pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0080501**
Wastewater Type	**Sewage**	APS ID	**274880**
Facility Type	**SFTF**	Authorization ID	**1448614**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Tuscarora School District**	Facility Name	**Montgomery Elementary School**
Applicant Address	9138 Fort Loudon Road	Facility Address	9138 Fort Loudon Road
	Mercersburg, PA 17236-9207		Mercersburg, PA 17236-9207
Applicant Contact	Corey Hollingshead	Facility Contact	Corey Hollingshead
Applicant Phone	(717) 658-8458	Facility Phone	(717) 328-2023
Client ID	6583	Site ID	454389
SIC Code	8211	Municipality	Montgomery Township
SIC Description	Services - Elementary And Secondary Schools	County	Franklin
Date Application Received	July 26, 2023	WQM Required	No
Date Application Accepted	August 25, 2023	WQM App. No.	

Project Description: NPDES Renewal.

Summary of Review

Tuscarora School District (TSD) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on December 20, 2018 and became effective on January 1, 2019. The permit expired on December 31, 2023.

Based on the review, it is recommended that the permit be drafted.

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		*Jinsu Kim* Jinsu Kim / Environmental Engineering Specialist	May 16, 2024
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	May 24, 2024
X		Maria D. Bebenek Maria D. Bebenek, P.E. / Program Manager	May 24, 2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.00175
Latitude	39º 47' 46.26"	Longitude	-77º 53' 47.84""
Quad Name	Mercersburg	Quad Code	2022
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of West Branch Conococheague Creek (TSF, MF)	Stream Code	59510
NHD Com ID	49487430	RMI	0.91
Drainage Area	0.0649	Yield (cfs/mi^2)	N/A
Q_{7-10} Flow (cfs)	0; see comments below	Q_{7-10} Basis	See comments below
Elevation (ft)	590	Slope (ft/ft)	
Watershed No.	13C	Chapter 93 Class.	Trout Stocking, Migratory Fishes
Existing Use	None	Existing Use Qualifier	None
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Hagerstown, MD		
PWS Waters	Potomac River	Flow at Intake (cfs)	unknown
PWS RMI	unknown	Distance from Outfall (mi)	unknown

Drainage Area
The discharge is to a dry channel and then to Unnamed Tributary 59510 of the West Branch Conococheague Creek at RMI 0.91 mi. USGS StreamStats provided an estimated drainage area of 0.0649 sq.mi at the point of discharge.

Streamflow
The fact sheet prepared for the last permit renewal explained that the discharge is to a dry/intermittent stream. DEP's eMapPA shows that the discharge at 39º 47' 46.26", -77º 53' 47.84" is located headwaters of the Unnamed Tributary 59510 of the West Branch Conococheague Creek. Consequently, little or no natural surface water flow is expected in this stream at the point of discharge. USGS StreamStats produced an estimated Q7-10 flow of 0.157 cfs. However, this may be inaccurate as the drainage area provided by USGS StreamStats is lower than the minimum value required to be used in regression equations to calculate the Q7-10. The fact sheet prepared for the last permit renewal indicates the Q7-10 of 0 cfs. This is more reasonable considering the fact that the discharge is to headwaters of the unnamed tributary.

Unnamed Tributary of West Branch Conococheague Creek
Under 25 Pa Code §93.9z, all unnamed tributaries of West Branch Conococheague Creek from US 30 Bridge to PA-MD State Border are designated as Trout Stocking and Migratory fishes. The main stem, West Branch Conococheague Creek, from US 30 Bridge to PA-MD State Border is also designated as Trout Stocking and Migratory fishes. No special protection water(s) is therefore impacted by this discharge. DEP's eMapPA shows that the receiving stream is not a Class A Wild Trout Fishery stream. Accordingly, no Class A Wild Trout Fishery is impacted by this discharge.

Public Water Supply Intake
The fact sheet prepared for the last permit renewal indicates that the nearest downstream water supply intake is the Hagerstown intake located on the Potomac River, Maryland. Considering the distance and dilution, the discharge is not expected to significantly impact the water supply intake.

Treatment Facility Summary				
Treatment Facility Name: Montgomery Elementary School WWTP				
WQM Permit No.	**Issuance Date**			
2812402	July 17, 2012			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Tertiary	Extended Aeration	Chlorine	0.00175
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.00175	10	Not Overloaded	Digestion	Other WWTP

TSD owns and operates an on-site wastewater treatment facility serving Montgomery Elementary School located in Montgomery Township, Franklin County. Prior to 2012, the facility utilizes an extended aeration treatment process with two (2) sand filters having the design flow of 0.004 MGD (i.e., comminutor → bar screen → aeration tank → clarifier → sand filters (2) → chlorine contact tank → post aeration tank → outfall). In 2011, TSD proposed to a new treatment plant to replace this existing aged facility. The new facility also utilizes an extended aeration treatment process but is equipped with an equalization tank, Orenco filter system and dechlorination. The design capacity was also de-rated from 0.004 MGD to 0.00175 MGD as part of this project. Consequently, DEP issued the WQM permit no. 2812402 and amended the NPDES permit in 2012 to address these changes. The past DMR data shown on the next page demonstrates that the facility has consistently discharged less than 1,000 GPD in average. The current treatment process is as follows:

Basket (Screening) → Equalization Tank → Aeration Tank → Clarifier → Chlorine Contact Tank → Orenco Filters (2) → Dechlorination → Post Aeration Tank → Outfall 001

Calcium hypochlorite and sodium sulfite are used for chlorination and dechlorination, respectively. Sludge is sent to the sludge holding tank and then hauled off site via a local septage hauler for disposal at a local POTW.

Compliance History	
Summary of DMRs:	A summary of past 12-month DMR data is presented on the next page.
Summary of Inspections:	12/19/2023: Cody Hoy conducted a routine inspection and noted that no violations are identified at the time of inspection.
Other Comments:	Since the last permit reissuance, there are a number of permit violations identified. These violations are shown later in this fact sheet. DEP's database also shows that there are a number of pending violations associated with this facility or permittee. A draft permit cover letter will indicate that the permit may not be finalized until all violations are resolved.

Effluent Data

DMR Data for Outfall 001 (from April 1, 2023 to March 31, 2024)

Parameter	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23
Flow (MGD) Average Monthly	0.0015	0.0009	0.0008	0.0007	0.0007	0.0008	0.0009	0.0007	0.0004	0.0003	0.0009	0.0010
Flow (MGD) Daily Maximum	0.0043	0.0019	0.0012	0.0012	0.0011	0.0015	0.0013	0.0009	0.0008	0.0007	0.0027	0.0018
pH (S.U.) Daily Minimum	6.5	6.6	6.0	6.3	6.5	6.5	6.9	7.2	6.2	6.6	6.8	6.9
pH (S.U.) Daily Maximum	7.8	7.2	7.5	6.8	6.7	7.4	7.5	7.5	7.7	7.9	7.1	7.3
DO (mg/L) Daily Minimum	5.7	10.8	10.8	9.9	8.5	6.1	6.1	6.1	6.0	6.2	6.0	6.1
TRC (mg/L) Average Monthly	0.20	0.16	0.15	0.20	0.24	0.30	0.31	0.40	0.24	0.20	0.19	0.22
TRC (mg/L) Instantaneous Maximum	0.68	0.35	0.66	0.80	0.42	0.80	0.64	0.62	0.35	0.48	0.42	0.55
CBOD5 (mg/L) Average Monthly	3.4	4.4	4.2	4.8	3.1	3.7	7.8	2.7	2.0	2.0	2.0	3.7
TSS (mg/L) Average Monthly	8.0	8.5	9.8	6.3	6.3	6.5	6.0	6.5	7.5	3.3	3.5	3.0
Fecal Coliform (No./100 ml) Geometric Mean	2.2	1	14.7	1	3	2	1	25	6.5	1	271	1
Fecal Coliform (No./100 ml) Instantaneous Maximum	5	1	216	1	9	4	1	78	14	1	294	1
Ammonia (mg/L) Average Monthly	1.4	0.50	3.4	2.8	0.50	1.7	0.50	0.50	0.50	0.50	0.61	2.9

Permit Violations

Date	Violaton Type	Parameter	Results	Limits	Units	SBC
6/28/2020	Violation of permit condition	Total Suspended Solids	19.3	10	mg/L	Average Monthly
7/27/2020	Violation of permit condition	Total Suspended Solids	19.5	10	mg/L	Average Monthly
9/28/2020	Violation of permit condition	Fecal Coliform	406	200	No./100 ml	Geometric Mean
3/26/2021	Violation of permit condition	Total Suspended Solids	10.5	10	mg/L	Average Monthly
8/27/2021	Violation of permit condition	Total Suspended Solids	14.3	10	mg/L	Average Monthly
9/28/2021	Violation of permit condition	Fecal Coliform	205	200	No./100 ml	Geometric Mean
10/28/2021	Violation of permit condition	Fecal Coliform	268	200	No./100 ml	Geometric Mean
3/30/2022	Late DMR Submission					
3/30/2022	Violation of permit condition	Ammonia-Nitrogen	10.2	9	mg/L	Average Monthly
4/27/2022	Violation of permit condition	Carbonaceous Biochemical Oxygen Demand (CBOD5)	25.2	10	mg/L	Average Monthly
5/27/2022	Violation of permit condition	Carbonaceous Biochemical Oxygen Demand (CBOD5)	13.4	10	mg/L	Average Monthly
9/28/2022	Violation of permit condition	Total Suspended Solids	10.5	10	mg/L	Average Monthly
10/27/2022	Violation of permit condition	Fecal Coliform	221	200	No./100 ml	Geometric Mean
6/28/2023	Violation of permit condition	Fecal Coliform	271	200	No./100 ml	Geometric Mean

Existing Effluent Limitations and Monitoring Requirements

A table below summarizes effluent limits and monitoring requirements specified in the existing permit amendment.

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	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6	2/month	8-Hr Composite

Proposed Effluent Limitations and Monitoring Requirements

Outfall No.	001	**Design Flow (MGD)**	.00175
Latitude	39º 47' 46.26"	**Longitude**	-77º 53' 47.84"

Wastewater Description: Sewage Effluent

Technology-Based Limitations

The discharge is to a dry/intermittent stream. As a result, DEP has been consistently developing effluent limits reflecting DEP's dry stream guidance requirements in the past permit renewals. Given that the facility has been in operation for years, the original dry stream guidance implemented on August 18, 1997 (i.e., *Implementation Guidance for Evaluating Wastewater Discharges to Drainage Ditches and Swales; Document ID: 391-2000-014*) was presumably used to develop permit requirements. This guidance specifies the following minimum treatment requirements for dry stream discharges:

Parameter	1997 Guidance	SBC	Existing Limits	SBC
BOD/TSS	10 mg/L	Average Monthly	10 mg/L	Average Monthly
BOD/TSS	20 mg/L	IMAX	20 mg/L	IMAX
NH3-N	3.0 mg/L	Average Monthly	3.0 mg/L	Average Monthly
DO	3.0 mg/L or greater	Average Monthly	5.0 mg/L	Minimum
Fecal Coliform	Rules/Regulations	Geo Mean/IMAX	200/2000	Geo Mean/IMAX

DEP's latest SOP no. BPNPSM-PMT-003 for new and reissuance small flow treatment facility individual NPDES permit applications recommends the same effluent limits that were included in the existing permit, except for NH3-N, DO and pH in which the SOP does not specify permit requirements for these parameters. Relaxation or removal of effluent limits is further prohibited in accordance with 40 CFR §122.44 (l)(1) since none of the exceptions listed in 40 CFR §122.44(1)(i) is, in the opinion of DEP, applicable to this facility. Therefore, these limits will remain unchanged in the permit. The existing effluent limit of 3.0 mg/L for NH3-N is the summer effluent limit and the winter effluent limit was set at three-times the summer limit for NH3-N; this approach is consistent with DEP's technical guidance no. 391-2000-013. Further, although the 1997 guidance recommends the average monthly DO of 3.0 mg/L, the existing permit contains a more stringent effluent limit of 5.0 mg/L (minimum) in which this effluent limit is a water quality criterion derived from 25 Pa. Code §93.7(a) to ensure the protection of water quality standards.

The existing average monthly Total Residual Chlorine effluent limit of 0.5 mg/L is DEP's best available technology (BAT) effluent standard found in 25 Pa Code §92a.48(b)(2).

Water Quality-Based Limitations

No water quality modeling has been performed for this discharge as DEP previously determined that modeling was not necessary since effluent limits derived from the dry stream guidance would be more stringent than those computed by the instream water quality models. This is a reasonable approach; accordingly, no instream water quality modeling will be performed for the upcoming permit renewal.

Additional Considerations

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Chesapeake Bay TMDL Nutrient Monitoring Requirements
DEP's Phase II Watershed Implementation Plan (WIP) as well as DEP's SOP no. BPNPSM-PMT-033 waives nutrient monitoring requirements for facilities discharging less than 0.002 MGD. Therefore, the requirement to monitor for nutrients is not necessary.

Monitoring Frequency and Sample Type
In general, monitoring frequencies and sample types listed in DEP's SOP no. BPNPSM-PMT-003 are included in permits for discharges from small flow treatment facilities. These are 1/month grabs samples for all parameters. However, given

the number of permit violations identified during the permit term, all monitoring frequencies and sample types will remain unchanged in the permit.

Antidegradation Requirements
All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Anti-Backsliding Requirements
All permit requirements developed for the upcoming permit renewal are at least as stringent as the requirements specified in the existing permit in accordance with 40 CFR §122.44 (l)(1).

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	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	3.0	XXX	6	2/month	8-Hr Composite