pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0228176**
Facility Type	**Municipal**	APS ID	**1038515**
Major / Minor	**Minor**	Authorization ID	**1354180**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Harrison Township**	Facility Name	**Harrison Township WWTP**
Applicant Address	205 E Main Street	Facility Address	Rt 49
	Harrison Valley, PA 16927-1203		Mills, PA 16937-0009
Applicant Contact	Richard Potter	Facility Contact	Richard Potter
Applicant Phone	(814) 334-5425	Facility Phone	(814) 334-5425
Client ID	95390	Site ID	528793
Ch 94 Load Status	Not overloaded	Municipality	Harrison Township
Connection Status	None	County	Potter
Date Application Received	May 13, 2021	EPA Waived?	Yes
Date Application Accepted	May 17, 2021	If No, Reason	

Purpose of Application: Renewal of existing NPDES permit

Summary of Review

The above facility has submitted an NPDES renewal application for their existing discharge at the Harrison Township sewage treatment plant (STP) to the Cowanesque River in Harrison Township, Potter County. The 0.07 MGD treatment plant is an extended aeration package plant consisting of a manual bar screen, a comminutor, a flow equalization tank with blowers, two aeration tanks, two final clarifiers, ultraviolet (UV) disinfection, a sludge storage/digestion tank, and sludge drying reed beds. The manual bar screen and UV disinfection were recently approved in WQM 5300401-A1 on October 6, 2021. The issuance of this renewed NPDES permit with be coordinated to be issued concurrent of the startup of the UV system.

Unless otherwise noted, all the Department's applicable Standard Operating Procedures (SOPs) were used in developing the following fact sheet.

Sludge use and disposal description and location(s): Sludge is dried on site and maintained in reed beds.

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		*Chad A. Fabian* Chad A. Fabian / Project Manager	February 9, 2022
X		*Nicholas W. Hartranft, P.E.* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	February 10, 2022

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.07
Latitude	41º 55' 5.14"	Longitude	-77º 37' 23.55"
Wastewater Description:	Sewage Effluent		
Receiving Waters	Cowanesque River	Stream Code	30995
NHD Com ID	57351185	RMI	37.2
Drainage Area	32.8	Yield (cfs/mi^2)	0.011
Q_{7-10} Flow (cfs)	0.38	Q_{7-10} Basis	Basin delineation
Elevation (ft)	1500	Slope (ft/ft)	n/a
Watershed No.	4-A	Chapter 93 Class.	CWF
Existing Use	CWF-MF	Existing Use Qualifier	n/a
Exceptions to Use	none	Exceptions to Criteria	none
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	NY state border approximately 34 miles downstream		

Changes Since Last Permit Issuance: None

Compliance History	
Summary of DMRs:	The facility uses the Department's eDMR system for reporting effluent results. A review of the past 12 months shows that 2 effluent violations have occurred in the past 12 months. One exceedance of fecal coliforms and one exceedance for ammonia. These exceedances can be found on page 5 of this fact sheet under the "Compliance History-Effluent Violations" section.
Summary of Inspections:	The most recent inspection performed by the Department was conducted on 7/26/2021. No violations were found during the inspection.

Other Comments: The Department does not believe the above noted effluent violations should hold up the draft and subsequent issuance of the renewed permit.

Compliance History

DMR Data for Outfall 001 (from January 1, 2021 to December 31, 2021)

Parameter	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21
Flow (MGD) Average Monthly	0.03834	0.034	0.0417	0.0372	0.0417	0.0331	0.025	0.0365	0.0344	0.0427	0.0313	0.0359
Flow (MGD) Daily Maximum	0.0662	0.0519	0.1075	0.1697	0.2032	0.117	0.0429	0.112	0.0552	0.0842	0.0675	0.0552
pH (S.U.) Minimum	7.5	7.6	7.5	7.8	7.3	7.2	7.6	7.1	7.4	7.3	7.6	7.3
pH (S.U.) Maximum	8.3	8.2	8.3	8.3	8.2	8.2	8.2	8.1	8.0	8.2	8.3	8.4
DO (mg/L) Minimum	2.1	2	2.3	2.5	2.4	2.5	2.3	3.1	3.5	2.4	2.8	2.7
TRC (mg/L) Average Monthly	0.0304	0.09	0.32	0.253	0.189	0.24	0.0693	0.19	0.31	0.0987	0.265	0.0245
TRC (mg/L) Instantaneous Maximum	1.05	0.59	0.86	0.95	1.10	1.08	0.65	1.29	1.15	0.57	0.97	0.76
CBOD5 (lbs/day) Average Monthly	1.1	< 1.2	< 1.4	< 0.9	< 1.6	< 1.1	< 9	1	< 1.2	4.7	1	< 1.5
CBOD5 (lbs/day) Weekly Average	1.1	1.5	1.7	< 0.1	2.3	< 1.5	< 9	1.1	1.5	6.7	1.2	1.5
CBOD5 (mg/L) Average Monthly	4.2	< 3.6	< 4.2	< 0.4	< 7.3	< 4.2	< 4	< 4	< 4.35	11.4	5.2	< 4.1
CBOD5 (mg/L) Weekly Average	4.47	4.2	4.3	< 0.4	10.6	4.4	< 4	< 4	4.7	13.1	6.1	4.1
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	52.7	44.7	47.6	60.8	53.2	39.9	49.7	46.3	81.9	115.7	41.6	75.9
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	55.4	46.8	51.1	69.1	57.6	57.1	62	60.8	111.3	138.4	42.9	77.8
BOD5 (mg/L) Raw Sewage Influent Average Monthly	202.5	147.5	157	278.5	240	191.35	327	189.5	299.5	307	219	217
TSS (lbs/day) Average Monthly	1.8	2.8	3.3	0.7	1.4	0.09	0.07	< 1.2	1.4	9.3	1.4	< 1.8
TSS (lbs/day) Raw Sewage Influent Average Monthly	58.6	46.6	102.8	57.1	54.7	44.1	54.8	33.1	92.6	41.7	41.3	50.8

TSS (lbs/day) Raw Sewage Influent Daily Maximum	68	48.9	114.9	93.7	83.7	65.4	85.5	41.1	173.7	49.3	44.8	57.9
TSS (lbs/day) Weekly Average	2	3.6	4.2	0.9	2.2	1.4	0.07	< 1.4	2.2	14.2	1.5	< 1.8
TSS (mg/L) Average Monthly	6.7	8.65	10	3.3	6.4	3.3	3.1	< 5	5.1	22	7.25	< 5
TSS (mg/L) Raw Sewage Influent Average Monthly	229	154	325	245	242.5	215	136	137	303.65	111	218	144.5
TSS (mg/L) Weekly Average	7.13	10	10.5	3.6	10.2	3.6	3.2	< 5	7	13.1	7.5	5
Fecal Coliform (CFU/100 ml) Geometric Mean	3.05	11.9	140.52	3.87	< 32.3	11.8	4.7	112.49	3.48	24.05	< 16.6	49.2
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	3.1	27.2	886	7.5	1046.2	14.5	7.4	185	12.1	111.2	275.5	2419.6
Ammonia (lbs/day) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 8	< 1	< 1	< 0.1	< 0.1	0.004	0.1
Ammonia (lbs/day) Weekly Average	< 0.1	0.1	< 0.1	< 0.1	0.1	< 1.14	< 1	0.1	0.2	< 0.2	0.004	0.1
Ammonia (mg/L) Average Monthly	< 2	< 2.5	< 0.3	< 0.3	< 0.31	< 3	< 3	< 0.3	< 0.427	< 0.39	0.194	0.158
Ammonia (mg/L) Weekly Average	< 2	< 0.3	0.3	< 0.3	0.32	< 3	< 3	0.3	0.553	< 0.47	0.198	0.186
Total Phosphorus (mg/L) Average Monthly	3.78	2.67	3.5	4.01	6.7	4.37	5.6	< 1	3.61	1.77	3.17	1.91

Compliance History- Effluent Violations

Effluent Violations for Outfall 001, from: February 1, 2021 To: December 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	08/31/21	IMAX	1046.2	CFU/100 ml	1000	CFU/100 ml
Ammonia	07/31/21	Avg Mo	< 8	lbs/day	4	lbs/day

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .07
Latitude 41º 55' 5.30" **Longitude** -77º 37' 23.70"
Wastewater Description: Sewage Effluent

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: This draft permit will include UV disinfection monitoring. The approved UV disinfection unit is scheduled to be installed in the next 180 days.

Water Quality-Based Limitations

The Department's WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. During the last permit issuance, the the WQM7.0 modeling was performed for the discharge to the Cowanesque River. The modeling showed that existing limitations are protective of water quality standards. Per the Department's SOP for reissuance of NPDES permits, additional modeling is not required at this time since there have been no changes to the characteristics of the effluent or to the condition of the receiving stream.

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.

The Department previous used its LAKE model for total phosphorus analysis since the discharge is located above the Cowanesque Lake. The model did not require phosphorus limitations for the respective discharge. Per the Department's SOP for reissuance of NPDES permits, additional modeling is not required at this time since there have been no changes to the characteristics of the effluent or to the condition of the receiving stream. Therefore, no further phosphorus consideration is necessary at this time.

Per the above-mentioned SOP, monitoring and reporting for E. Coli will be required in this draft permit at a rate of 1/quarter.

Best Professional Judgment (BPJ) Limitations

Monitor and report for dissolved oxygen has been added to this permit per the Department's SOPs for establishing effluent limitations for sewage dischargers.

Chesapeake Bay Nutrient 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 is required to monitor for total phosphorus since they are upstream of the Cowanesque Lake. However, the following is a summary of the total nitrogen results obtained during the existing permit cycle:

Parameter	Instantaneous Maximum (mg/l)	Total Annual (lbs)
Total Nitrogen (TN)	26.8	5710

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

Anti-Backsliding

The Department does not propose to relax any of the existing effluent limitations in this draft permit.

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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Daily Min	XXX	XXX	XXX	1/day	Grab
Ultraviolet (UV) disinfection (% transmissivity)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Meter
CBOD5	15	23	XXX	25	40	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	18	26	XXX	30	45	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	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 - May 31	11	16	XXX	18	27	36	2/month	8-Hr Composite
Ammonia Jun 1 - Oct 31	4	5	XXX	6	9	12	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
E. Coli (No./100 ml)	XXX	XXX	XXX	Report	XXX	XXX	1/quarter	Grab

All of the above effluent limitations and sampling frequencies are the same as the existing permit, except the elimination of total nitrogen monitoring, the addition of E.Coli, and the replacement of TRC with UV monitoring, all of which are described above.

It is recommended the permit be drafted as described within this fact sheet.