pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0261793**
Wastewater Type	**Sewage**	APS ID	**769681**
Facility Type	**SRSTP**	Authorization ID	**1432538**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Laura Lee Kauffman & William S. Kauffman**	Facility Name	**Kauffman Res**
Applicant Address	110 Union Hall Road Carlisle, PA 17013-8391	Facility Address	110 Union Hall Road Carlisle, PA 17013-8391
Applicant Contact	William Kauffman	Facility Contact	William Kauffman
Applicant Phone	(717) 462-0482	Facility Phone	(717) 462-0482
Client ID	292562	Site ID	756987
SIC Code	6514	Municipality	North Middleton Township
SIC Description	Fin, Ins & Real Est - Dwelling Operators, Except Apartments	County	Cumberland
Date Application Received	March 17, 2023	WQM Required	
Date Application Accepted	March 28, 2023	WQM App. No.	
Project Description	NPDES permit renewal		

Summary of Review

An application was submitted on March 17, 2023 for reissuance of an NPDES permit to discharge treated sewage from the single-family residence sewage treatment plant located in North Middleton Township, Cumberland County. The permit was last reissued on August 30, 2018 and became effective on September 1, 2018. The permit expires on August 31, 2023.

The facility has a design capacity of 500 gpd, and discharges to an UNT to Conodoguinet Creek, which is classified for Warm Water and Migratory fishes.

The WQM Part II No. 2112401 issued on April 20, 2012.

Changes from the previous permit: N/A

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	November 17, 2023
X		***Maria D. Bebenek for Daniel W. Martin*** Daniel W. Martin, P.E. / Environmental Engineer Manager	December 7, 2023

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0005
Latitude	40º 13' 41"	Longitude	-77º 13' 25"
Quad Name	Carlisle	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Conodoguinet Creek (WWF)	Stream Code	10290
NHD Com ID	56405903	RMI	0.303
Drainage Area	7.17 mi.^{2}	Yield (cfs/mi^2)	0.015
Q_{7-10} Flow (cfs)	0.107	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-B	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Regime Modification, Siltation,		
Source(s) of Impairment	Agriculture, Construction, Habitat Modification - Other Than Hydromodification		
TMDL Status	Final	Name	Conodoguinet Creek Watershed
Nearest Downstream Public Water Supply Intake	Carlisle Borough		
PWS Waters	Conodoguinet Creek	Flow at Intake (cfs)	
PWS RMI	39.95 miles	Distance from Outfall (mi)	

Changes Since Last Permit Issuance: none

The discharge is to a drainage swale and then to Unnamed Tributary of Conodoguinet Creek at RMI 0.303. On October 20, 2011, DEP Water Pollution Biologist conducted a point of first use survey and concluded that the drainage swale does not support a viable benthic macroinvertebrate community at the point of discharge. As a result, DEP determined that the point of first use is located at the confluence of the drainage swale and the unnamed tributary to Conodoguinet Creek.

Drainage Area
A drainage area upstream of the confluent of the drainage swale and the unnamed tributary to Conodoguinet Creek is estimated to be 7.17 sq.mi. according to USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
USGS StreamStats produces a Q7-10 flow of 0.107 cfs at the confluence of the drainage swale and the unnamed tributary to Conodoguinet Creek.

Unnamed Tributary to Conodoguinet Creek
Under Pa Code §93.9o, all unnamed tributaries to Conodoguinet Creek from PA997 at Roxbury to Mouth are designated as warm water and migratory fishes. No special protection water is impacted by this discharge. No Class A Wild Trout fishery is impacted by this discharge. DEP's latest integrated report prepared in 2022 showed the unnamed tributary of Conodoguinet Creek is impaired for siltation as a result of construction and agricultural activities. A Total Maximum Daily Load (TMDL) was developed in December 2000 to address impairments issues identified within the Conodoguinet Creek watershed. No Waste-Load allocation (WLA) has however been assigned to this system yet.

Public Water Supply Intake
According to the fact sheet developed for the original permit, the nearest downstream public water supply intake is Carlisle Borough, located on the Conodoguinet Creek at RMI 35.95 miles. Considering nature and dilution, the discharge is not expected to impact the water supply.

Compliance History	
Summary of DMRs:	AMRs have been consistently submitted to DEP. The lab test results of discharge with application on March 17, 2023 were < 2.4 mg/L of BOD_5, < 2.0 No./100 mL of Fecal Coliform, and < 2.4 mg/L of TSS.
Summary of Inspections:	8/04/2020: Mr. Benham, DEP Water Quality Specialist, conducted an administrative inspection. There were no violations noted during inspection. The laboratory test results samples on 6/25/2020 were exceeded the permit limitations. Recommend contacting your service provide for suggestions in maintaining effluent parameters within permit limitations. Mr. Peck's summary of service provided on 6/25/2020 indicated that the UV bulb was due for replacement.
Other Comments:	There are no open violations associated with the permittee.

Treatment Facility Summary

The treatment system which will serve a 4-bedroom single residence (500 GPD) will consist of two (2) septic tanks of 1,000 and 1,500-gallon capacity with Biotube filter, AdvanTex AX-20 filter consisting of poly textile media with splitter valve controlling recycle to the second septic tank, and UV disinfection unit. The WQM permit no. 2112401 was issued on April 20, 2012.

Development of Effluent Limitations and Monitoring Requirements

Unless stated otherwise below, the proposed effluent limitations and monitoring requirements listed on page 4 of this fact sheet 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). First, all existing monitoring frequencies and sample types have been changed to reflect the requirements specified in the SOP (i.e., all average monthly codes have been modified to annual average due to WMS coding issues). This is a reasonable approach as the permittee has been submitting annual maintenance reports consistently and no significant maintenance/operation issues are found. In addition, DEP no longer requires sampling of pH for single residence sewage treatment facilities. The facility was permitted and built prior to publication of DEP's small flow treatment facilities manual. As a result, the facility may not be capable of meeting tertiary treatment limits (10 mg/L for both CBOD5 and TSS). As a result, existing effluent limits for $CBOD_5$ and TSS will remain unchanged in the permit. Since only 1/year sampling will be conducted, a year-round 200/mL fecal coliform annual average effluent limit will be written in the permit rather than seasonal effluent limits.

Facilities that are designed based on a flow of less than 2,000 GPD or considered as SRSTPs are exempt from the Bay requirements. Accordingly, it is not necessary for the permittee to perform nutrient monitoring.

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. BCW-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.

Carbon Biochemical Oxygen Demand ($CBOD_5$): 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 maximum 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 & Fecal Coliform are recommended to remain the same as the existing permit.

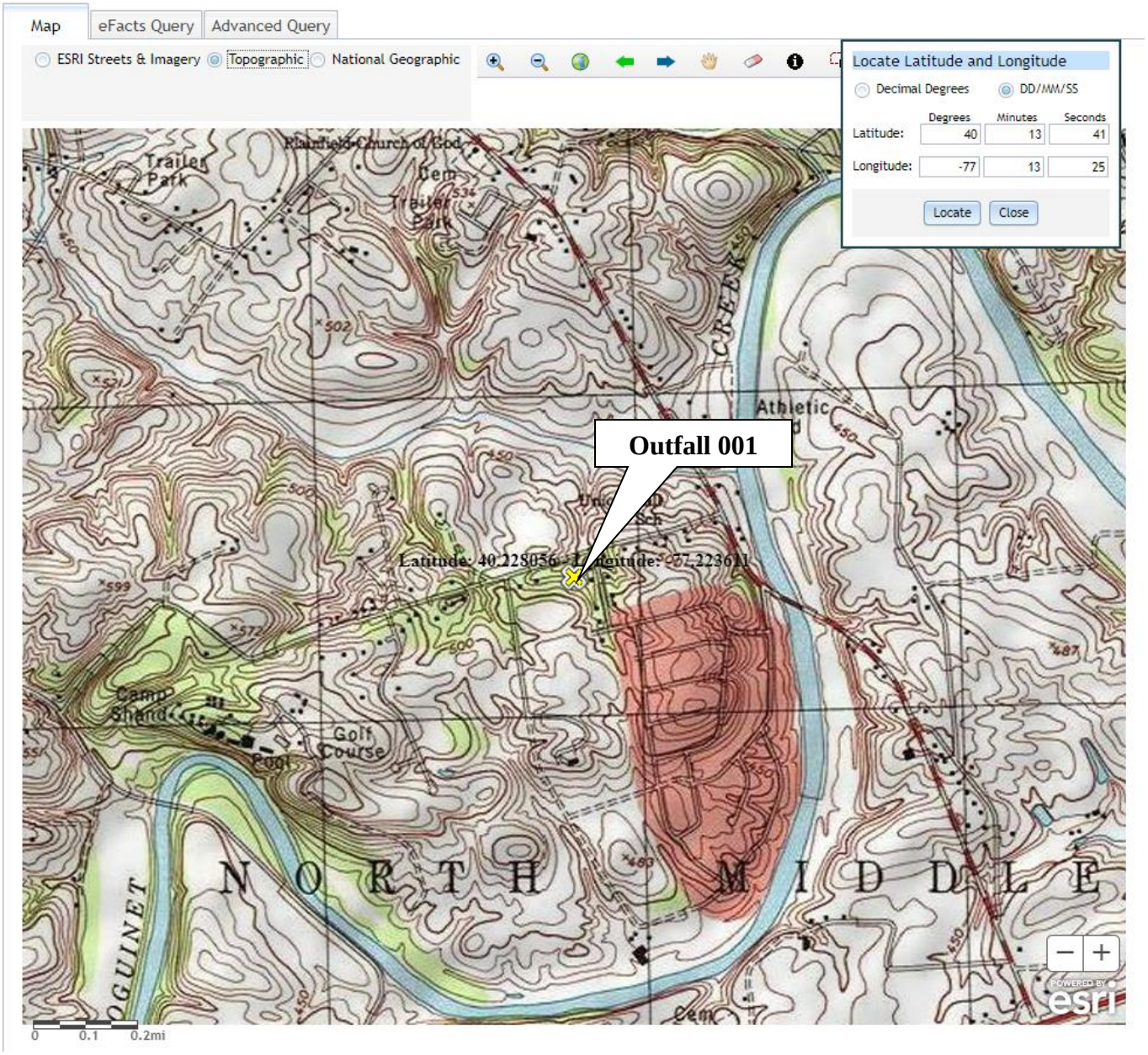
The facility utilizes UV disinfection.

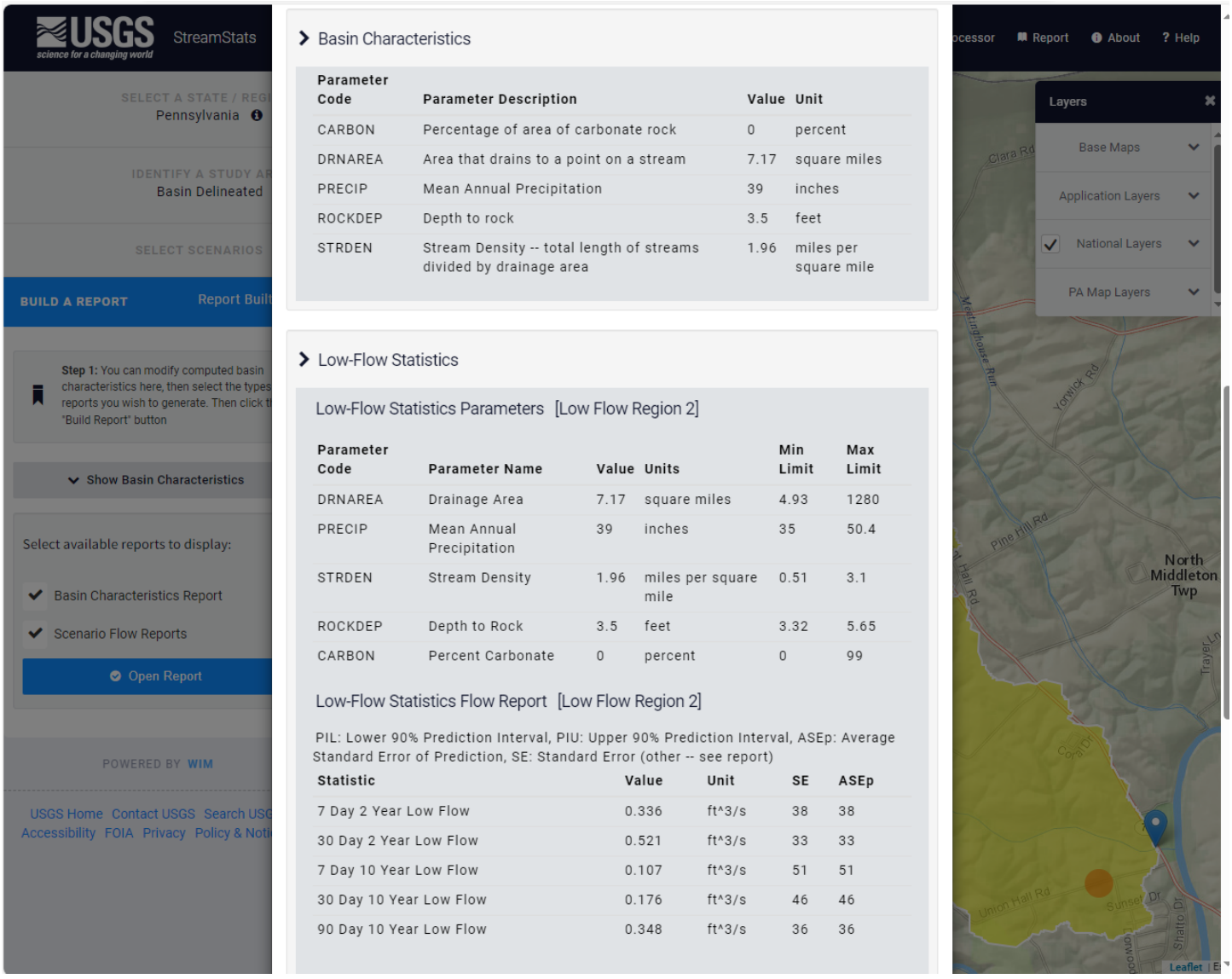
This facility is exempt from the Chesapeake Bay requirements for Total Nitrogen and Total Phosphorus because the flow is less than 2,000 gpd.

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.





Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	0	percent
DRNAREA	Area that drains to a point on a stream	7.17	square miles
PRECIP	Mean Annual Precipitation	39	inches
ROCKDEP	Depth to rock	3.5	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	1.96	miles per square mile

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	7.17	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	1.96	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	3.5	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

Low-Flow Statistics Flow Report [Low Flow Region 2]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.336	ft^3/s	38	38
30 Day 2 Year Low Flow	0.521	ft^3/s	33	33
7 Day 10 Year Low Flow	0.107	ft^3/s	51	51
30 Day 10 Year Low Flow	0.176	ft^3/s	46	46
90 Day 10 Year Low Flow	0.348	ft^3/s	36	36

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
	Annual Average	Average Weekly	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	10	XXX	20	1/year	Grab
Total Suspended Solids	XXX	XXX	XXX	10	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	10000	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
CBOD5	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	1000	1/year	Grab

Compliance Sampling Location:

Other Comments: