pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0061310**
Facility Type	**Non-Municipal**	APS ID	**628882**
Major / Minor	**Minor**	Authorization ID	**1281485**

Applicant and Facility Information

Applicant Name	**Marian High School**	Facility Name	**Marian High School STP**
Applicant Address	166 Marian Avenue (Hometown Section)	Facility Address	166 Marian Avenue
	Tamaqua, PA 18252-9789		Tamaqua, PA 18252-4755
Applicant Contact	Jean Susko	Facility Contact	Louis Ceci
Applicant Phone	(570) 668-2225	Facility Phone	(570) 668-2225
Client ID	44637	Site ID	2618
Ch 94 Load Status	Not Overloaded	Municipality	Rush Township
Connection Status	-	County	Schuylkill
Date Application Received	November 27, 2017	EPA Waived?	Yes
Date Application Accepted	December 1, 2017	If No, Reason	-

Purpose of Application: Renewal of NPDES Permit.

Summary of Review

This is a 0.035 MGD School STP discharging to the Little Schuylkill River (CWF; Stream Code# 2202). Annual average daily flows were 0.00238 MGD (2016), 0.00324 MGD (2015), and 0.00345 MGD (2014). See EDMR section below for more recent monthly average/daily max flow data.

Communication Log: 11/29/2017 Phone call for missing GIF form. GIF received 12/1/2017.

Part C Special Conditions:

- Parts C.I.A, B, C, & D: Existing Standard conditions (stormwater prohibition; necessary property rights; proper management of residuals; and Planning).
- **Part C.I.E: New Chlorine Minimization Condition**
- Part C.I.F: Existing site-specific permit condition about changes to effluent or stream.
- **Part C.II: New standard Solids Management conditions**

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		James D. Berger, P.E. / Environmental Engineer	August 12, 2019
X		Amy M. Bellanca, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.035
Latitude	40º 49' 26.70"	Longitude	-76º 0' 20.21"
Quad Name	Delano	Quad Code	1237 (5.19.2)
Wastewater Description:	Sewage Effluent		

Receiving Waters	Little Schuylkill River (CWF)	Stream Code	2202
NHD Com ID	25968766	RMI	-
Drainage Area	20.1 square miles	Yield (cfs/mi^2)	0.1462
Q_{7-10} Flow (cfs)	2.94	Q_{7-10} Basis	USGS PAStreamstats
Elevation (ft)	~985 Feet	Slope (ft/ft)	-
Watershed No.	3-A	Chapter 93 Class.	CWF
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	Final	Name	Little Schuylkill River (Metals; Other Inorganics (Sulfates, etc.); pH; Siltation; Total Suspended Solids (TSS))

Background/Ambient Data:		Data Source
pH (SU)	5.6	5/29/2004 Monitor Point ID# 68830 Sample ID# 916552, located about 0.06 miles upstream of Outfall
Temperature (°C)	17	See above
Hardness (mg/L)	-	-
Aluminum (ug/l)	<500	5/29/2004 Monitor Point ID# 68830 Sample ID# 916552, located about 0.06 miles upstream of Outfall
Manganese (ug/l)	200.00	See above
Total Iron (ug/l)	622.00	See above
TSS (mg/l)	<3	See above
Sulfate (mg/l)	39.0	See above

Nearest Downstream Public Water Supply Intake		Reading Area Water Auth BERKS CNTY ID# 101156-001 in Ontelaunee Township	
PWS Waters	Schuylkill River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	>10 miles

Changes Since Last Permit Issuance: The receiving stream has been classified as a Natural Trout Reproduction Stream (subject to the Chapter 93.7 non-summer DO WQS).

Other Comments:

Stream is AMD impacted. Facility uses well water, but unknown if well is AMD impacted.
Discharge is located upstream of confluence with Pine Creek (Stream code# 2269).
Small facility is not expected to contribute to impairment, with AMD metal monitoring this permit term.

Treatment Facility Summary

Treatment Facility Name: Marian HS STP

WQM Permit No.	Issuance Date	Scope
663811	April 22, 1963	1963 WQM Permit (issued to Diocese of Allentown) indicates that the STP consists of a comminutor/bypass screen, two aeration tanks (combined capacity of 46,100 gallons), two settling tanks (combined capacity of 14,650 gallons), hypochlorinator plus two sludge holding tanks (combined capacity of 7,550 gallons). The discharge is routed through 2,500 linear feet of 4-inch pipe with nine manholes to the Little Schuylkill river. The discharge point's latitude and longitude corresponds to the sewage pipe route following the road to the Little Schuylkill Creek (as shown on the 2008 NPDES Application USGS excerpt).

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Hypochlorite	0.035

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.035	50.4	Not Overloaded	None	Disposal

Changes Since Last Permit Issuance: None known

Other Comments:

Facility flows are only a fraction of the permitted flows.
Sludge disposed at Greater Hazleton WWTP.

Compliance History

DMR Data for Outfall 001 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	0.0034	0.0025	0.0023	0.0034	0.0027	0.0023	0.0031	0.00365	0.00355	0.0034	0.0039	0.0033
Flow (MGD) Daily Maximum	0.0065	0.0113	0.0095	0.0080	0.0059	0.0088	0.0085	0.0073	0.0088	0.0093	0.0110	0.0106
pH (S.U.) Minimum	7.0	7.0	6.8	7.4	7.0	7.1	6.8	6.8	6.8	6.9	7.0	6.7
pH (S.U.) Maximum	7.8	8.9	8.4	8.7	8.4	8.4	8.5	8.7	8.6	8.8	8.8	9.0
TRC (mg/L) Average Monthly	0.63	0.77	0.73	0.69	0.65	0.63	0.71	0.56	0.585	0.60	0.68	0.66
TRC (mg/L) Instantaneous Maximum	0.82	0.98	0.98	0.83	0.85	0.76	0.80	0.77	0.83	0.89	0.98	0.92
CBOD5 (mg/L) Average Monthly	3.0	5.0	5.0	< 1.0	< 1.0	2.0	5.0	< 1.0	3.0	9.52	9.52	17.1
TSS (mg/L) Average Monthly	4.0	6.0	1.0	1.0	2.0	3.0	2.0	3.0	3.0	4.57	4.57	10.0
Fecal Coliform (CFU/100 ml) Geometric Mean	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	< 1.0	1	< 1.0
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1.0	1.0	1.0	20	10	1.0	1	1.0	1.0	1.0	1	1.0
Nitrate-Nitrite (mg/L) Average Monthly						39.3						
Total Nitrogen (mg/L) Average Monthly						40.82						
Ammonia (mg/L) Average Monthly			0.10			< 1.0			< 0.10			< 0.13
TKN (mg/L) Average Monthly						1.52						
Total Phosphorus (mg/L) Average Monthly						2.91						

Compliance History

No EDMR reported violations.

Inspection History:

FACILITY NAME	INSP PROGRAM	INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR ID	# OF VIOLATIONS
MARIAN HS STP	WPCNP	2670025	11/16/2017	Compliance Evaluation	No Violations Noted	00531359	0
MARIAN HS STP	WPCNP	2467376	04/21/2015	Routine/Complete Inspection	No Violations Noted	00613405	0
MARIAN HS STP	WPCNP	2316281	04/02/2014	Routine/Complete Inspection	No Violations Noted	00613405	0
MARIAN HS STP	WPCNP	2174338	02/25/2013	Routine/Complete Inspection	No Violations Noted	00613405	0

Comments:

NPDES Permit administratively extended (timely renewal application

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .035
Latitude 40º 49' 27.00" **Longitude** -76º 0' 20.00"
Wastewater Description: Sewage Effluent

Permit Limits and Monitoring: Changes bolded

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
CBOD5	**Report Lbs/d** 25.0 **Report** 50.0	**Monthly Average** Monthly Average **Daily Max** IMAX	Existing Technology limit (Chapter 92a.47) supported by water quality modeling. Application data was 14.1 mg/l Max and 4.19 mg/l average (24 samples).
TSS	**Report Lbs/d** 30.0 **Report** 60.0	**Monthly Average** Monthly Average **Daily Max** IMAX	Existing Technology limit (Chapter 92a.47) Application data was 27 mg/l Max and 5.36 mg/l average (24 samples).
pH	6.0 – 9.0 SU	**Inst.** Min - IMAX	Existing Technology limit (Chapter 92a.47) Application data was 6.5 l – 9.0 SU (730 samples)
Dissolved Oxygen (DO)	**3.0**	**Inst. Minimum**	**New permit limit based on water quality modeling and statewide DEP BPJ that this is normal treated sewage DO concentrations.** **No application data.**
Fecal Coliform (5/1 – 9/30)	200/**100 m**l 1,000/**100 ml**	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47) **with current EDMR reporting units**. Application data was 50/100 ml max and 3.41/100 ml average (24 samples).
Fecal Coliform (10/1 – 4/30)	2,000/**100 ml** 10,000 ml/**100 ml**	Geo Mean IMAX	See above
Total Residual Chlorine	1.2**0** 2.8**0**	Monthly Average IMAX	Existing TBEL (site-specific based upon old Regional BAT, no upgrades, and no known TRC impacts) **with new significant digit**. Application data was 1.75 mg/l max and 0.59 mg/l average (730 samples).
Ammonia-Nitrogen **(May 1 - Oct 31)**	**Report Lbs/d** **25.0** **Report** **50.0**	**Monthly Average** **Monthly Average** **Daily Max** **IMAX**	**New permit limit based on water quality modeling and statewide DEP BPJ, superseding previous quarterly monitoring requirement.** **Application date was 0.26 mg/l max and 0.149 mg/l average (8 samples from quarterly monitoring requirement). Data shows facility in compliance with new limits.**
Ammonia-Nitrogen **(Nov 1 - Apr 30)**	**Report Lbs/d** Report **Report**	**Monthly Average** Monthly Average **Daily Max**	See above.
Total Nitrogen (TKN + Nitrate-Nitrite-N measured in same sample)	Report Lbs/d Report Report	Annual Average Annual Average Daily Max	Existing Annual Monitoring requirement (Chapter 92a.61). Application data was 51.6 mg/l max and 13.87 mg/l average (2 samples)

Total Phosphorus	Report Lbs/d Report Report	Annual Average Annual Average Daily Max	Existing Annual Monitoring requirement (Chapter 92a.61). Application data was 3.9 mg/l max and 2 mg/l average (2 samples)
Total Dissolved Solids (TDS)	**Report Lbs/d Report Report**	**Annual Average Annual Average Daily Max**	**New monitoring requirement (Chapter 92a.61) for the TMDL (citing inorganics and siltation as constituents of concern) and DRBC constituent of interest.**
AMD Metals (Aluminum, Manganese, Total Iron)	**Report Lbs/d Report Report**	**Annual Average Annual Average Daily Max**	**New monitoring requirement (Chapter 92a.61) to allow for updating Schuylkill River TMDL.**

Comments:

Monitoring requirements have been updated to standard frequencies, additional reporting requirements (see above), updated unit, and significant digits.

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
03B	2022	Trib 02022 of Mill Creek

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.260	Marian HS TP	PA0061310	0.035	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9 — Marian HS STP

2.94	= Q stream (cfs)	0.5	= CV Daily
0.035	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
1.2	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 17.340	1.3.2.iii	WLA cfc = 16.898
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 6.461	5.1d	LTA_cfc = 9.824

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 1.200	BAT/BPJ
		INST MAX LIMIT (mg/l) = 3.924	