

Application Type New
Wastewater Type Sewage
Facility Type SRSTP

NPDES PERMIT FACT SHEET INDIVIDUAL SFTF/SRSTP

Application No. PA0285404
APS ID 1129234
Authorization ID 1512982

Applicant, Facility and Project Information

Applicant Name <u>Cossell Mike</u>	Facility Name <u>130 Virgin Run Rd SRSTP</u>
Applicant Address <u>600 Speers Avenue</u>	Facility Address <u>130 Virgin Run Road</u>
<u>Charleroi, PA 15022-1035</u>	<u>Vanderbilt, PA 15486-1136</u>
Applicant Contact <u>Mike Cossell</u>	Facility Contact <u>Same as Applicant</u>
Applicant Phone <u>(412) 691-1576</u>	Facility Phone <u>Same as Applicant</u>
Client ID <u>390331</u>	Site ID <u>877414</u>
SIC Code <u>8800</u>	Municipality <u>Perry Township</u>
SIC Description <u>Private Households</u>	County <u>Fayette</u>
Date Application Received <u>January 6, 2025</u>	WQM Required <u>Yes</u>
Date Application Accepted <u>January 21, 2025</u>	WQM App. No. <u>2625400</u>
Project Description <u>Application for a new NPDES permit authorize a discharge of a treated Sewage</u>	

Summary of Review

The permittee proposed to construct a 0.0004 MGD single residence treatment facility to serve a proposed three-bedroom single-family house in Fayette County. The purpose of construction is to replace a malfunctioning on-lot system.

The sewage from this facility is discharging to Tributary 38040 to Virgin Run, which is classified as a High-Quality (HQ) Trout Stocking Fishery (TSF) per Chapter 93 Designated Use.

This discharge does not qualify for a general permit because it discharges to a high-quality stream. General permits cannot be issued to high-quality streams.

The SFTF will consist of:

- Singulair Bio-Kinetic Model 960-500 Treatment tank
- Hydro-Kinetic Bio-Film Reactor (HKBFR) system
- A Norweco AT 1500 UV Disinfection System preinstalled by the manufacturer.

WQM Permit No. 2625400 will be issued concurrently with the final issuance of the NPDES Permit.

Single Residence Treatment Plant (SRSTP) permittees are not required to register for eDMR.

Act 537 Planning was approved for this project on December 02, 2024.

Approve	Deny	Signatures	Date
X		<i>Fahmida Amin</i> Fahmida Amin / Environmental Engineering Trainee	March 18, 2025
X		<i>MAHBUBA IASMIN</i> Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	March 20, 2025

Summary of Review

Act 14-PL 834 Municipal Notification was documented by letters sent to Perry Township and Fayette County on December 12, 2024.

Biosolids treatment and disposal was not indicated on the application.

Permit issuance is recommended.

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.

Discharge and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.0004
Latitude	40° 2' 46.31"	Longitude	-79° 44' 28.36"
Quad Name	Dawson	Quad Code	40079A6
Wastewater Description:		Sewage Effluent	
Receiving Waters	Tributary 38040 to Virgin Run (HQ-TSF)	Stream Code	38040
NHD Com ID	69917737	RMI	0.0400
Drainage Area	0.36	Yield (cfs/mi²)	0.0069167
Q7-10 Flow (cfs)	0.00249	Q7-10 Basis	USGS Stream Stats
Elevation (ft)	1347	Slope (ft/ft)	
Watershed No.	19-D	Chapter 93 Class.	HQ-TSF
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 (°F)			
Hardness (mg/L)			
Other:			
Nearest Downstream Public Water Supply Intake	MAWC Yough Plant		
PWS Waters	Youghiogheny River	Flow at Intake (cfs)	30 MGD
PWS RMI	46.67	Distance from Outfall (mi)	14.72

Changes Since Last Permit Issuance: New Construction

Other Comments: none

Treatment Facility Summary

Treatment Facility Name: 130 Virgin Run Rd SRSTP

WQM Permit No.	Issuance Date
2625400	Under Department Review

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary		UV Disinfection	0.0004

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0005		Not Overloaded		

Changes Since Last Permit Issuance: N/A- New Permit Issuance

Other Comments: Act 537 Planning was approved on December 02, 2024

Development of Effluent Limitations

Outfall No. 001
Latitude 40° 2' 46.40"
Wastewater Description: Sewage Effluent

Design Flow (MGD) .0004
Longitude -79° 44' 28.36"

Technology-Based Limitations

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SFTF permits based on the requirements of Department's Standard Operating Procedure (SOP) for *New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application* [SOP No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised May 17, 2019].

Parameter	Avg	IMAX	Sample Type	Frequency: SFTFs	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate (SRSTPs) Measured (SFTFs)	1/month	1/year
BOD5 (mg/L)	10	20	Grab	1/month	1/year
TSS (mg/L)	10	20	Grab	1/month	1/year
pH*	6.0 S.U. Inst. Min.	9.0 S.U.	Grab	1/month	1/year
TRC (mg/L)	Report for SRSTPs; Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L for SFTFs		Grab	1/month	1/month
Fecal Coliform (No./100 ml)	200 Geometric Mean (SFTFs) / Average (SRSTPs)		Grab	1/month	1/year

* Technology-Based effluent limits for pH will be imposed based upon Federal Regulation 133.102(c) and State Regulation 95.2(1).

Antidegradation Considerations:

Outfall 001 discharges to Tributary 38040 to Virgin Run, which is a HQ-TSF.

The following Antidegradation Best Available Combination of Technologies (ABACT) effluent limits, at a minimum, will be established based on the requirements of DEP's *Water Quality Antidegradation Implementation Guidance* [Doc. No. 391-0300-002].

Parameter	Treatment Process Performance Expectations (mg/L)		
	<2,000 gpd	2,000-50,000 gpd	>50,000 gpd
CBOD ₅ (May 1 – Oct. 31)	10	10	10
CBOD ₅ (Nov. 1 – Apr. 30)	20	20	10
Suspended Solids	20	10	10
NH ₃ -N (May 1 – Oct. 31)	5.0	3.0	1.5
NH ₃ -N (Nov. 1 – Apr. 30)	15.0	9.0	4.5
Effective disinfection	Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encourage and must be considered.		
Other parameters, as needed	<i>Determined by the size and characteristics of the proposed discharge, may include – NO₂/NO₃-N, Total Phosphorus, Copper, Lead, Zinc</i>		

The limitations and monitoring requirements, specified on page 7 of this Fact Sheet, reflect the most stringent limitation amongst the above Technology-Based Effluent Limitations.

Additional Considerations:

Annual BOD5 limitations were imposed instead of CBOD5 seasonal limits which reflect the most stringent limitation amongst the Technology-Based Effluent Limitations and also based upon the Department's SOP – New and Reissuance Individual SFTF NPDES Permits, and per DEP Small Flow Treatment Facilities Manual (Nov. 2023).

TBELs for Suspended Solids AML of 10 mg/L will be applied for this discharge since the antidegradation limits are less stringent.

Based on the proposed design discharge, yearly monitoring frequency and anti-degradation requirements, year-round Ammonia-Nitrogen (NH₃-N) limits have been applied as AML of 5.0 mg/L and Ins Max of 10.0 mg/L.

SFTFs/SRSTPs are not required to monitor for Total Nitrogen and Total Phosphorus in new and reissued permits. The receiving stream is not impaired for nutrients.

Using UV for disinfection is compatible with the SOP No. BCW-PMT-003 Rev. November 9, 2023 under Sec. F.2. Special condition Part C 150 will be included within the new permit.

Monthly Sampling frequencies will be imposed for the proposed facility that are consistent with current policy and Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations. Monthly monitoring is required for these parameters to provide minimum assurance that the facility is being operated properly.

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" (386-0400-001), 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 (GPD)	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
BOD5	XXX	XXX	XXX	10	XXX	20	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200.0	XXX	XXX	1/year	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	5.0	XXX	10.0	1/year	Grab

Compliance Sampling Location: Outfall 001

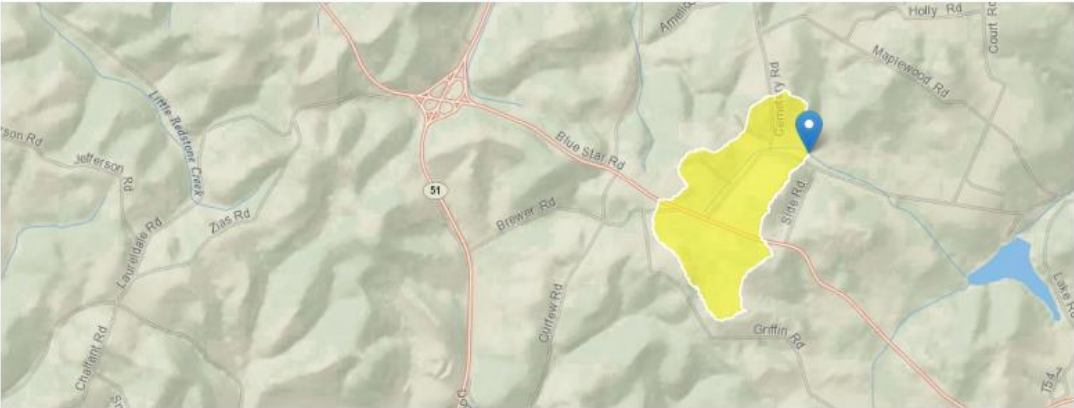
Other Comments: None

ATTACHMENT A

USGS Stream Stats Output

StreamStats Report

Region ID: PA
Workspace ID: PA20250312184912795000
Clicked Point (Latitude, Longitude): 40.04621, -79.74120
Time: 2025-03-12 14:49:39 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.36	square miles
ELEV	Mean Basin Elevation	1347	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.36	square miles	2.26	1400
ELEV	Mean Basin Elevation	1347	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

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 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00966	ft ³ /s
30 Day 2 Year Low Flow	0.0197	ft ³ /s
7 Day 10 Year Low Flow	0.00249	ft ³ /s
30 Day 10 Year Low Flow	0.00581	ft ³ /s
90 Day 10 Year Low Flow	0.0128	ft ³ /s

Low-Flow Statistics Citations

Stuckey, M.H., 2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (<http://pubs.usgs.gov/sir/2006/5130/>)

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Application Version: 4.28.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1