pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0284971**
Wastewater Type	**Sewage**	APS ID	**1067770**
Facility Type	**SRSTP**	Authorization ID	**1403764**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Hydro Sc LLC**	Facility Name	**Ratchkauskas SRSTP**
Applicant Address	1500 Bay Road Apt 514	Facility Address	6054 Sinan Drive
	Miami Beach, FL 33139-3252		Export, PA 15632-1700
Applicant Contact	Dov Ratchkauskas	Facility Contact	Same as Applicant
Applicant Phone	(305) 978-2474	Facility Phone	Same as Applicant
Client ID	371288	Site ID	858700
SIC Code	**8800**	Municipality	Murrysville Borough
SIC Description	**Sewage**	County	Westmoreland
Date Application Received	July 20, 2022	WQM Required	Yes
Date Application Accepted	July 26, 2022	WQM App. No.	6522405

Project Description: Application of a new NPDES Permit for discharge of treated sewage.

Summary of Review

The applicant has proposed to construct a 0.0004 MGD Single Residence Sewage Treatment Plant (SRSTP).

The discharge is to UNT 37414 to Haymakers Run, which is classified as High Quality - Cold-Water Fishes (HQ-CWF), located in watershed 19A.

Act 537 planning was approved for this project on July 5, 2022.

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		Jordan T Coldsmith Jordan Coldsmith / Environmental Engineering Specialist	August 8, 2022
x		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	September 6, 2022

Discharge and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0004
Latitude	40º 27' 35.36"	Longitude	-79º 38' 15.74"
Quad Name	Murrysville	Quad Code	40079D6
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Haymakers Run (HQ-CWF)	Stream Code	37414
NHD Com ID	99406960	RMI	0.2300
Drainage Area	0.0954	Yield (cfs/mi^2)	0.001978
Q_{7-10} Flow (cfs)	0.000455	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1208	Slope (ft/ft)	
Watershed No.	19-A	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	**Metals; pH; Aluminum; Iron; pH, Low**		
Source(s) of Impairment	**Acid Mine Drainage (AMD)**		
TMDL Status	Final	Name	Turtle Creek Watershed

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	PA AMER WATER CO-PITTSBURGH		
PWS Waters	Monongahela River (WWF)	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	25.3

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

Other Comments: None

Treatment Facility Summary

Treatment Facility Name: Ratchkauskas Properties SRSTP

WQM Permit No.	Issuance Date
6522405	Under Department Review

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

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0004	0.90	Not Overloaded		Other WWTP

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

Other Comments: WQM permit No. 6522405 currently under Department review; requests construction of a STP with a rated annual average design flow of 0.0004 MGD. The treatment process consists of:

Singulair Bio-Kinetic Model 960-500 Treatment Tank
Hydro-kinetic Bio-film Reactor
AT 1500 UV Disinfection System

Act 537 planning was approved for this project on July 5, 2022.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .04
Latitude 40º 27' 35.36" **Longitude** -79º 38' 15.74"
Wastewater Description: Sewage Effluent

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 DEP's "Standard Operating Procedure (SOP) for Clean Water Program 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/year
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).

Additional TBELs:

Outfall 001 discharges to an UNT to Haymakers Run, which is classified as a HQ-CWF. The proposed SFTF is a repair for an existing on-lot system and an anti-degradation analysis is typically not required. Act 537 Planning was approved for this SFTF on July 5, 2022.

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; November 29, 2003).

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	*Determined by the size and characteristics of the proposed discharge, may include – NO_2/NO_3-N, Total Phosphorus, Copper, Lead, Zinc*		

The limitations and monitoring requirements, specified on page 6 of this Fact Sheet, reflect the most stringent limitation amongst the above Technology-Based Effluent Limitations.

Total Maximum Daily Loads (TMDL)

This facility discharges to the Turtle Creek Watershed. The Watershed has a TMDL that was finalized on June 29, 2009. The watershed is impaired by metals and pH. Abandoned mine drainage is a source of such impairment. The sewage discharge from the Ratchkauskas SRSTP is not expected to contribute to the stream impairment. No WLAs have been developed for this sewage discharge, and they are not expected to contribute to the stream impairment for these pollutants. No monitoring requirements for Total Iron, Total Manganese and Total Aluminum will be imposed on this facility.

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 (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	10.0	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	200.0	XXX	XXX	1/year	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	5.0	XXX	15.0	1/year	Grab

Compliance Sampling Location: Outfall 001

Other Comments: Ultraviolet (UV) disinfection is used, and therefore, Total Residual Chlorine (TRC) limits are not applicable. Current policy does not require SRSTPs to monitor for UV Intensity.

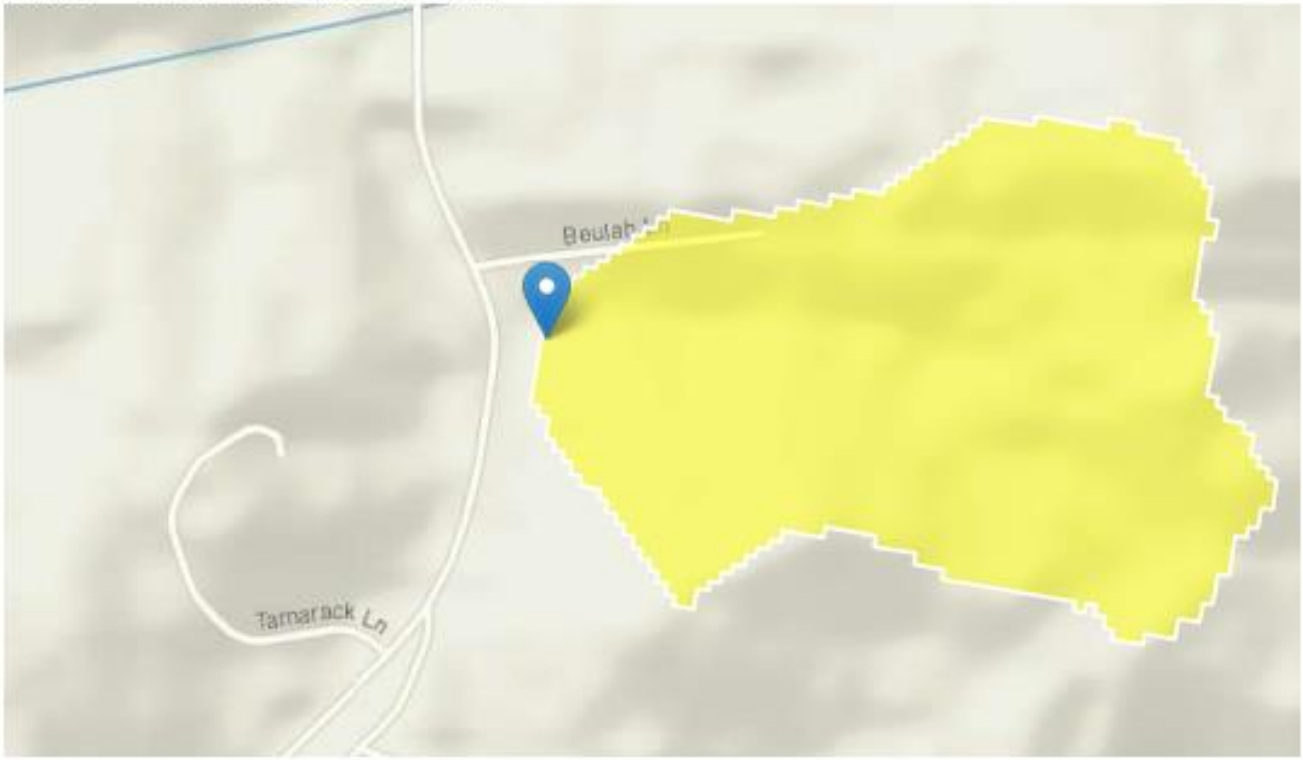
Seasonal effluent limits for ammonia-nitrogen will not be imposed. DEP's "Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application" (SOP No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised May 17, 2019) require an annual monitoring frequency for SRSTPs. An annual ammonia-nitrogen effluent limitation, based upon the warmer ABACT effluent limit, will be established for this facility.

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.

StreamStats Report

Region ID: PA
Workspace ID: PA20220810143154646000
Clicked Point (Latitude, Longitude): 40.45986, -79.63773
Time: 2022-08-10 10:32:15 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.0954	square miles
ELEV	Mean Basin Elevation	1208	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	0.0954	square miles	2.26	1400
ELEV	Mean Basin Elevation	1208	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	0.00194	ft^3/s
30 Day 2 Year Low Flow	0.00418	ft^3/s
7 Day 10 Year Low Flow	0.000455	ft^3/s
30 Day 10 Year Low Flow	0.00116	ft^3/s
90 Day 10 Year Low Flow	0.00267	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/)