pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0031461**
Facility Type	**Non-Municipal**	APS ID	**1003475**
Major / Minor	**Minor**	Authorization ID	**1291434**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Mainlines Manholes & Wastewater Treatment, Inc.**	Facility Name	**Hickory Hill Country Village MHP**
Applicant Address	9208 Tannery Road Girard, PA 16417	Facility Address	Trask Road Waterford, PA 16441-0084
Applicant Contact	Kyle Luciano	Facility Contact	Jackie Pfadt
Applicant Phone	(814) 774-4663	Facility Phone	(814) 450-1005
Client ID	275993	Site ID	447188
Ch 94 Load Status	Not Overloaded	Municipality	Waterford Township
Connection Status	No Limitations	County	Erie
Date Application Received	September 26, 2019	EPA Waived?	Yes
Date Application Accepted	October 17, 2019	If No, Reason	

Purpose of Application: Renewal of a NPDES Permit for an existing discharge of treated sewage.

Summary of Review

No changes to discharge quantity or quality were proposed as part of this permit renewal.

A CACP was executed on February 3, 2020, for sludge removal issues that occurred at the plant from July 2017 to March 2018.

There are currently no open violations listed in EFACTS for this permittee (9/14/2020).

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		Adam Pesek Adam J. Pesek, E.I.T. / Environmental Engineering Specialist	September 16, 2020
X		Justin C. Dickey Justin C. Dickey, P.E. / Environmental Engineer Manager	September 21, 2020

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.04
Latitude	41º 58' 22 "	Longitude	-80º 1' 27"
Quad Name	Cambridge Springs NE	Quad Code	0305
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Trout Run	Stream Code	53494
NHD Com ID	127344937	RMI	1.04
Drainage Area	0.05 (dry); 1.15 (perennial)	Yield (cfs/mi^2)	0.001 (dry); 0.0406 (perennial)
Q_{7-10} Flow (cfs)	0 (dry); 0.0467 (perennial)	Q_{7-10} Basis	Dry Stream; Streamstats flow regression
Elevation (ft)	1290	Slope (ft/ft)	
Watershed No.	16-A	Chapter 93 Class.	HQ-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		Name	

Background/Ambient Data		Data Source
pH (SU)	6.89	4/25/14 Macroinvertebrate Sample on LeBoeuf Creek
Temperature (°C)	20	Default (CWF)
Hardness (mg/L)		
Other: NH_3-N	0.02	4/27/15 sample from LeBoeuf Lake

Nearest Downstream Public Water Supply Intake		Cambridge Springs Borough	
PWS Waters	French Creek	Flow at Intake (cfs)	51.45
PWS RMI	48.35	Distance from Outfall (mi)	22

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Hickory Hill Country Village MHP

WQM Permit No.	Issuance Date
2501427 T-1	6/08/2017
2501427	10/31/2003

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Hypochlorite	0.04

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.04	68.0	Not Overloaded	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance: Permit was transferred to new owner in 2017.

Other Comments: Treatment consists of an 8,000-gallon flow equalization tank, a flow diversion chamber, two parallel trains each with four Jet, Inc. extended aeration units having an individual 5,296-gallon capacity, for a total aeration capacity of 42,374 gallons. Two clarifiers, a sludge settling chamber, and tablet chlorine disinfection with an approximate 2,200-gallon chlorine contact tank.

Compliance History

DMR Data for Outfall 001 (from August 1, 2019 to July 31, 2020)

Parameter	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19
Flow (MGD) Average Monthly	28524	29075	29201	28692	30210	30319	30000	29782	29833	29484	28728	28078
pH (S.U.) Minimum	7.5	7.1	6.8	6.7	6.5	6.7	6.7	6.7	6.6	6.7	6.7	6.7
pH (S.U.) Maximum	7.8	7.7	7.6	7.0	7.0	7.0	7.1	7.0	7.2	7.3	7.1	7.4
DO (mg/L) Minimum	4.13	4.28	4.08	4.03	4.03	4.05	4.03	4.03	4.17	4.9	4.27	4.11
TRC (mg/L) Average Monthly	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4
TRC (mg/L) Instantaneous Maximum	0.40	0.60	0.50	0.80	0.80	0.50	0.80	0.60	0.80	0.90	0.90	0.53
CBOD5 (mg/L) Average Monthly	< 3	4	< 4	6	4	4	6	< 3	< 3	< 4	11	8
TSS (mg/L) Average Monthly	< 4	< 4	6	9	5	6	< 4	< 3	8	< 2	3	5
Fecal Coliform (CFU/100 ml) Geometric Mean	< 10	< 10	< 10	< 10	< 85	< 90	< 10	< 51	39	31	10	< 10
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	< 10	< 10	< 10	< 10	730	802	< 10	370	154	38	10	10
Total Nitrogen (mg/L) Average Monthly	6.81	4.77	5.67	4.07	9.73	6.54	2.31	8.56	11.0	< 0.8	15.7	94.4
Ammonia (mg/L) Average Monthly	< 0.4	< 0.4	7.0	< 0.4	< 0.4	0.4	1.7	< 1.1	< 0.4	< 0.4	< 0.4	0.4
Total Phosphorus (mg/L) Average Monthly	3.31	0.367	4.63	2.04	1.58	0.782	0.69	1.72	1.38	1.19	0.92	2.56

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.04 (16-hour runoff period)
Latitude 41º 58' 21.57" **Longitude** -80º 1' 19.51"
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)

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Ammonia Nitrogen (May 1 – Oct 31)	4.5	Average Monthly	Previous modeling*
Ammonia Nitrogen (Nov 1 – Apr 30)	13.5	Average Monthly	Previous modeling*

Comments: A seasonal multiplier of "3" is applied to ammonia nitrogen limits in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

* -- WQM 7.0 modeling for this permit renewal (attached) calculated less stringent effluent limitations than were previously calculated and placed in the permit. Therefore, the existing effluent limitations will remain in the permit due to anti-backsliding provisions.

No TRC modeling was conducted due to the discharge being to a dry/intermittent stream that extends over a mile before perennial conditions exist. Any chlorine residual should dissipate prior to reaching perennial conditions.

Best Professional Judgment (BPJ) Limitations

Comments: A dissolved oxygen limit of a minimum of 4.0 mg/l, a total residual chlorine instantaneous maximum limit of 1.6, mg/l, and monitoring for total nitrogen and total phosphorus is placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits" and under the authority of Chapter 92a.61.

Anti-Backsliding

The TRC Instantaneous maximum limit was relaxed to 1.6 mg/l from 1.15 mg/l due to the sampling frequency being increased from 1/week to 1/day. Increasing the sampling frequency in the TRC spreadsheet increases the multiplier used to calculate the water quality based instantaneous maximum limit which is also the BPJ-based proposed limit. Therefore, backsliding is permissible under 402(o)(1) of the CWA based on compliance with 303(d)(4)(B) – Attainment Water. Compliance with 303(d)(4)(B) is being met because the receiving stream – Unnamed Tributary to Trout Run, is attaining its designated use and the backsliding of the effluent limits is consistent with PADEP's antidegradation policy located in 25 Pa. Code Chapter 93.4(a). The revised total residual chlorine instantaneous maximum effluent limit is meeting state antidegradation requirements because instream water uses are being met and state water quality standards for total residual chlorine in 25 Pa. Code Chapter 93.7 will be achieved.

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 Pemit 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	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30.0	XXX	60	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
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Ammonia Nov 1 - Apr 30	XXX	XXX	XXX	13.5	XXX	27	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	4.5	XXX	9	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite

Compliance Sampling Location: Outfall 001 (after disinfection).

Other Comments: