

Application Type Renewal
Wastewater Type Sewage
Facility Type SRSTP

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

Application No. PA0265900
APS ID 840801
Authorization ID 1283006

Applicant, Facility and Project Information

Applicant Name	<u>Jennifer L Messner & Larry G Messner</u>	Facility Name	<u>Messner Residence</u>
Applicant Address	<u>1954 Bowmansville Road</u> <u>Adamstown, PA 19501</u>	Facility Address	<u>1954 Bowmansville Road</u> <u>Adamstown, PA 19501</u>
Applicant Contact	<u>Jennifer Messner</u>	Facility Contact	<u>Jennifer Messner</u>
Applicant Phone	<u>(610) 823-1710</u>	Facility Phone	<u>(610) 823-1710</u>
Client ID	<u>311660</u>	Site ID	<u>782592</u>
SIC Code	<u>4952</u>	Municipality	<u>Adamstown Borough</u>
SIC Description	<u>Trans. & Utilities - Sewerage Systems</u>	County	<u>Lancaster</u>
Date Application Received	<u>August 2, 2019</u>	WQM Required	<u>N/A</u>
Date Application Accepted	<u>August 7, 2019</u>	WQM App. No.	<u></u>
Project Description	<u>NPDES permit renewal.</u>		

Summary of Review

Jennifer L & Larry G Messner has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. It is for discharge of treated sanitary wastewater from a single residence sewage treatment plant (SRSTP) located in Adamstown Borough, Lancaster County. The permit was last issued on October 30, 2014 and became effective on November 1, 2014. The permit expired on October 31, 2019.

Based on the review outline in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

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		Hilary H. Le / Environmental Engineering Specialist	November 5, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Clean Water Program Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0005
Latitude	40° 14' 40.71"	Longitude	-76° 2' 43.89"
Quad Name	Terre Hill	Quad Code	
Wastewater Description: Sewage Effluent			
Receiving Waters	Little Muddy Creek (TSF, MF)	Stream Code	07765
NHD Com ID	57461239	RMI	7.0600 miles
Drainage Area	5.3 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)	505 ft	Slope (ft/ft)	
Watershed No.	07J	Chapter 93 Class.	Trout Stocking, Migratory Fishes
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	Lancaster City Water Bureau		
PWS Waters	Conestoga River	Flow at Intake (cfs)	
PWS RMI	23.5 miles	Distance from Outfall (mi)	Approximate 30 miles

Changes Since Last Permit Issuance: none

Drainage Area:

The discharge is to the headwater of Little Muddy Creek at RMI 7.06 miles. A drainage area at the point of discharge is estimated to be 5.32 mi.² according to USGS StreamStats available at <https://streamstats.usgs.gov/ss/>.

Streamflow:

Stream flows were determined using a nearby stream gage. A stream gage located on the Conestoga River near Lancaster City was used. The coordinates for the stream gage are 40°05'03" latitude and 76°27'77" longitude. From the USGS StreamStats website, this location has a Q₇₋₁₀ of 40.1 cfs and a drainage area of 322 mi.². This results in a low flow yield of 0.12 cfs/mi.². According to StreamStats, the drainage area of Little Muddy Creek at the discharge point is 5.32 mi.². The yield calculated from the stream gage and the drainage area were used to determine the Q₇₋₁₀, Q₃₀₋₁₀, and Q₁₋₁₀ as shown below. (Guidance No. 391-2000-023).

$$\begin{aligned} \text{Low Flow Yield: } & 40.1 \text{ cfs} / 322 \text{ mi.}^2 = 0.12 \text{ cfs/mi.}^2 \\ \text{Q}_{7-10}: & 0.12 \text{ cfs/mi.}^2 * 5.32 \text{ mi.}^2 = 0.64 \text{ cfs} \\ \text{Q}_{30-10}: & 1.36 * 0.64 \text{ cfs} = 0.87 \text{ cfs} \\ \text{Q}_{1-10}: & 0.64 * 0.64 \text{ cfs} = 0.41 \text{ cfs} \end{aligned}$$

Public Water Supply Intake:

The nearest downstream public water supply is Lancaster City Water Bureau. The intake is located on the Conestoga River, approximately 30 miles downstream of the discharge. Based on the nature of the discharge, it is not expected to affect downstream public water supply.

Compliance History	
Summary of DMRs:	AMRs have been consistently submitted to DEP.
Summary of Inspections:	<p>Last conducted inspection at the facility on 11/9/2018. No violation was noted at the time of inspection. The most recent fecal result was 44 CFU/ 100 ml on 8/22/18.</p> <p>The field for the sample collected on 11/9/2018 indicated that D.O was 8.14 mg/l, and pH was 6.76 S.U. These results indicated compliance with permit limits.</p> <p>The lab report for the sample included with application on 7/30/2019 indicated that CBOD₅ was < 2 mg/l, TSS was 4.5 mg/l, and Fecal Coliform was 44 CFU/100 ml. These results indicated compliance with permit limits.</p>
Other Comments:	There are no open violations associated to facility or permittee.

Treatment Facility Summary

The treatment system consists of a two-compartment septic tank of 1250 gallons with septic tank solids retainer, an Ecoflo peat filter, Ultraviolet disinfection unit, and outfall. WQM Nos. 3614403 were issued on 10/30/2014.

Development of Effluent Limitations and Monitoring Requirements

The reviewer notes that the existing CBOD₅, and TSS monitoring frequencies and limits are consistent with the monitoring frequencies and limits recommended in DEP SOP No. BPNPSM-PMT-003 for SFTFs revised on May 17, 2019. The monitoring frequencies and limits from the previous permit will remain in the proposed permit.

For Flow, it is not necessary to perform daily maximum monitoring since the treated effluent is less than 2,000 GPD. The permit included a non-seasonal fecal coliform limit of 200 / 100 mL which is more stringent than the seasonal fecal limits (200 / 100 mL for summer; and 10,000 / 100 mL for winter). The reviewer notes that the frequency of sampling for Flow, and Fecal Coliform are recommended to remain the same as the existing permit.

Chesapeake Bay Requirements

No nutrient monitoring requirement is recommended for this facility. Facilities that are designed based on a flow of less than or equal to 2,000 GPD or considered as SRSTPs are exempt from the Bay requirements.

Total Maximum Daily Load (TMDL)

The discharge is located in a stream segment listed as attaining uses; therefore, no TMDL has been taken into consideration during this review.

303d Listed Streams

This discharge is not located on a 303(d) listed stream segment.

Antidegradation Requirements

All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High Quality or Exceptional Value Waters are impacted by this discharge.

Other Considerations

No Class A Wild Trout Fishery is impacted by this discharge. Considering dilution and distance from the intake, the discharge is not expected to affect the water supply.

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly		Minimum	Average Monthly		Instant. Maximum		
Flow (GPD)	Report	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
CBOD ₅	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

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	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
CBOD 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 Geo Mean	XXX	XXX	1/year	Grab

Compliance Sampling Location:

Other Comments:

Topographic map

