

Application Type New  
Wastewater Type Sewage  
Facility Type SRSTP

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

Application No. PA0292737  
APS ID 1077340  
Authorization ID 1420483

**Applicant, Facility and Project Information**

Applicant Name	<u>Paula Larsen</u>	Facility Name	<u>Paula Larsen SRSTP</u>
Applicant Address	<u>558 Clay Furnace Road</u> <u>Sharpsville, PA 16150-3402</u>	Facility Address	<u>558 Clay Furnace Road</u> <u>Sharpsville, PA 16150-3402</u>
Applicant Contact	<u>Paula Larsen</u>	Facility Contact	<u></u>
Applicant Phone	<u>(724) 866-8764</u>	Facility Phone	<u></u>
Applicant Email	<u>palarsen@roadrunner.com</u>		<u></u>
Client ID	<u>374153</u>	Site ID	<u>859801</u>
SIC Code	<u>8800</u>	Municipality	<u>Clark Borough</u>
SIC Description	<u>Private Households</u>	County	<u>Mercer</u>
Date Application Received	<u>December 9, 2022</u>	WQM Required	<u>Yes</u>
Date Application Accepted	<u>December 21, 2022</u>	WQM App. No.	<u>4322410</u>
Project Description	<u>Single Residence Sewage Treatment Plant</u>		

**Summary of Review**

This is a new discharge for an existing 3 bedrooms dwelling with proposed construction of a single residence sewage treatment plant to replace a malfunctioning septic system.

Proposed treatment will consist of (WQM Permit No. 4322410): Norweco singulair Bio-Kinetic Model 960-500/600 GPD wastewater treatment system with a Norweco singulair Hydro-Kinetic Bio-Film reactor. This system consists of two separate treatment tanks.

- The first tank has a volume of 1300 gallons and houses a 450-gallon pretreatment chamber, an extended aeration chamber with a Norweco singulair Model 206C aerator, and a final clarification chamber with a Bio-Kinetic system and a Bio-Static sludge return.
- The second tank houses a Hydro-Kinetic bio film reactor, an in-line Norweco Model AT 1500 UV disinfection unit, which will provide final disinfection of the effluent, a 500-gallon pump chamber and an effluent pump.

The effluent will then be pumped to the proposed point of discharge at a proposed catch basin to be installed on an existing privately owned 18" diameter drainage pipe that conveys stormwater runoff along the southern boundary line of the subject property from west to east on the north side of Clay Furnace Road, and ultimately discharges to a perennial stream, Magargee Run.

Act 14 – Proof of Notification was submitted and received.

SPECIAL CONDITIONS: NONE

The EPA waiver is in effect.

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.

Approve	Deny	Signatures	Date
X		Aeshah Shameseldin Aeshah Shameseldin / Civil Engineer Trainee	December 21, 2022
X		Adam J. Pesek (Lead Reviewer) for Vacant / Environmental Engineer Manager	December 28, 2022

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>0.0004</u>
Latitude	<u>41° 16' 17.18"</u>	Longitude	<u>-80° 23' 30.39"</u>
Quad Name	<u>Sharpsville</u>	Quad Code	<u>41080C4</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Magargee Run (WWF)</u>	Stream Code	<u>36050</u>
NHD Com ID	<u>130034197</u>	RMI	<u>1.88</u>
Drainage Area	<u>0.000116</u>	Yield (cfs/mi <sup>2</sup> )	<u>0.1</u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.0000116</u>	Q <sub>7-10</sub> Basis	<u>Default</u>
Elevation (ft)	<u>1035</u>	Slope (ft/ft)	<u>---</u>
Watershed No.	<u>20-A</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u>---</u>	Existing Use Qualifier	<u>---</u>
Exceptions to Use	<u>---</u>	Exceptions to Criteria	<u>---</u>
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	<u>---</u>		
Source(s) of Impairment	<u>---</u>		
TMDL Status	<u>---</u>	Name	<u>---</u>
Background/Ambient Data		Data Source	
pH (SU)	<u>7</u>	Default	
Temperature (°C)	<u>25</u>	Default	
Hardness (mg/L)	<u>100</u>	Default	
Other:	<u></u>		
Nearest Downstream Public Water Supply Intake	<u>Reynolds Water Company</u>		
PWS Waters	<u>Shenango River at Big Run</u>	Flow at Intake (cfs)	<u>8.088</u>
PWS RMI	<u>53.71</u>	Distance from Outfall (mi)	<u>15.1 (approximately)</u>

Changes Since Last Permit Issuance: N/A - This is a proposed discharge (Planning was approved on November 17, 2022)

Other Comments: This SRSTP 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 Norweco Singulair Model 960 Aerobic Treatment Unit with a Hydro-Kinetic Bio-Film Reactor.

The Hydro-Kinetic Bio Film Reactor and the Norweco Model AT 1500 UV disinfection unit is reportedly capable of meeting CBOD5 averages of 10 mg/L and TSS averages of 10 mg/L.

In accordance with the SOP, no water quality modeling was performed since this is a SRSTP.

**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) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (GPD)	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
pH (S.U.)	XXX	XXX	6 Inst Min	XXX	XXX	9	Upon Request	Grab
BOD5	XXX	XXX	XXX	10	XXX	20	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001, after UV Disinfection.

Other Comments: Flow is monitor only based on Chapter 92a.61. The limits for BOD5, Total Suspended Solids, and Fecal Coliform are BPJ-technology-based on the Department's Small Flow Treatment Facilities Manual. The limits for pH are technology-based on Chapter 93.7.

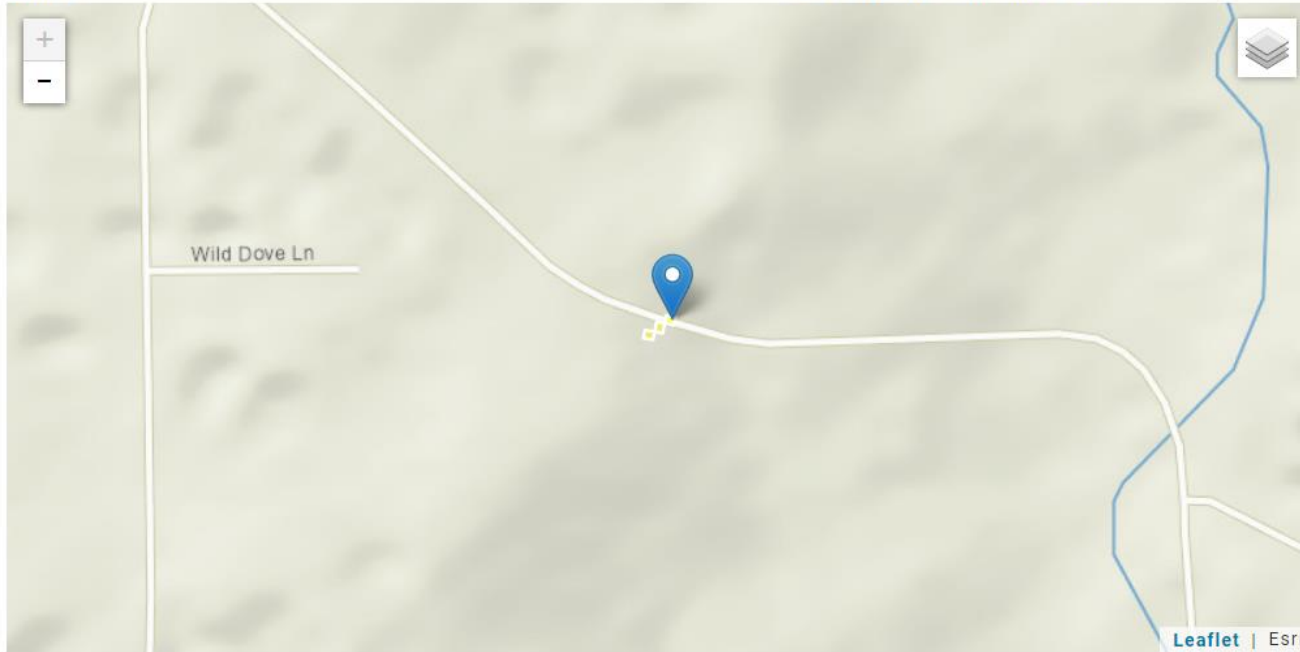
Outfall Location - eMap with Aerial Imagery

The screenshot displays the Pennsylvania eMapPA web application interface. At the top, the Pennsylvania Department of Environmental Protection logo is visible on the left, and navigation links for 'PA STATE AGENCIES', 'ONLINE SERVICES', 'Tom Wolf, Governor', 'Ramez Ziadeh, Acting Secretary', and 'DEP Home' are on the right. The main map area shows aerial imagery with a grid overlay. A yellow 'X' marks a specific location on the map, with the coordinates 'Latitude: 41.271439' and 'Longitude: -80.391775' displayed next to it. To the left of the map is a legend panel with categories: 'Regulated Facilities and Related Information', 'Streams and Water Resources', 'Water Quality', and 'Designated Use Streams'. The 'Designated Use Streams' section lists various stream types such as 'Cold Water Fish', 'Exceptional Value', 'High Quality', 'Trout Stocking', and 'Warm Water Fish'. A pop-up window titled 'Designated Use Streams (1 of 3)' is open, showing detailed metadata for a stream: 'Designated Use Gen ID: 33549', 'GNIS Name: Magargee Run', 'GNIS ID: 01180190', 'ReachCode: 05030102000259', 'COMID: 130034319', 'Length Miles: 1.351', 'Map Symbology: WWF', 'Length Miles: 1.351', 'Designated Use: 12', 'DES Use ID: 8', 'Use Description: WWF(WARM WATER FISHES)', 'Migratory\_Fish: N', 'HUC: 05030102', 'Basin: N', 'Basin Narrative: Null', 'Segment Narrative: Null', 'Evaluation Date: Null', and 'Last Edit Date: Null'. A 'Zoom to' link is also present. The map interface includes a toolbar with navigation tools and a 'Locate Latitude and Longitude' panel on the right with input fields for Degrees, Minutes, and Seconds for both Latitude and Longitude. The map is powered by Esri, as indicated by the logo in the bottom right corner.

**Drainage Area Location – StreamStats with Aerial Imagery**

StreamStats Report

Region ID: PA  
Workspace ID: PA20221222150245004000  
Clicked Point (Latitude, Longitude): 41.27147, -80.39187  
Time: 2022-12-22 10:03:08 -0500



Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.000116	square miles