pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES / WQM PERMITS FACT SHEET INDIVIDUAL SFTF/SRSTP

Application Type	**New**	Application No.	**PA0267382**
Wastewater Type	**Sewage**	APS ID	**2120404** / **1029073**
Facility Type	**SRSTP**	Authorization ID	**1337169 (NPDES)** / **1337171 (WQM)**

Applicant, Facility and Project Information

Applicant Name	**Emanuel & Naomi Esh**	Facility Name	**Esh SRSTP**
Applicant Address	1135 Enola Road	Facility Address	N Harmon Road
	Newburg, PA 17240-9305		Newburg, PA 17240
Applicant Contact	Emanuel Esh	Facility Contact	Emanuel Esh
Applicant Phone	(717) 423-5953	Facility Phone	(717) 423-5953
Client ID	360098	Site ID	846710
SIC Code	8800	Municipality	Newburg Borough
SIC Description	Private Households	County	Cumberland
Date Application Received	December 8, 2020	WQM Required	Yes
Date Application Accepted	December 22, 2020	WQM App. No.	2120404
Project Description	NPDES and WQM permit applications for a new SRSTP.		

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 Newburg Borough, Cumberland County. DEP received new NPDES and WQM permit applications on December 8 ,2020 by Marshall Engineering. While the proposed system is eligible for a General Permit, DEP has not yet renewed the current PAG-04 General Permit; therefore, the coverage under the General Permit cannot be issued at this time (as of the date of this fact sheet). As a result, an individual permit is required for all SRSTPs and SFTFs.

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.

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		*Jinsu Kim* Jinsu Kim / Environmental Engineering Specialist	February 3, 2021
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.0004
Latitude	40º 10' 50.64"	Longitude	-77º 32' 47.26"
Quad Name	Newburg	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Bore Mill Run (WWF, MF)	Stream Code	10471
NHD Com ID	56407981	RMI	0.4100
Drainage Area	0.25 sq.mi	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.00377	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-B	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	North Middleton Township		
PWS Waters	Conodoguinet Creek	Flow at Intake (cfs)	
PWS RMI	43	Distance from Outfall (mi)	(approximately) 20

Drainage Area
The discharge will be to Unnamed Tributary (10471) of Bore Mill Run at RM 0.41. A drainage area upstream of the point of proposed discharge is estimated to be 0.25 sq.mi., according to USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
USGS StreamStats also produced a Q7-10 flow of 0.00377 cfs at the point of proposed discharge.

Unnamed Tributary of Bore Mill Run
25 Pa Code Chapter 93 does not list the stream classification for the receiving stream and its main stem, Bore Mill Run. Bore Mill Run is a tributary of Three Square Hollow Run in which its entire basin is designated as warm water fishes and supports migratory fishes according to 25 Pa Code §93.9o. No special protection water is therefore impacted by this discharge. DEP's 2020 integrated water quality report indicates that the receiving stream near the point of proposed discharge 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 North Middleton Township located on Conodoguinet Creek, approximately 20 miles from the point of proposed discharge. Given the nature and distance, the proposed discharge is not expected to impact the water supply.

Class A Wild Trout Fishery
The Class A Wild Trout Fishery will be not be impacted by the discharge.

Treatment Facility Summary

The facility is proposed to serve a 3-bedroom single family residence (400 GPD) located at 1453 North Harmon Road, Newburg, PA 17240. The facility will be owned and maintained by Emanuel Esh and Naomi Esh. The proposed treatment process, according to the application, is as follows:

One (1) 1,250-gallon two (2)-compartment septic tank with Polylock PL-122 filter→ a 500-gallon dosing tank→ 12'x50' (600 sq.ft.) subsurface sand filter – 250-gallon chlorine contact tank with tablet chlorinator → 4" PVC outfall pipe to Unnamed Tributary of Bore Mill Run.

A two (2)-compartment 1,250-gallon septic tank will be constructed to receive raw sewage from the house via 4-inch DWV SCH 40 gravity pipe. A solids septic retainer device, Polylock PL-122 filter, will be installed at the end of the septic tank to remove additional solids before discharges into a new 500-gallon dosing tank via 4-inch SCH 40 pipe. The dosing tank will be equipped with a submersible effluent pump, Goulds Model no. 3885 that is capable of pumping the flow at a rate of 26 GPM at TDH of 21 ft.

From the dosing tank, flow will be sent to a new 600 sq.ft. subsurface sand filter (12'x50') with a 2-inch PVC manifold and 1-1/2-inch PVC laterals. At least 24 inches of sand will be used. A 20 mil impervious liner of PVC, hyplon or polyethylene will be also be used. The sand will not contain more than 15 percent (%) by weight deleterious material as determined by PA test method no. 510, AASHTO-104 or ASTM-3-88. The sand will also be consistent with bituminous concrete sand type B #2.

Effluent from the sand filter will be then directed via gravity to a 250-gallon chlorine contact tank. Chlorine tablets will be inserted manually into a tablet feeder for disinfection. Treated effluent will be discharged via a 4-inch PVC to Unnamed Tributary of Bore Mill Run.

The Act 537 official plan revision was approved on August 27, 2019 (No. A3-21911-252-3S). It is recommended that the WQM Permit be issued with standard sewage conditions.

Compliance History

This is a new facility; therefore, there are no effluent sample results / inspection reports associated with this facility. DEP'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).

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, 5-year septic tank pumping requirement, reporting requirement of a completed Annual Maintenance Form.
b. Stormwater Prohibition
c. Chlorine Minimalization
d. Property Rights
e. Proper Disposal of Solids

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) and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Annual Average	Daily Maximum	Minimum	Annual Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
Total Residual Chlorine	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
BOD5	XXX	XXX	XXX	10	XXX	20	1/year	Grab
Total Suspended Solids	XXX	XXX	XXX	10	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	1/year	Grab