

Application Type **Renewal**
Wastewater Type **Sewage**
Facility Type **SRSTP****NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP**Application No. **PA0261394**
APS ID **702898**
Authorization ID **1301198****Applicant, Facility and Project Information**

Applicant Name	<u>Randy S. Macko</u>	Facility Name	<u>Macko Residence</u>
Applicant Address	<u>3315a Back Road</u> <u>Halifax, PA 17032-8720</u>	Facility Address	<u>3315a Back Road</u> <u>Halifax, PA 17032-8720</u>
Applicant Contact	<u>Randy Macko</u>	Facility Contact	<u>Randy Macko</u>
Applicant Phone	<u>(717) 462-5070</u>	Facility Phone	<u>(717) 362-3592</u>
Client ID	<u>275964</u>	Site ID	<u>725984</u>
SIC Code	<u>6514</u>	Municipality	<u>Jefferson Township</u>
SIC Description	<u>Fin, Ins & Real Est - Dwelling Operators, Except Apartments</u>	County	<u>Dauphin</u>
Date Application Received	<u>December 31, 2019</u>	WQM Required	<u></u>
Date Application Accepted	<u></u>	WQM App. No.	<u></u>
Project Description	<u>Permit renewal for discharge treated sewage</u>		

Summary of Review**1.0 General Discussion**

This facts sheet supports the reissuance of an existing NPDES permit for the discharge of treated domestic sewage from a small flow treatment facility that serve an existing 4-bedroom single family residence. The system has a design capacity of 0.0005 mgd, and discharges to South Fork Powell Creek, which is classified for cold water fishes(CWF) migratory fishes(MF). The system replaced a malfunctioning on-lot disposal system. The existing permit was issued on June 23, 2015 with effective date of July 1, 2015 and expiration date of June 30, 2020. The permittee submitted a timely permit renewal application to the Department and has been operating under the conditions in the existing permit under administrative extension provision pending Department action on the permit renewal. Topographical map showing discharge location is presented in attachment A.

1.1 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.

1.2 Changes to Existing Permit

Approve	Deny	Signatures	Date
X		<i>J. Pascal Kwedza</i> J. Pascal Kwedza, P.E. / Environmental Engineer	June 1, 2021
X		Daniel W. Martin Daniel W. Martin, P.E. / Environmental Engineer Manager	June 3, 2021

Summary of Review

Limits will be annual averages instead of the monthly averages in the existing permit. Monitoring frequencies will be revised to 1/year for consistency with SOP.

1.3 Existing Limits

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly		Minimum	Average Monthly		Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	2/year	Estimate
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/month	Grab
Total Residual Chlorine	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	2/year	Grab
Total Suspended Solids	XXX	XXX	XXX	10	XXX	20	2/year	Grab
Fecal Coliform (CFU/100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	2/year	Grab

1.4 Treatment Facility

The plant consists of two compartment septic tank of 1,250 gallons minimum with effluent filter (EFT-080), a STB-650 Ecoflo peat filter, a 250 gallons minimum contact tank with tablet chlorinator. WQM permit number is 2209404. Planning module A3-22919-028-3S was approved on June 22, 2009.

1.5 Streamflows:

Streamflows for the water quality analysis were determined by correlating with the yield of USGS gage 01568500 on Clark Creek near Carsonville. The Q₇₋₁₀ and drainage area at the gage is 2.3ft³/s and 22.5mi² respectively. The resulting yields are as follows:

- $Q_{7-10} = (2.3\text{ft}^3/\text{s})/22.5 \text{ mi}^2 = 0.102\text{ft}^3/\text{s}/ \text{mi}^2$
- $Q_{30-10} / Q_{7-10} = 1.17$
- $Q_{1-10} / Q_{7-10} = 0.78$

The drainage area at discharge calculated by streamStats = 6.9 mi²

The Q₇₋₁₀ at discharge = 6.9 mi² x 0.102 ft³/s/mi² = 0.70ft³/s.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0005
Latitude	40° 28' 14.00"	Longitude	76° 46' 56.00"
Quad Name	Enders	Quad Code	1531
Wastewater Description: Treated Sewage			
Receiving Waters	South Fork Powell Creek	Stream Code	16739
NHD Com ID	54974561	RMI	0.49
Drainage Area	6.9 mi ²	Yield (cfs/mi ²)	0.102
Q ₇₋₁₀ Flow (cfs)	0.70	Q ₇₋₁₀ Basis	USGS
Elevation (ft)	677	Slope (ft/ft)	
Watershed No.	6-C	Chapter 93 Class.	CWF, 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	
Background/Ambient Data		Data Source	
pH (SU)			
Temperature (°C)			
Nearest Downstream Public Water Supply Intake	Suez Water PA		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	28

Changes Since Last Permit Issuance: None

1.7 Water Supply Intake

The nearest water supply intake is 28 miles downstream Suez Water PA in Harrisburg, Dauphin County on the Susquehanna River. No impact is expected from this discharge.

1.8 Compliance History

The permittee has been submitting the required annual monitoring reports(AMRs) regularly. The AMRs indicate the facility is in compliance with permit requirements. The tanks have been pumped regularly consistent with permit limits. The facility was recently inspected by the Department via phone on July 20, 2020.

1.9 Development of Permit Limits

The existing limits are consistent with the technology limits recommended in the general permit for small flow treatment facilities and DEPs Standard Operating Procedure (SOP) for the Clean Water Program SOP No. BPNPSM-PMT-003 version 1.8 and the facility has been complying with the limits therefore, the existing limits will remain in the permit. The treatment system is a Septic tank/ Premier Tech's Ecoflo Peat biofilter which is capable of meeting an average monthly CBOD₅ – 10 mg/L, IMAX CBOD₅– 20 mg/L and average monthly TSS – 10 mg/L, IMAX TSS– 20 mg/L. Consistent with SOP No.

BNPNSM-PMT-003 version 1.8, water quality modeling using WQM model was not conducted. Chlorine is used for disinfection, however TRC calculation is not required for residential small flow systems. The existing monitoring requirement for all pollutants except TRC will be revised to 1/year for consistency with the SOP. Monthly monitoring for TRC will remain in the permit. Fecal coliform limit of 200/100 mL as a geometric will be revised to annual average in the current permit. The technology limit of 6.0 to 9.0 for pH shall be maintained at all time in accordance to 25 PA Code 95.2(1) with 1/year monitoring frequency. Flow estimation 1/year is required.

2.0 Chesapeake Bay

The facility will discharge less than 2000 gpd and is exempt from Bay nutrient evaluations and requirements.

2.1 Color Evaluation

Peat filters discharge color that is an esthetics issue for a long period of time, up to several years. To address color, the Department is requiring a streamflow to discharge ratio of at least 6:1. The ratio is 0.7:0.00077 resulting 905:1 which is larger than Department's requirement of at least 6:1

2.2 Anti-Degradation (93.4)

The effluent limits for this discharge 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 Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

2.3 Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

2.4 303d Listed Streams

The discharge is not located on a 303d listed stream.

2.5 The following conditions are listed in Part C of the permit:

- Annual Maintenance Report Requirement
- Measurement requirement of depth of septage and scum in all treatment units
- Septic & Treatment tank pumping requirement
- Chlorine Minimization
- Prohibition of Stormwater Discharges
- Collected screenings and solids Handling
- Abandonment of the treatment facility for public sewers

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
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/year	Grab
TRC	XXX	XXX	XXX	Report Avg Mo	XXX	XXX	1/month	Grab
BOD5	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: At Outfall 001