

Application Type Renewal  
Wastewater Type Sewage  
Facility Type SFTF

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

Application No. PA0228796  
APS ID 1002002  
Authorization ID 1288899

**Applicant, Facility and Project Information**

Applicant Name	<u>Matthew M. Barr</u>	Facility Name	<u>Barr Residence SFTF</u>
Applicant Address	<u>1957 Halfmoon Valley Road</u> <u>Port Matilda, PA 16870-8710</u>	Facility Address	<u>1957 Halfmoon Valley Road</u> <u>Port Matilda, PA 16870-8710</u>
Applicant Contact	<u>Matthew Barr</u>	Facility Contact	<u>Matthew Barr</u>
Applicant Phone	<u>(814) 574-1345</u>	Facility Phone	<u>(814) 574-1345</u>
Client ID	<u>221108</u>	Site ID	<u>629743</u>
SIC Code	<u>6513</u>	Municipality	<u>Halfmoon Township</u>
SIC Description	<u>Fin, Ins &amp; Real Est - Apartment Building Operators</u>	County	<u>Centre</u>
Date Application Received	<u>September 13, 2019</u>	WQM Required	<u>No</u>
Date Application Accepted	<u>September 30, 2019</u>	WQM App. No.	<u>n/a</u>

Project Description Renewal of an existing NPDES permit for the discharge of treated sewage.

**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		<i>Derek S. Garner</i> Derek S. Garner / Project Manager	7/2/2020
X		<i>Nicholas W. Hartranft</i> Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	7/2/2020

**Discharge, Receiving Waters and Water Supply Information**

Outfall No.	<u>001</u>	Design Flow (GPD)	<u>600</u>
Latitude	<u>40° 47' 39.45"</u>	Longitude	<u>-78° 0' 59.04"</u>
Quad Name	<u>Port Matilda</u>	Quad Code	<u>1221</u>
Wastewater Description: <u>Sewage Effluent</u>			

Receiving Waters	<u>Halfmoon Creek</u>	Stream Code	<u>15728</u>
NHD Com ID	<u>65602888</u>	RMI	<u>8.1</u>
Drainage Area	<u>2.1</u>	Yield (cfs/mi <sup>2</sup> )	<u>0.2157</u>
Q <sub>7-10</sub> Flow (cfs)	<u>0.45</u>	Q <sub>7-10</sub> Basis	<u>Streamgage No. 1559000</u>
Elevation (ft)	<u>1315</u>	Slope (ft/ft)	<u>n/a</u>
Watershed No.	<u>11A</u>	Chapter 93 Class.	<u>HQ-CWF</u>
Existing Use	<u>HQ-CWF</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>n/a</u>	Exceptions to Criteria	<u>n/a</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Siltation</u>		
Source(s) of Impairment	<u>Agriculture</u>		
TMDL Status	<u>Approved, 8/30/2018</u>	Name	<u>Halfmoon Creek Watershed Sediment TMDL</u>

Nearest Downstream Public Water Supply Intake	<u>Mifflintown Municipal Authority</u>		
PWS Waters	<u>Juniata River</u>	Flow at Intake (cfs)	<u>392</u>
PWS RMI	<u>85.47</u>	Distance from Outfall (mi)	<u>44.4</u>

**Treatment Facility Summary**

The Barr Residence Small Flow Treatment Facility ("SFTF") was constructed and operates under WQM Permit No. 1404402, issued June 25, 2004. It serves a duplex rental property. The facility is permitted for a design flow of 600 GPD and contains the following treatment units:

- Two (2) 1,000-gal septic tanks
- One (1) 900-ft<sup>2</sup> sand filter
- One (1) erosion tablet chlorinator
- One (1) 415-gal chlorine contact tank

After disinfection the effluent is ultimately discharged via Outfall 001 to Halfmoon Creek.

**Compliance History**

The facility was last inspected by DEP on August 22, 2018. No violations were noted.

The annual maintenance reports are being submitted in a timely manner.

There are no open violations associated with the permittee.

**Development of Effluent Limitations**

<b>Outfall No.</b>	<u>001</u>	<b>Design Flow (GPD)</b>	<u>600</u>
<b>Latitude</b>	<u>40° 47' 38"</u>	<b>Longitude</b>	<u>78° 00' 59"</u>
<b>Wastewater Description:</b> <u>Sewage Effluent</u>			

**Technology-Based Limitations**

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Basis
BOD <sub>5</sub>	10	Average Monthly	92a.61
	20	IMAX	92a.61, DEP SFTF Design Manual
Total Suspended Solids	10	Average Monthly	92a.61, DEP SFTF Design Manual
	20	IMAX	92a.61, DEP SFTF Design Manual
pH	6.0 – 9.0 S.U.	IMIN - IMAX	40 CFR 133.102(c), 95.2(1)
Fecal Coliform	200 / 100 ml	Geo Mean	92a.47(a)(4)
TRC <sup>(1)</sup>	0.5	IMAX	92a.47(a)(8)

<sup>(1)</sup> Historically, the facility has been assigned a total residual chlorine (“TRC”) average monthly limit of 1.0 mg/l, presumably based on best professional judgment. However, DEP no longer believes 1.0 mg/l is an appropriate limit, and instead, should be replaced with an average monthly limit 0.5 mg/l based on technology standards required by 92a.47(a)(8).

**Water Quality-Based Limitations**

Generally, DEP does not develop water quality-based effluent limitations for SFTFs due to the lack of reasonable potential to exceed in-stream criteria. However, DEP does analyze TRC. The TRC analysis (attached) indicates that the above technology-based effluent limit is protective of Halfmoon Creek.

**Chesapeake Bay Requirements**

Facilities with design flows under 2,000 GPD are not a part of Pennsylvania’s Chesapeake Bay Tributary Strategy. Accordingly, Chesapeake Bay nutrient monitoring requirements are not applicable.

**Anti-Degradation Requirements**

This facility was constructed to replace a malfunctioning on-lot system in 2004. Even though Halfmoon Creek’s high-quality designation predates the construction of the facility, it is reasonable to assume that eliminating the malfunctioning on-lot system and replacing it with a SFTF has improved the water quality. No degradation associated with the SFTF has been documented. Accordingly, in-line with previous determinations, DEP still maintains that anti-degradation requirements are not applicable.

**TMDL Considerations**

The Halfmoon Creek Watershed TMDL assigns daily and annual TSS waste load allocations (“WLA”) to the Barr Residence SFTF of 0.2 lbs/day and 60.9 lbs/year, accordingly. The WLAs appear to be based on a discharge concentration of 40 mg/l and a design flow of 2,000 GPD. Current TSS effluent limits only allow for an instantaneous maximum TSS concentration of 20 mg/l and the facility’s design flow is 600 GPD. Since the WLA is based on a concentration that is twice the allowable limit and a flow 3.33 times higher than the actual design flow, it does not appear the Barr Residence SFTF has any potential to approach the TMDL’s WLA. Additionally, even if the SFTF could theoretically approach the WLA’s values, there is no practicable way for a SFTF to reduce sediment loadings beyond what is already being required. Accordingly, DEP is recommending that the TMDL’s daily and annual WLAs are not established in the permit.

**Existing Effluent Limitations and Monitoring Requirements**

The existing effluent limitations and monitoring requirements are as follows:

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/month	Estimate
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/month	Grab
TRC	XXX	XXX	XXX	1.0	XXX	2.3	1/month	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20	1/month	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20	1/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/month	Grab

Compliance Sampling Location: Outfall 001

**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)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Instant. Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/month	Estimate
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/month	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.17	1/month	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20	1/month	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20	1/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/month	Grab

Compliance Sampling Location: Outfall 001



TRC Analysis