None on record.

Compliance Status: TBD

Other Comments: The Compliance Status of the facility will be determined prior to the issuance of the final permit. At that time a fact sheet addendum will be issued with the compliance status determination.

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	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	2/year	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	2/year	Grab
CBOD5	XXX	XXX	XXX	10.0	XXX	20.0	2/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	2/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	2/year	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	15.0	XXX	30.0	2/year	Grab
Ammonia May 1 - Oct 31	XXX	XXX	XXX	5.0	XXX	10.0	2/year	Grab

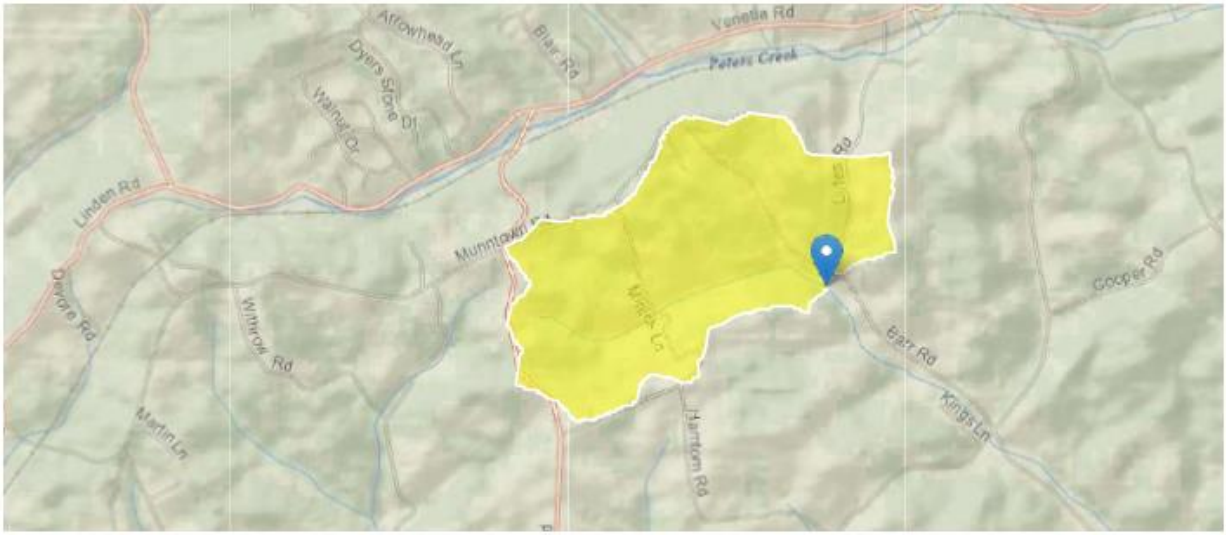
Compliance Sampling Location: Outfall 001

Other Comments: N/A

Attachment 1-StreamStats Report

PA0255459 StreamStats Report

Region ID: PA
Workspace ID: PA20240222182434345000
Clicked Point (Latitude, Longitude): 40.23217, -80.05158
Time: 2024-02-22 13:24:57 -0500



Outlet Elevation: 1135.17

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRN	Drainage quality index from STATSGO	3.7	dimensionless
DRNAREA	Area that drains to a point on a stream	0.81	square miles
ELEV	Mean Basin Elevation	1181	feet
OUTLETXA83	X coordinate of the outlet, in NAD_1983_Albers,meters	-174571.805	meters
OUTLETYA83	Y coordinate of the outlet, in NAD_1983_Albers, meters	138835.5997	meters
PRECIP	Mean Annual Precipitation	39	inches
STRMTOT	total length of all mapped streams (1:24,000-scale) in the basin	1.4	miles

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.81	square miles	2.26	1400
ELEV	Mean Basin Elevation	1181	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

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 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0218	ft^3/s
30 Day 2 Year Low Flow	0.0424	ft^3/s
7 Day 10 Year Low Flow	0.00628	ft^3/s
30 Day 10 Year Low Flow	0.0136	ft^3/s
90 Day 10 Year Low Flow	0.0281	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.19.4
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1