

Application Type New
Wastewater Type Sewage
Facility Type SFTF

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

Application No. PA0294144
APS ID 1091076
Authorization ID 1444362

Applicant, Facility and Project Information

Applicant Name	<u>Marlin R. Knaub</u>	Facility Name	<u>Marlin R. Knaub Properties</u>
Applicant Address	<u>802 Old Quaker Road</u> <u>Lewisberry, PA 17339-9207</u>	Facility Address	<u>802 Old Quaker Road</u> <u>Lewisberry, PA 17339-9207</u>
Applicant Contact	<u>Marlin Knaub</u>	Facility Contact	<u>Marlin Knaub</u>
Applicant Phone	<u>(717) 683-0077</u>	Facility Phone	<u>(717) 683-0077</u>
Client ID	<u>377971</u>	Site ID	<u>864323</u>
SIC Code	<u>8811</u>	Municipality	<u>Fairview Township</u>
SIC Description	<u>Services - Private Households</u>	County	<u>York</u>
Date Application Received	<u>June 16, 2023</u>	WQM Required	<u></u>
Date Application Accepted	<u>June 21, 2023</u>	WQM App. No.	<u>6723406</u>
Project Description	<u>NPDES & WQM SFTF new permits.</u>		

Summary of Review

This fact sheet supports the issuance of new NPDES permit for discharge of treated sewage from the Small Flow Treatment Facility (SFTF) for two-unit multi-family located in Fairview Township, York County. The annual average design flow is 800 gallons per day (GPD). The discharge will be to Unnamed Tributary to Bennett Run which is classified as Warm Water & Migratory Fishes (WWF & MF).

The WQM permit for the construction of the treatment system with permit No. WQM 6723406 is concurrently under review. DEP Planning for the project was approved under Code No. A3-67919-492-3s.

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

Approve	Deny	Signatures	Date
X		<i>Hilaryle</i> Hilary H. Le / Environmental Engineering Specialist	July 7, 2023
X		Maria D. Bebenek, P.E. for Daniel W. Martin Daniel W. Martin, P.E. / Environmental Engineer Manager	July 18, 2023

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0008
Latitude	40° 8' 44.92"	Longitude	-76° 51' 4.19"
Quad Name	Steelton	Quad Code	
Wastewater Description: Sewage Effluent			
Receiving Waters	Unnamed Tributary to Bennett Run (WWF, MF)	Stream Code	08474
NHD Com ID	57463533	RMI	1.91 miles
Drainage Area	0.24 mi. ²	Yield (cfs/mi ²)	0.06
Q ₇₋₁₀ Flow (cfs)	0.015	Q ₇₋₁₀ Basis	USGS StreamStats
Elevation (ft)	447.02	Slope (ft/ft)	
Watershed No.	7-F	Chapter 93 Class.	WWF, MF
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	Wrightsville Boro Water system, York County		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI	28.51 miles	Distance from Outfall (mi)	Approximate 27.0 miles

Changes Since Last Permit Issuance: new

Drainage Area/Stream Flows

The discharge is to Unnamed Tributary 08474 to Bennett Run at RMI 1.91 miles. A drainage area upstream of the discharge is estimated to be 0.24 mi.², according to USGS StreamStats available at <https://streamstats.usgs.gov/ss/>. USGS StreamStats also produced a Q₇₋₁₀ flow of 0.015 cfs at the point of proposed discharge.

Unnamed Tributary to Bennett Run to Conewago Creek to Susquehanna River

Under 25 Pa Code §93.9o, Unnamed Tributary to Bennett Run to Conewago Creek is designated as Warm Water Fishes & Migratory Fishes (WWF & MF). No TMDL has been developed yet to address this stream. Therefore, no Class A Wild Trout fishery is impacted by this discharge.

Based on integrated report 2022, Unnamed Tributary to Bennett Run, assessment ID 5298, is not impaired.

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 Wrightsville Borough Water Supply Co., York County located on Susquehanna River, approximately 27.0 miles. 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 existing two-unit multi-family residential dwelling (800 GPD) located at 802 Old Quaker Road, Lewisberry, PA 17339. The facilities will be owned and maintained by Marlin Knaub. The proposed treatment process, according to the application, is as follows:

One (1) 1,500-gallon dual compartment concrete septic tank + one (1) 1,000-gallon septic tank (or equivalent) → Polylock PL-122 filter → Premier Tech Ecoflo EC7-1050-P 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 Biofilter Treatment System (filter) will be provided, which has been demonstrated to produce effluent that does not exceed 10 mg/L BOD₅ 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 May 17, 2023, DEP approved the Act 537 planning as a revision to the Act 537 official sewage facilities plan of Fairview Township (DEP Code No. A3-67919-492-3s).

This is a new facility; therefore, there are no effluent sample results / 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.

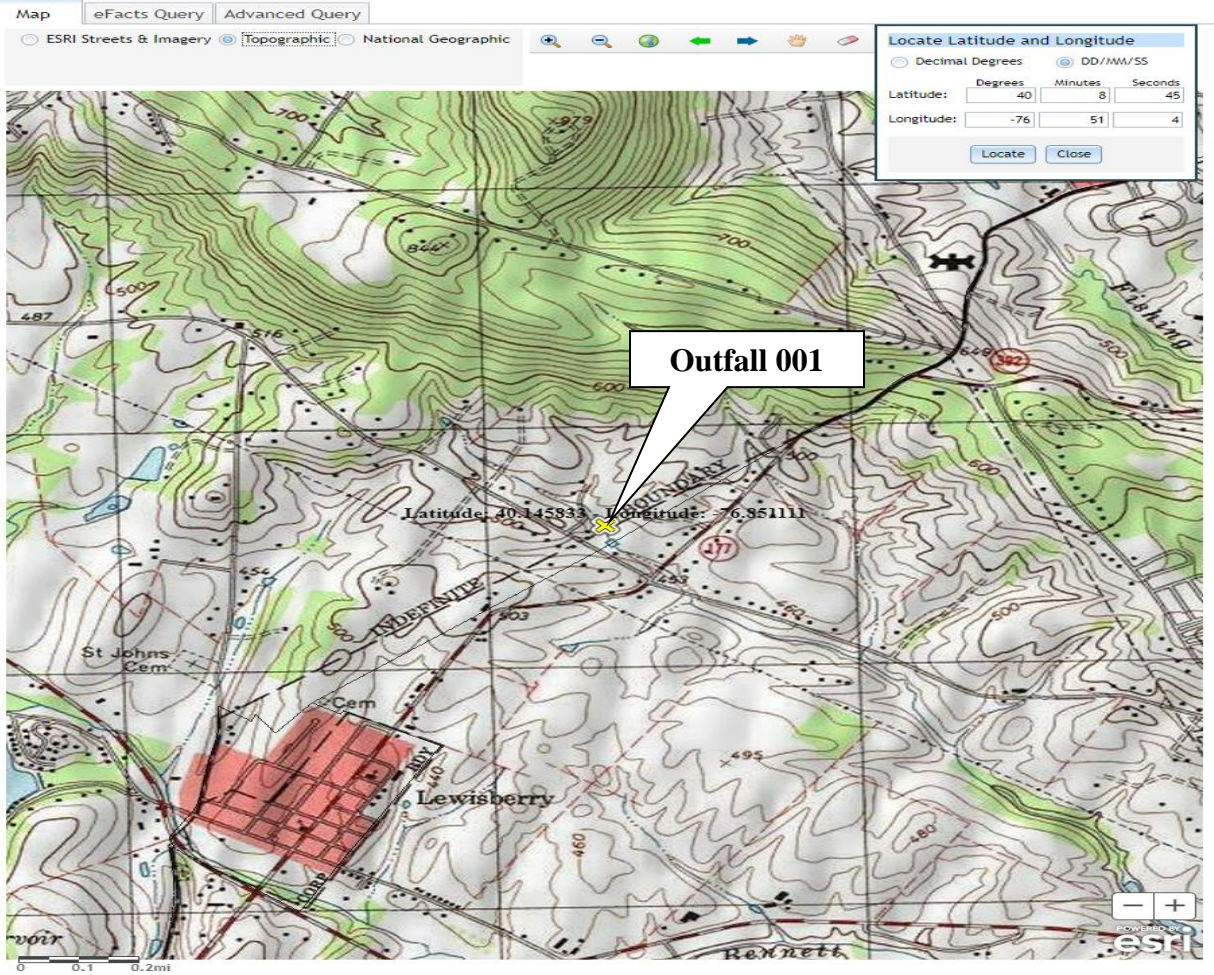
Development of Effluent Limitations and Monitoring Requirements

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 Toxic Management Spreadsheet 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



USGS StreamStats

SELECT A STATE / REGION
 Pennsylvania

IDENTIFY A STUDY AREA
 Basin Delineated

SELECT SCENARIO

BUILD A REPORT Report Builder

Step 1: You can modify computed basin characteristics here, then select the type of reports you wish to generate. Then click the "Build Report" button

Show Basin Characteristics

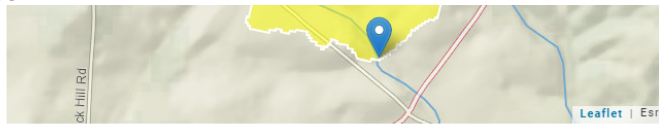
Select available reports to display:

- Basin Characteristics Report
- Scenario Flow Reports

Open Report

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Collapse All

> Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	7.1526	degrees
DRNAREA	Area that drains to a point on a stream	0.24	square miles
ROCKDEP	Depth to rock	4	feet
URBAN	Percentage of basin with urban development	0	percent

> Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.24	square miles	4.78	1150
BSLOPD	Mean Basin Slope degrees	7.1526	degrees	1.7	6.4
ROCKDEP	Depth to Rock	4	feet	4.13	5.21
URBAN	Percent Urban	0	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

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 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0383	ft ³ /s
30 Day 2 Year Low Flow	0.0513	ft ³ /s
7 Day 10 Year Low Flow	0.0148	ft ³ /s
30 Day 10 Year Low Flow	0.0216	ft ³ /s
90 Day 10 Year Low Flow	0.0327	ft ³ /s

Report About Help

Layers

- Base Maps
- Application Layers
- National Layers
- PA Map Layers

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
BOD ₅	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:

Other Comments: