

Application Type Renewal
Facility Type Municipal
Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0228893
APS ID 1022187
Authorization ID 1324659

Applicant and Facility Information

Applicant Name	<u>Liberty Area Municipal Authority</u>	Facility Name	<u>Liberty Area Municipal Authority STP</u>
Applicant Address	<u>PO Box 73</u> <u>Liberty, PA 16930-0073</u>	Facility Address	<u>4810 Blockhouse Road</u> <u>Liberty, PA 16930-9118</u>
Applicant Contact	<u>Tracy Gregory</u>	Facility Contact	<u>Chris Fabian</u>
Applicant Phone	<u>(570) 980-3404</u>	Facility Phone	<u>(570) 439-1681</u>
Client ID	<u>239611</u>	Site ID	<u>652621</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Liberty Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Tioga</u>
Date Application Received	<u>August 25, 2020</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>August 27, 2020</u>	If No, Reason	<u></u>
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 discharge (Outfall 001) from their existing Sewage Treatment Plant (STP) that serves Liberty Township in Tioga County, PA. The respective NPDES permit expired on November 30, 2020. A renewal application was received on August 25, 2020.

Unless otherwise noted, all applicable Department Standard Operating Procedures (SOPs) were followed during the review of this application. Based on the following review, it is recommended the permit be drafted.

Sludge use and disposal description and location(s): The treatment system is a recirculating sand filters which do not produce sludge.

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		<i>Chad A. Fabian</i> Chad A. Fabian / Project Manager	January 26, 2021
X		<i>Nicholas W. Hartranft, P.E.</i> Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	January 27, 2021

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.075
Latitude	41° 33' 9.00"	Longitude	77° 6' 39.00"
Quad Name	Liberty	Quad Code	0629
Wastewater Description: Sewage			
Receiving Waters	Blockhouse Creek	Stream Code	21361
NHD Com ID	66539289	RMI	11.79
Drainage Area	7.68	Yield (cfs/mi ²)	0.025
Q ₇₋₁₀ Flow (cfs)	0.2	Q ₇₋₁₀ Basis	Streamgage No. 01549500
Elevation (ft)	1508	Slope (ft/ft)	0.01
Watershed No.	9-A	Chapter 93 Class.	CWF
Existing Use	EV	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
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	Jersey Shore Joint Water Authority		
PWS Waters	Pine Creek	Flow at Intake (cfs)	38.6
PWS RMI	1.92	Distance from Outfall (mi)	39.6

Changes Since Last Permit Issuance: None

Treatment Facility Summary				
Treatment Facility Name: Liberty Area Municipal Authority				
WQM Permit No.	Issuance Date			
5905401-A3	3/31/2016			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sand Filter	Ultraviolet	0.075
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.09	255	Not Overloaded	Holding Tank	Other WWTP

Changes Since Last Permit Issuance: None

Compliance History	
Summary of DMRs:	The facility utilizes the Department's eDMR system. In the past 12 months, the only effluent exceedance is for TSS in July of 2020. A summary of effluent results for the past 12 months can be found in the table on the next two pages.
Summary of Inspections:	The Department performed an inspection on 10/5/2020. No violations were reported during the inspection other than the TSS exceedances previously discussed. During the inspection the facility appeared to be operating as intended.

Comments: An eFacts query did not reveal any ongoing compliance actions at the facility.

Compliance History

DMR Data for Outfall 001 (from December 1, 2019 to November 30, 2020)

Parameter	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19
Flow (MGD) Average Monthly	0.024	0.020	0.018	0.021	0.020	0.024	0.032	0.036	0.039	0.036	0.027	0.024
Flow (MGD) Daily Maximum	0.058	0.062	0.043	0.045	0.028	0.049	0.161	0.074	0.120	0.072	0.054	0.082
pH (S.U.) Minimum	6.2	6.2	6.2	6.16	6.2	6.4	6.1	6.1	6.2	6.2	6.2	6.2
pH (S.U.) Maximum	6.6	6.6	6.6	6.7	6.7	7.0	6.6	6.6	6.7	6.6	6.6	6.6
DO (mg/L) Minimum	3.9	4.2	4.9	4.3	4.3	4.4	4.9	4.3	4.7	5.2	5.9	6.0
CBOD5 (lbs/day) Average Monthly	1	< 0.5	< 0.4	< 0.4	0.9	< 0.8	< 0.6	2	3.0	< 1.0	1.0	1
CBOD5 (lbs/day) Weekly Average	2	< 0.5	0.5	< 0.4	1.0	0.9	< 0.6	6	3.0	1.0	2.0	2
CBOD5 (mg/L) Average Monthly	5	< 3.0	< 4.0	< 3.0	5.0	< 3.0	< 3	6	8.0	< 4.0	5.0	8
CBOD5 (mg/L) Weekly Average	5	< 3.0	5.0	< 3.0	6.0	< 3.0	3.0	6	9.0	1.0	2.0	12
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	43	10	12	9	36	16	55	31	40	19	19	22.0
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	72	14	13	11	60	20	100	46	44	20	24	23.0
BOD5 (mg/L) Raw Sewage Influent Average Monthly	109	65	108	65	210	57	66	102	133	55	92	126.0
TSS (lbs/day) Average Monthly	2	0.7	0.3	0.6	4.0	2.0	2.0	4	3.0	< 1.0	0.8	1.0
TSS (lbs/day) Raw Sewage Influent Average Monthly	27	7	6	4	8	8	27	10	10	7	11	10
TSS (lbs/day) Raw Sewage Influent Daily Maximum	50	9	8	5	8	13	48	11	11	8	15	11
TSS (lbs/day) Weekly Average	2	0.7	0.5	0.7	8.0	2.0	3.0	6	3.0	1.0	0.9	2.0

NPDES Permit Fact Sheet
Liberty Area Municipal Authority Wastewater System

NPDES Permit No. PA0228893

TSS (mg/L) Average Monthly	5	4	3.0	4.0	26	6.0	11.0	15	9.0	4.0	6.0	5.0
TSS (mg/L) Raw Sewage Influent Average Monthly	62	40	55	32	49	26	36	35	35	21	61	56
TSS (mg/L) Weekly Average	6	5	4.0	5.0	46	9.0	16.0	23	9.0	6.0	8.0	8.0
Fecal Coliform (CFU/100 ml) Geometric Mean	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 98	490
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	2419.6	2419.6
UV Transmittance (%) Average Monthly	76	77	77.0	77	77	78	77	76	77	76	76	75
Ammonia (lbs/day) Average Monthly	1	0.2	0.2	0.04	0.7	1.0	0.3	1.0	2.0	< 1.0	2.0	2.0
Ammonia (lbs/day) Weekly Average	2	0.3	0.4	0.04	1.0	3.0	0.5	1.0	3.0	2.0	2.0	2.0
Ammonia (mg/L) Average Monthly	3.92	1.029	1.722	0.258	4.246	4.87	1.379	4.5	6.36	< 3.871	10.52	9.1
Ammonia (mg/L) Weekly Average	6.49	1.719	3.2	0.308	6.493	8.652	2.629	4.7	7.8	7.641	13.9	9.3

Development of Effluent Limitations				
Outfall No.	001	Design Flow (MGD)	.075	
Latitude	41° 33' 9.00"	Longitude	-77° 6' 39.00"	
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: A TRC limitation is not applicable since the facility uses ultraviolet (UV) disinfection.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” was previously conducted using WQM 7.0 v1.0b and determined the existing effluent limitations for CBOD5 and ammonia-N are protective of the receiving surface water.

Analysis for toxics is not required by the renewal application based on the size and characteristics of the discharge. Additionally, since the facility also does not serve any industrial users, there are not any expected toxics present in the discharge.

Per the Department’s SOP for reissuance of NPDES permits, additionally modeling is not required since there has been no change to the receiving stream, design flow, or characteristics of the wastewater.

Chesapeake Bay Considerations

The permittee conducted 27 months of nutrient monitoring from January 2008 to June 2010. The summarized results are as follows:

Parameter (lbs/yr)	Monitoring Year		
	2008	2009	2010
Total Nitrogen	170	152	225
Total Phosphorus	18	13	15

Since the permittee is considered a Phase 5 facility and already completed two years of sampling, based on Pennsylvania’s Chesapeake Bay Watershed Implementation Plan (Phase II), further nutrient monitoring is not recommended.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this draft permit does not propose to relax any existing effluent limitation.

Existing and 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	XXX	XXX	XXX	1/day	Grab
CBOD5 Nov 1 - May 31	15	25	XXX	25	40	50	2/month	8-Hr Composite
CBOD5 Jun 1 - Oct 31	12	18	XXX	20	30	40	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Nov 1 - May 31	18	28	XXX	30	45	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Jun 1 - Oct 31	6.0	9.0	XXX	10	15	20	2/month	8-Hr Composite
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
UV Transmittance (%)	XXX	XXX	XXX	Report	XXX	XXX	1/day	Metered
Ammonia Nov 1 - May 31	11	16	XXX	18	27	36	2/month	8-Hr Composite

Outfall 001 , Continued (from 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		
Ammonia Jun 1 - Oct 31	3.5	5.5	XXX	6.0	9.0	12	2/month	8-Hr Composite

Compliance Sampling Location: 001

Other Comments: All of the above effluent limitations and monitoring frequencies are the same as the existing NPDES permit. It is recommended that the permit be drafted as described above.