

Application Type Renewal
 Facility Type Non-Municipal
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0100099
 APS ID 983681
 Authorization ID 1256687

Applicant and Facility Information

Applicant Name	<u>Harmony Area School District</u>	Facility Name	<u>Harmony School</u>
Applicant Address	<u>5239 Ridge Road</u> <u>Westover, PA 16692-8706</u>	Facility Address	<u>5239 Ridge Road</u> <u>Westover, PA 16692-8706</u>
Applicant Contact	<u>Guy Kitchen</u>	Facility Contact	<u>Guy Kitchen</u>
Applicant Phone	<u>(814) 845-2300</u>	Facility Phone	<u>(814) 845-2300</u>
Client ID	<u>27576</u>	Site ID	<u>261491</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Burnside Township</u>
Connection Status		County	<u>Clearfield</u>
Date Application Received	<u>December 26, 2018</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>January 02, 2019</u>	If No, Reason	
Purpose of Application	<u>Renewal of existing NPDES permit</u>		

Summary of Review

The above applicant has submitted an NPDES renewal application for their existing 0.0156 MGD discharge of treated sewage at the Harmony Area School District sewage treatment plant. The respective plant serves the elementary and high school. The facility was issued a water quality management permit (WQM 1779401) on 7/13/1979 for the construction and operation of the treatment facility consisting of 1 bar screen, 2 aerated lagoons with sonic wave transducers, 2 sand filters, 1 tablet erosional chlorinator and a chlorine contact tank.

Based on the following review, it is recommended that this NPDES permit be drafted and published in the Pennsylvania Bulletin for a 30 day public comment period. All applicable Standard Operating Procedures were followed in the development of this fact sheet and the draft NPDES permit, unless noted otherwise.

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
		Chad A. Fabian / Project Manager	November 21, 2019
		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.0156</u>
Latitude	<u>40° 47' 5.33"</u>	Longitude	<u>-78° 43' 25.44"</u>
Quad Name	<u>Burnside</u>	Quad Code	<u>5-6.2</u>
Wastewater Description:	<u>Sewage Effluent</u>		
Receiving Waters	<u>Snyder Run (CWF)</u>	Stream Code	<u>27178</u>
NHD Com ID	<u>61835101</u>	RMI	<u>1.97</u>
Drainage Area	<u>n/a</u>	Yield (cfs/mi ²)	<u>n/a</u>
Q ₇₋₁₀ Flow (cfs)	<u>0 (intermittent stream)</u>	Q ₇₋₁₀ Basis	<u>Intermittent stream</u>
Elevation (ft)	<u>1270</u>	Slope (ft/ft)	<u>n/a</u>
Watershed No.	<u>8-B</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u>CWF</u>	Existing Use Qualifier	<u>n/a</u>
Exceptions to Use	<u>None</u>	Exceptions to Criteria	<u>None</u>
Assessment Status	<u>Attaining Use(s)</u>		
Nearest Downstream Public Water Supply Intake	<u>Approximately 217 miles downstream on the West Branch of the Susquehanna River near Milton, PA.</u>		

Changes Since Last Permit Issuance: None

Compliance History	
Summary of DMRs:	The facility uses the Department's eDMR system. No effluent violations have occurred in the past 24 months.
Summary of Inspections:	The last inspection was performed by Clarissa Alcorn (DEP, Clean Water Program, Water Quality Specialist) on 3/22/2019. No violations were found during the inspection. The treatment plant was operating as intended during the inspection.

Compliance History

DMR Data for Outfall 001 (from October 1, 2018 to September 30, 2019)

Parameter	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18
Flow (MGD) Average Monthly	0.0027			0.004	0.004	0.0021	0.001	0.0041	0.003	0.0051	0.0032	0.0018
Flow (MGD) Daily Maximum	0.015			0.015	0.015	0.012	0.0045	0.012	0.012	0.012	0.0105	0.0066
pH (S.U.) Daily Minimum	6.96			7.35	6.83	7.0	7.32	7.39	7.1	7.29	7.41	7.41
pH (S.U.) Daily Maximum	7.49			8.41	7.91	8.33	7.75	7.9	7.91	7.78	7.97	8.13
DO (mg/L) Daily Minimum	7.24			7.89	6.73	6.2	7.85	9.99	11.51	12.01	11.63	7.98
TRC (mg/L) Average Monthly	0.49			0.05	0.7	0.4	0.45	0.45	0.48	0.52	0.33	0.4
CBOD5 (mg/L) Average Monthly	2.7			< 2.4	< 2	2.0	2.5	2.4	2.2	2.4	2.7	2.4
TSS (mg/L) Average Monthly	6			8.0	2.5	4.5	7.0	9	4.5	2	5	4
Fecal Coliform (No./100 ml) Geometric Mean	< 1			1	< 1	< 1.0	1	1	7	1	1	1
Total Nitrogen (lbs/day) Average Monthly										4.36		
Total Nitrogen (mg/L) Average Monthly										4.36		
Total Phosphorus (lbs/day) Average Monthly										1.14		
Total Phosphorus (mg/L) Average Monthly										1.14		

Development of Effluent Limitations

Outfall No. <u>001</u>	Design Flow (MGD) <u>.0156</u>
Latitude <u>40° 46' 37.60"</u>	Longitude <u>-78° 43' 27.10"</u>
Wastewater Description: <u>Sewage Effluent</u>	

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD ₅	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The above TRC limitation is more stringent than the existing TRC limitation. Based on a review of the DMRs, the permittee should be able to meet the new TRC limitations.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” was not performed since the facility does not have any industrial users nor does it accept any hauled in wastes. Therefore, the application does not require any toxics to be sampled in the permit renewal application since they are not expected to be present in the discharge.

The Department’s WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD (CBOD₅), and ammonia-nitrogen (NH₃-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH₃-N in the stream and the mixing and consumption of DO in the stream due to the degradation of CBOD₅ and NH₃-N. However, WQM7.0 modeling is not able to be performed since the receiving stream is an intermittent stream with a Q_{7,10} of 0 CFS.

Technology-Based Limitations

The following technology-based limitations are proposed for the renewed permit:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD ₅	10	Average Monthly	See BPJ analysis	See BPJ analysis
	20	Average Weekly	See BPJ analysis	See BPJ analysis
Total Suspended Solids (TSS)	10	Average Monthly	See BPJ analysis	See BPJ analysis
	20	Average Weekly	See BPJ analysis	See BPJ analysis
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (TRC)	0.5	Average Monthly	-	92a.48(b)(2)
Dissolved Oxygen	6.0 (Minimum)			

The above proposed technology limitations are in accordance with the Department’s policy for intermittent streams (Document No. 391-200-014).

Chesapeake Bay Requirements

According to the Department’s Supplement to the Phase 2 Chesapeake Bay Watershed Implementation Plan (WIP), the facility is classified as a Phase 5 bay discharger (>0.002 MGD and <0.2 MGD). Phase 5 facilities are required to monitor for total nitrogen and total phosphorus at a rate of 1/year unless the facility has already conducted at least two years of nutrient monitoring and a summary of the results are included in the next permit fact sheet. The facility has been sampling for total nitrogen and total phosphorus during the existing permit cycle. The following is a summary of the peak values reported over the existing permit cycle:

Parameter	Instantaneous Maximum (mg/l)	Total Annual (lbs)
Total Nitrogen (TN)	4.61	219
Total Phosphorus (TP)	1.79	85

Since the permittee has had more than 2 years of monitoring for nutrients, it is recommended that the total nitrogen and total phosphorus requirements be removed from the permit per the WIP.

Best Professional Judgment (BPJ) Limitations

A review of the DMR results for the past year indicate that the permittee is able to meet the newly proposed TRC limitations. Therefore, there will not be a compliance schedule included in the draft permit.

Anti-Backsliding

There is no proposal to relax of any limitations in this permit.

Existing Effluent Limitations

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	1/week	Estimate
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	6.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	1.0	XXX	2.3	1/day	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	10	XXX	20	2/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab

All of the above existing effluent limitations are technology based limits that are in accordance with the Department's policy for intermittent streams (Document No. 391-200-014).

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	1/week	Estimate
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	6.0 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	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	10	XXX	20	2/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab

Compliance Sampling Location: 001

Other Comments:

All of the above proposed effluent limitations are the same as the existing permit except for TRC. The proposed TRC effluent limitations are in accordance with 25 PA Code 92a.48(b)(2).

It is recommended the permit be drafted as described herein.