pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0266396**
Wastewater Type	**Sewage**	APS ID	**922014**
Facility Type	**SRSTP**	Authorization ID	**1386954**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Scot D. & Colleen E. Riddell**	Facility Name	**Riddell Residence**
Applicant Address	2992 Dublin Mills Road	Facility Address	2992 Dublin Mills Road
	Hustontown, PA 17229-9120		Hustontown, PA 17229-9120
Applicant Contact	Scot Riddell	Facility Contact	Scot Riddell
Applicant Phone	(814) 685-3898	Facility Phone	(814) 685-3898
Client ID	330234	Site ID	817713
SIC Code	8811	Municipality	Taylor Township
SIC Description	Services - Private Households	County	Fulton
Date Application Received	February 25, 2022	WQM Required	
Date Application Accepted	March 15, 2022	WQM App. No.	

Project Description: NPDES permit renewal.

Summary of Review

Scot D. Riddell has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of a NPDES permit. The existing NPDES permit, issued on January 26, 2017, authorizes the discharge of treated sewage from the Single Residence Sewage Treatment Plant (SRSTP) located in Taylor Township, Fulton County. The permit became effective on March 1, 2017, expired on February 28, 2022.

The facility has a design capacity of 400 gpd, and discharges to an UNT to Sideling Hill Creek, which is classified for HQ-Cold Water and Migratory fishes.

The WQM Part II No. 2916402 issued on January 26, 2017.

Changes from the previous permit:

- The SIC Code changed to 8811-Service-Private Household based on SOP No. BCW-PMT-003, revised May 17, 2019, version 1.8.
- A Special Condition has been added to the proposed permit, Section C – item J, page 15, as follows.
  "The discharge from the system is to a stream currently classified as High Quality. If the Department determines, that the discharge of chlorine to the stream based on Total Residual Chlorine (TRC) monitoring is having a detrimental effect on the aquatic life in the stream, you will be required to install ultraviolet disinfection system within sixty days of notification by the Department."

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.

Approve	Deny	Signatures	Date
X		*Hilaryle* Hilary H. Le / Environmental Engineering Specialist	May 22, 2023
X		*Maria D. Bebenek for* Daniel W. Martin, P.E. / Environmental Engineer Manager	May 22, 2023

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0004
Latitude	40º 7' 10.80"	Longitude	-78º 1' 39.53"
Quad Name	Hustontown	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Sideling Hill Creek (HQ-CWF, MF)	Stream Code	13024
NHD Com ID	66213015	RMI	0.2500
Drainage Area	0.36 mi.^{2}	Yield (cfs/mi^2)	0.003
Q_{7-10} Flow (cfs)	0.0012	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	815	Slope (ft/ft)	
Watershed No.	12-C	Chapter 93 Class.	HQ-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	
Nearest Downstream Public Water Supply Intake	Mifflin County Municipal Authority		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	34.39 miles	Distance from Outfall (mi)	Approximate 85.0 miles

Changes Since Last Permit Issuance: None

Dry Swale to Unnamed Tributary to Sideling Hill Creek:
Under 25 Pa. Code § 93.9z, Dry Swale to Unnamed Tributary to Sideling Hill Creek is designated as High-Quality Cold Water & Migratory Fishes (HQ-CWF & MF). A hydrogeologic survey was conducted on March 31, 2016 by DEP's Hydrogeologist. No Point of First Use (POFU) survey was conducted for this discharge during or after the planning phase. Several discussions with DEP's biologist supervisor about the POFU survey and the hydro-geologic survey report indicated that the POFU is at the confluence of the dry swale to UNT to Sideling Hill Creek. Regardless, the effluent limits for SRSTP individual permits are as stringent as the limits for discharge into dry stream which will be protective to special protection water. There are no drinking water supply wells downstream of the discharge within 200' of the dry stream on each side. Facilities below design flow of 2000 GPD are exempted from Chesapeake Bay Nutrients monitoring requirements. No special protection water(s) is impacted by this discharge. No Class A Wild Trout fishery is impacted by this discharge.

Public Water Supply:
The fact sheet prepared for the renewal permit indicated that the nearest downstream public water supply intake is Mifflin County Municipal Authority, located on Juniata River, approximately 85.0 miles from the discharge. Considering dilution, the discharge is not expected to impact the water supply.

Compliance History	
Summary of DMRs:	There were no Annual Maintenance Reports available for review. The lab test results of discharge with application on April 8, 2022 were 6.12 mg/L of BOD_5, 4 No./100 mL of Fecal Coliform, 13.0 mg/L of TSS, and 0.0 mg/L of TRC. The annual lab test results of discharge submitted to the DEP on April 13, 2023 were 7.26 mg/L of BOD_5, 109 No./100 mL of Fecal Coliform, and 10.0 mg/L of TSS. No TRC test results reported from the lab. However, the monthly TRC monitoring was 0.0 mg/L from July 2022 to April 2023.
Summary of Inspections:	10/12/2022: Mr. Clark, DEP Water Quality Specialist, conducted an administrative inspection. There was a violation noted during inspection: Department did not receive an Annual Maintenance Report for the 2021-2022 monitoring year. The recommendations were check and record the total residual chlorine level monthly, provide the copy of the completed evaluation inspection report to DEP when it done, and submit an Annual Maintenance Report (AMR) by June 30, 2023. 4/20/2021: Mr. Clark, DEP Water Quality Specialist, conducted an administrative inspection. There was a violation noted during inspection: Department did not receive an Annual Maintenance Report for the 2019-2020 monitoring year. The recommendations were check and record the total residual chlorine level monthly, submit a sample of the discharge to a testing laboratory by May 31, 2021, and submit an Annual Maintenance Report (AMR) by June 30, 2021. 10/1/2019: Mr. Clark, DEP Water Quality Specialist, conducted a compliance evaluation inspection. There were no violations noted during inspection. There were comments such as perform monthly testing of effluent for chlorine residual, yearly effluent testing for TSS, $CBOD_5$ and Fecal Coliform, inspect treatment units at least yearly, and submit an annual Maintenance report to the Department by June 30th of each year.

Other Comments: There were two violations associated with the permittee due to not able to submit the permit renewal application 180 days before permit expire date status until February 25, 2022, and lab test results record until April 8, 2022. However, the open violations were removed by the Department after the documents were received.

Treatment Facility Summary

The facility will be designed to serve the existing 3-bedroom single-family residence (400 GPD) located at 2992 Dublin Mills Road, Hustontown, PA. The proposed treatment process which will replace a malfunctioning on-lot system, according to the application, is as follows:

1,250-gal dual-compartment septic tank → 500-gal single-compartment dosing tank → 20' X 16' accessible sand filter → Chlorine erosion tablet feeder → 500 gal two compartment chlorine contact tank → sodium sulfate dechlorination tablet feeder → Outfall 001 to dry swale to UNT of Sideling Hill Creek.

The WQM Part II No. 2916402 issued on January 26, 2017.

Development of Effluent Limitations and Monitoring Requirements

The proposed effluent limitations and monitoring requirements are derived from DEP's Standard Operating Procedure (SOP) for New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications (SOP No. BPNPSM-PMT-003 revised on May 17, 2019, version 1.8). Based on the proposed requirements, the permittee will no longer be required to monitor for pH.

Biochemical Oxygen Demand (BOD_5): Only the minimum treatment requirements of secondary treatment will be necessary to protect water quality. The limits of 10.0 mg/L average monthly and 20.0 mg/L instantaneous will remain in the proposed permit.

Total Suspended Solids (TSS): The existing limits of 10.0 mg/L average monthly and 20.0 mg/L instantaneous maximum will remain in the proposed permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47

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.

Total Residual Chlorine (TRC): The system was installed without ultraviolet disinfection. During this permit term, the Department will monitor the TRC and stream quality to determine if the homeowner should install dichlorination or UV. A Special Condition has been added to the proposed permit, Section C – item J, page 15, as follows.

> "*The discharge from the system is to a stream currently classified as High Quality. If the Department determines, that the discharge of chlorine to the stream based on Total Residual Chlorine (TRC) monitoring is having a detrimental effect on the aquatic life in the stream, you will be required to install ultraviolet disinfection system within sixty days of notification by the Department.*"

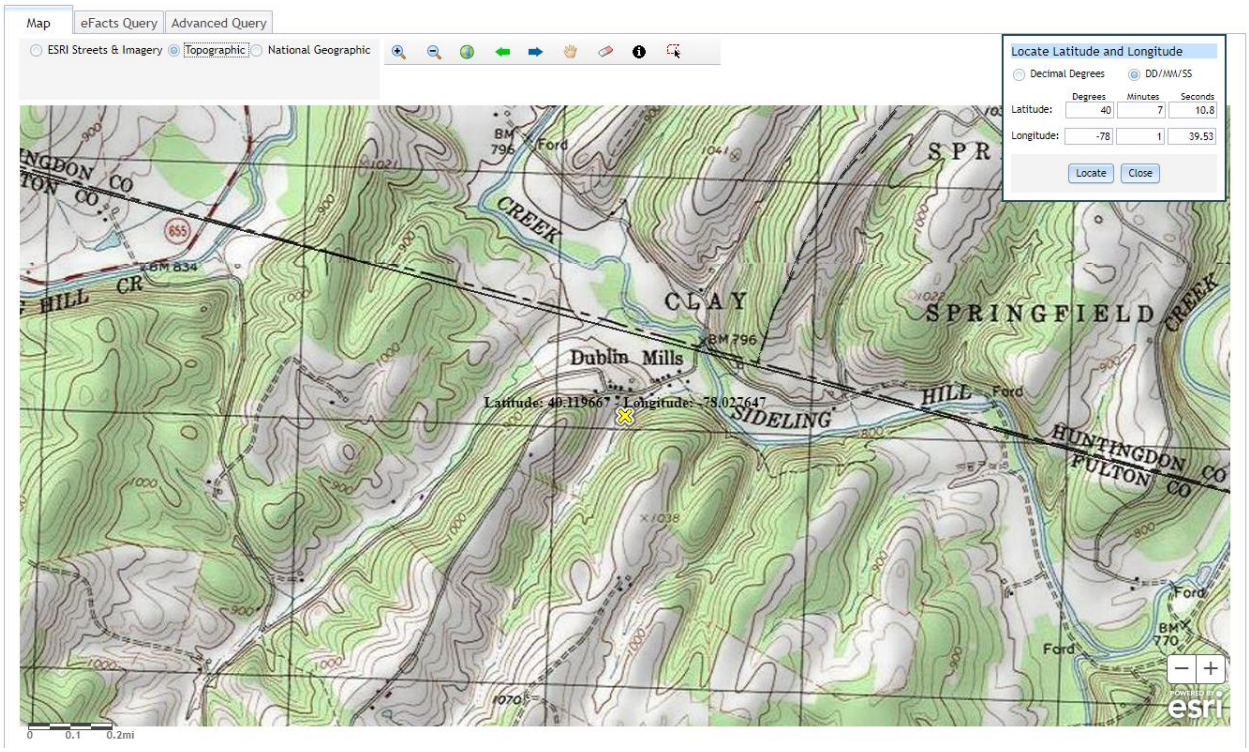
The facility utilizes chlorine disinfection. The monthly monitor and report requirement will remain in the proposed permit.

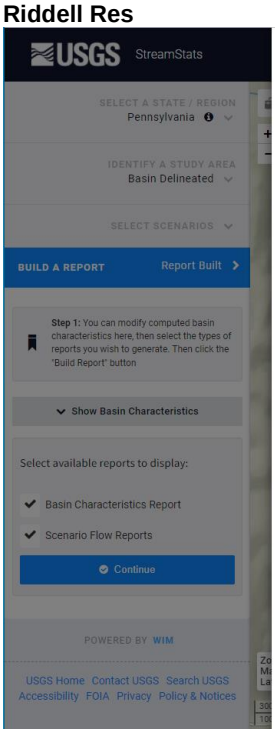
This facility is exempt from the Chesapeake Bay requirements for Total Nitrogen and Total Phosphorus because the flow is less than 2,000 gpd.

303d Listed Streams:
eMapPA indicates that the receiving stream is impaired for siltation due to agriculture. A "tentative" TMDL currently exists for this impairment.

Antidegradation (93.4):
The effluent limits for this discharge have been developed to ensure that existing in-stream 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.

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





Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.36	square miles
PRECIP	Mean Annual Precipitation	37	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	2.79	miles per square mile
ROCKDEP	Depth to rock	3	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.36	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	37	inches	35	50.4
STRDEN	Stream Density	2.79	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	3	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

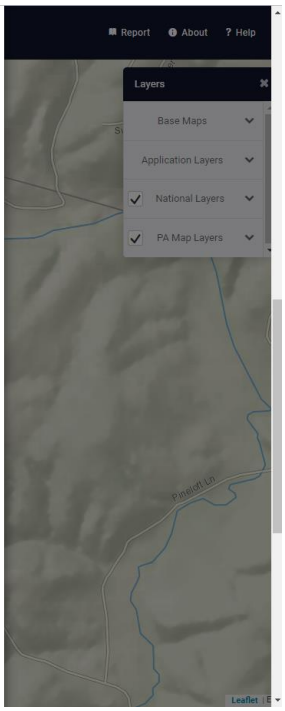
Low-Flow Statistics Disclaimers [Low Flow Region 2]

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 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.00554	ft^3/s
30 Day 2 Year Low Flow	0.00995	ft^3/s
7 Day 10 Year Low Flow	0.00117	ft^3/s
30 Day 10 Year Low Flow	0.00228	ft^3/s
90 Day 10 Year Low Flow	0.00566	ft^3/s

Low-Flow Statistics Citations



Existing Effluent Limitations and Monitoring Requirements

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
TRC	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	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 Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
TRC	XXX	XXX	XXX	XXX	Report	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:

Other Comments: