pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0062839**
Facility Type	**Non-Municipal**	APS ID	**563086**
Major / Minor	**Minor**	Authorization ID	**1347363**

Applicant and Facility Information

Applicant Name	**Lake Adventure Community Association**	Facility Name	**Lake Adventure Community Association WWTF**
Applicant Address	150 Office Way North Milford, PA 18337-4114	Facility Address	5000 Lake Adventure Drive Milford, PA 18337-9709
Applicant Contact	Cheryl Destefano, Camp Manager	Facility Contact	John Wurst, STP Operator
Applicant Phone	(570) 686-2800	Facility Phone	(570) 656-6495
Client ID	39883	Site ID	4275
Ch 94 Load Status	Not Overloaded	Municipality	Dingman Township
Connection Status	-	County	Pike
Date Application Received	March 23, 2021	EPA Waived?	Yes
Date Application Accepted	April 27, 2021	If No, Reason	-

Purpose of Application: Renewal of NPDES permit for discharge of treated sewage

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.160 MGD of treated sewage into an Unnamed Tributary to Birchy Creek, a High Quality, Cold-Water Fishery, Migratory Fish (HQ-CWF, MF) receiving stream in State Water Plan Basin 1-D (Shohola – Bushkill Creeks) As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. This stream segment is not designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. This discharge is not expected to affect public water supplies.

Limitations for pH and Fecal Coliform are technology-based and carried over from the previous permit.

Limitations for Dissolved Oxygen (DO), $CBOD_5$, Total Suspended Solids (TSS), Total Phosphorous, and Nitrate-Nitrite as N are water quality-based and carried over from the previous permit. Monitoring/reporting for Total Nitrogen (TN) and Total Kjeldahl Nitrogen have also been carried over.

The previous $CBOD_5$, TSS, and NH_3-N limitations were established in the Agreement of Settlement (Agreement) between the permittee and Department dated April 13, 1993. WQM 7.0 modeling now recommends stricter summertime limitations for Ammonia-Nitrogen (1.72 mg/L monthly average, 3.44 mg/L IMAX). These limitations will come into effect three (3) years after the permit effective date. Wintertime monitoring/reporting for Ammonia-Nitrogen has also been updated to three times the new summertime limitations (5.16 mg/L monthly average, 10.32 mg/L IMAX). The limitations for Ammonia-Nitrogen from the previously issued permit will be in effect the first three (3) years of the permit. eDMR data from the past year (see page 5-6 of this fact sheet) confirms the facility should be able to meet these new limits.

UV is the approved disinfection method. Daily samples for TRC should be taken if the permittee uses chlorine for emergency disinfection, cleaning or other purposes (see Part C. I. E.). The Total Residual Chlorine (TRC) Calculation Spreadsheet

Approve	Deny	Signatures	Date
X		/s/ Allison Seyfried / Environmental Engineering Specialist	May 10, 2022
X		/s/ Amy M. Bellanca, P.E. / Environmental Engineer Manager	5-13-22

Summary of Review

recommends stricter limitations than the previous permit. The permittee will be required to meet the new water quality-based limits for TRC starting three years after the effective date of the permit. TRC limitations from the previously issued permit are in effect for the first three years after the permit effective date.

Paragraph 20 of the Agreement addresses the Duration of Agreement. Section 20.3 is **Duration of Remainder of Agreement:** "The remaining provisions of the Agreement shall remain in effect for the time period ending ten (10) years from the execution of the Agreement." "Remaining provisions" exclude the liquidated damages paragraph. Paragraph 17 also includes that "nothing set forth in this Agreement is intended, nor shall be construed, to relieve or limit Lake Adventure Community Association's obligation to comply with any existing or subsequent state, regulation, permit or order…".

Sewage discharges now require monitoring and reporting for E. Coli. A monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD will be utilized.

The latest DRBC Preliminary Docket No. D-1993-062 CP-4 requires the addition of 2/month monitoring/reporting of $CBOD_5$ of the Raw Sewage Influent and for the Percent Removal of $CBOD_5$.

For this permit renewal, all monitoring frequencies for parameters with limitations are consistent with the Department's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document no. 362-0400-001).

The previous fact sheet indicated that the wastewater treatment and conveyance facilities have experienced chronic infiltration and inflow (I&I) problems. Two special conditions were added to the previous permit to address the ongoing issues. The first condition reinforces the use of the spray irrigation system. The spray irrigation system should be operated in accordance with the previously approved Spray Irrigation Operating Plan. The second condition includes a compliance schedule for performing the activities associated with the I&I monitoring program and reporting requirements. Both of the above special conditions were carried over to this permit renewal.

It is noted in the most recent Sewage Compliance Inspection Report, dated July 1, 2019, that the written plan was never received by the Department. The Department Inspector for this site confirmed in May 2022 that he still did not have any record of the written plan being performed and submitted.

There are no representative stream gages in the vicinity of the outfall and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values. Therefore, the default Low Flow Yield (LFY) of 0.1 cfs/mi^2 was used to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

The existing permit expired on April 30, 2021. The application for renewal was not received until March 23, 2021.

A Water Management System Inspection query indicated that on July 1, 2019 a Compliance Evaluation was performed.

There are currently 6 open violations for this facility that may need to be resolved before issuance of the final permit:

1. 04/26/2021 - Violation ID 915323 – Violation Code 92A.75(A) – NPDES-Failure to submit NPDES renewal application at least 180 days prior to expiration or later approved date (Program Specific ID: PA0062839).

2. 04/26/2021 - Violation ID 915324 – Violation Code 92A.75(A) – NPDES-Violation of effluent limits in Part A of permit (Program Specific ID: PA0062839).

3. 04/26/2021 - Violation ID 915325 – Violation Code 92A.75(A) – NPDES-Failure to monitor pollutants as required by the NPDES permit (Program Specific ID: PA0062839).

4. 04/26/2021 - Violation ID 915326 – Violation Code 92A.75(A) – NPDES-Failure to submit monitoring report(s) or properly complete monitoring reports (Program Specific ID: PA0062839).

5. 04/26/2021 - Violation ID 915327 – Violation Code 92A.75(A) – NPDES-Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO) (Program Specific ID: PA0062839).

Summary of Review

6. 04/26/2021 - Violation ID 915328 – Violation Code 92A.75(A) – CSL - Failure to comply with terms and conditions of a WQM permit (Program Specific ID: PA0062839).

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to the Wyoming Valley Sanitary Authority by Koberlein Environmental Services.

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.16
Latitude	41º 20' 20.91"	Longitude	-75º 0' 24.87"
Quad Name	Pecks Pond	Quad Code	0845
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Birchy Creek (HQ-CWF)	Stream Code	5399
NHD Com ID	26162464	RMI	0.726
Drainage Area	0.38 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.038	Q_{7-10} Basis	State-wide default
Elevation (ft)	1,348.76	Slope (ft/ft)	-
Watershed No.	1-D	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	-
Nearest Downstream Public Water Supply Intake	Easton Area Water System		
PWS Waters	Delaware River	Flow at Intake (cfs)	-
PWS RMI	110.4	Distance from Outfall (mi)	~ 120

Treatment Facility Summary

Treatment Facility Name: Lake Adventure Community Association WWTP

WQM Permit No.	Issuance Date
5203401	3/18/2003
5202404	7/18/2003

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Equalization tanks, secondary treatment, sand filter	UV Disinfection	0.089 (2018-2020)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.16	6.7	Not Overloaded	Holding Tank	Hauled

Compliance History

DMR Data for Outfall 001 (from March 1, 2021 to February 28, 2022)

Parameter	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21
Flow (MGD) Average Monthly	0.058	0.028	0.046	0.024			0.0009	0.026	0.03309	0.11	0.129	0.2
Flow (MGD) Daily Maximum	0.113	0.062	0.096	0.148			0.003	0.089	0.20	0.258	0.192	0.95
pH (S.U.) Minimum	6.6	6.99	6.11	7.3			7.15	6.81	6.75	6.55	6.44	6.47
pH (S.U.) Instantaneous Maximum	8.0	8.23	8.05	7.9			7.8	7.73	7.6	7.8	7.11	7.01
DO (mg/L) Minimum	10.5	9.8	8.71	7.32			7.1	7.05	7.43	8.06	8.28	9.26
TRC (mg/L) Average Monthly	GG	GG	GG	GG			GG	GG	GG	GG	GG	GG
TRC (mg/L) Instantaneous Maximum	GG	GG	GG	GG			GG	GG	GG	GG	GG	GG
CBOD5 (lbs/day) Average Monthly	< 1.1	0.90	< 1.2	< 3.5			< 3.52	< 7.8	< 1.5	< 1.6	< 2.2	< 2.4
CBOD5 (mg/L) Average Monthly	< 2.0	4.0	< 3.4	< 5.0			< 2.9	< 7.3	< 2.1	< 2.1	< 2.2	< 2.0
TSS (lbs/day) Average Monthly	5.0	4.0	5.0	< 6.0			8.0	< 5.0	< 17.0	< 4.0	< 7.0	< 11.0
TSS (mg/L) Average Monthly	10.3	15.5	14.0	< 8.1			< 6.0	< 6.5	< 15.4	< 5.3	< 7.1	< 9.0
Total Dissolved Solids (mg/L) Average Quarterly			220.0			297.3			259.8			173.3
Total Dissolved Solids (mg/L) Daily Maximum	184	206	255.0	166.5			372	340.5	241	270.4	197.4	161.4
Fecal Coliform (CFU/100 ml) Geometric Mean	55	< 29	< 14	< 20			< 3	< 1	< 2	< 1	< 1	< 2
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1300	24200	900	670			10	2	< 3	< 2	< 2	< 2
Nitrate-Nitrite (lbs/day) Average Monthly	1.6	1.0	2.8	3.4			0.2	12.8	7.6	5.5	4.8	2.1

Nitrate-Nitrite (mg/L) Average Monthly	3.2	4.3	6.4	4.4			14.8	16.1	9.4	7.8	5.3	1.8
Total Nitrogen (lbs/day) Annual Average	< 2.0	2.0	3	4			0.2	13	9.0	6	5	2
Total Nitrogen (lbs/day) Annual Average			4.67									
Total Nitrogen (mg/L) Annual Average	< 4.0	7.9	7.79	4.92			15.6	16.5	11.2	8.08	5.56	2.05
Total Nitrogen (mg/L) Annual Average			8.68									
Ammonia (lbs/day) Average Monthly	< 0.50	0.4	< 0.2	< 0.08			< 0.01	< 0.1	< 0.07	< 0.07	< 0.1	< 0.3
Ammonia (mg/L) Average Monthly	< 0.4	2.0	< 0.6	< 0.1			< 0.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2
TKN (lbs/day) Average Monthly	< 0.30	0.7	0.6	< 1.0			< 0.02	< 1	1	< 0.8	< 1	< 0.6
TKN (mg/L) Average Monthly	< 0.79	3.48	1.42	< 1			< 1.5	< 1.2	< 1.9	< 1	< 1.1	< 0.51
Total Phosphorus (lbs/day) Average Monthly	0.10	0.10	0.1	0.2			0.009	0.5	0.4	0.2	0.1	0.2
Total Phosphorus (mg/L) Average Monthly	0.20	0.4	0.4	0.2			0.7	0.6	0.4	0.3	0.1	0.2

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.16
Latitude 41º 20' 21.22" **Longitude** -75º 0' 27.80"
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
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)
E. Coli	Report	IMAX	-	92a.61

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	7.0	Minimum	Previous Modeling
Total Residual Chlorine	0.031	Average Monthly	TRC Calculation Spreadsheet
	0.102	IMAX	
Ammonia-Nitrogen Nov 1 - Apr 30	5.16	Average Monthly	WQM 7.0
	10.32	IMAX	
Ammonia-Nitrogen May 1 - Oct 31	1.72	Average Monthly	
	3.44	IMAX	
$CBOD_5$	5.0	Average Monthly	Agreement of Settlement (April 13, 1993)
	10.0	IMAX	
Total Suspended Solids	10.0	Average Monthly	
	20.0	IMAX	
CBOD5 Minimum % Removal (%)	Report	Average Monthly	DRBC Docket D-1993-062 CP-4
		IMAX	
Carbonaceous Biochemical Oxygen Demand (CBOD5) Raw Sewage Influent	Report	Average Monthly	
		IMAX	
Total Dissolved Solids	1,000	Average Monthly	Previous DRBC Docket
	2,000	IMAX	
Nitrate-Nitrite as N	11.0	Average Monthly	Previous Permit
	22.0	IMAX	
Total Phosphorus	2.0	IMAX	
	4.0	Average Monthly	
Total Kjeldahl Nitrogen	Report	IMAX	Previous DRBC Docket
		Average Monthly	
Total Nitrogen	Report	IMAX	Previous Permit
		Average Monthly	

Anti-Backsliding

No limitations were made less stringent.

Modeling

Using the state-wide Low-Flow Yield (LFY) of 0.1 cfs/mi²:

$$\frac{0.1\ ft^3/sec}{mi^2} \times 0.38\ mi^2 = \frac{\mathbf{0.038\ ft^3}}{\mathbf{sec}}$$

USGS StreamStats Modeling:

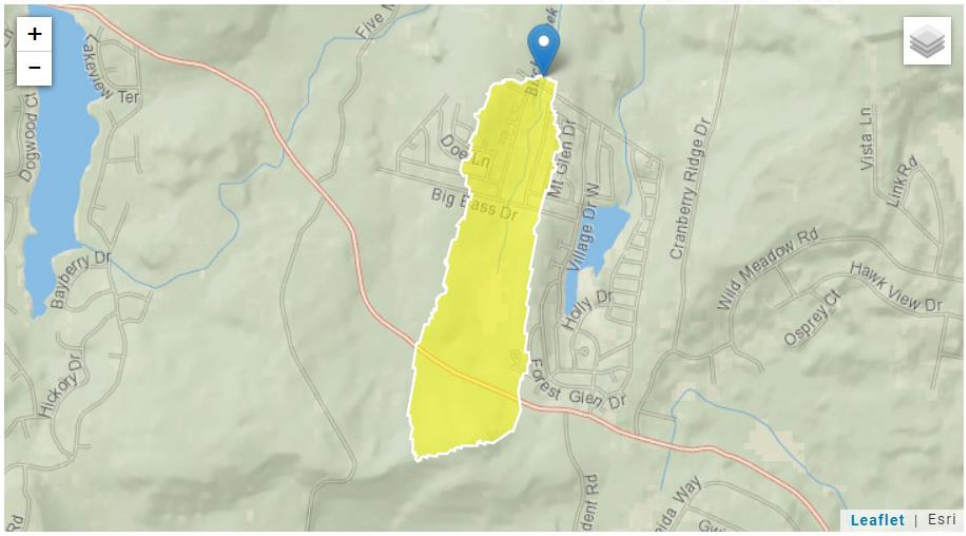
At Outfall 001 on Unnamed Tributary 5399 to Birchy Creek:

RMI	Elevation (ft)	Drainage Area (mi²)	$Q_{7\text{-}10}$ Flow (cfs)
0.726	1,348.76	0.38	0.00607

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{0.00607\ ft^3/sec}{0.38\ mi^2} = \mathbf{0.016}\ \frac{\mathbf{ft^3/sec}}{\mathbf{mi^2}}$$

StreamStats Report

Region ID: PA
Workspace ID: PA20220405180810263000
Clicked Point (Latitude, Longitude): 41.34009, -75.00662
Time: 2022-04-05 14:08:41 -0400



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.38	square miles

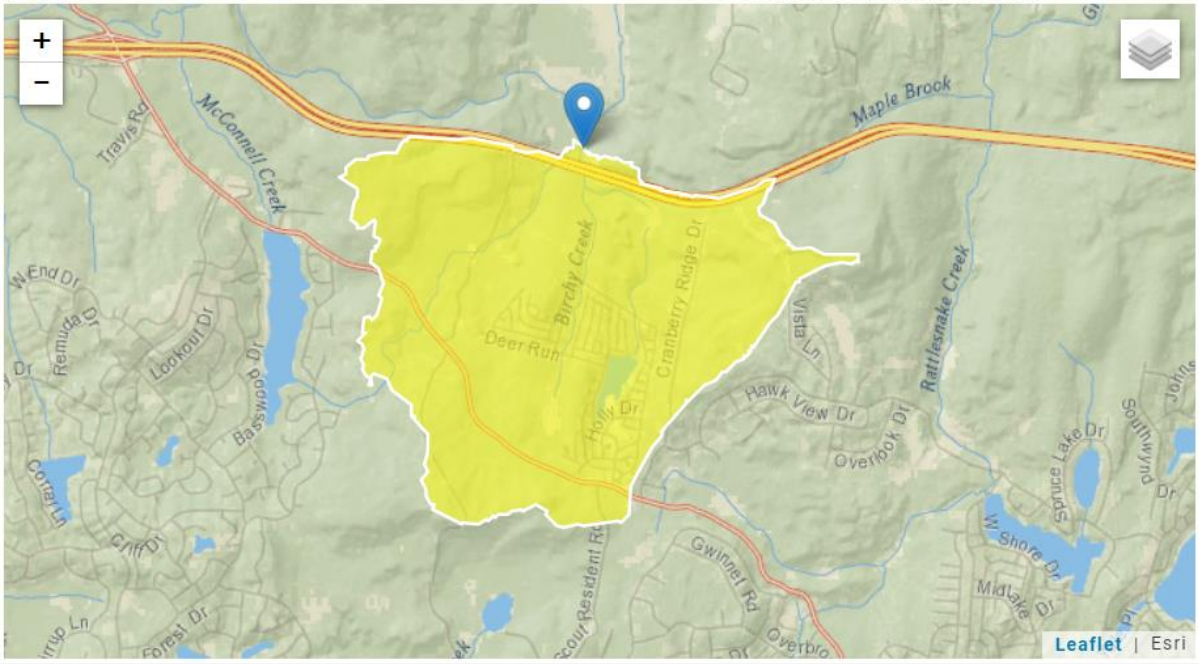
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0236	ft^3/s
30 Day 2 Year Low Flow	0.037	ft^3/s
7 Day 10 Year Low Flow	0.00607	ft^3/s

At confluence with Birchy Creek (5398):

RMI	Elevation (ft)	Drainage Area (mi^2)
0.0	1,156.3	3.62

StreamStats Report

Region ID: PA
Workspace ID: PA20220405182806490000
Clicked Point (Latitude, Longitude): 41.35014, -75.00656
Time: 2022-04-05 14:28:26 -0400



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3.62	square miles

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01D	5399	Trib 05399 to Birchy 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)
0.726	Lake Adventure	PA0062839	0.160	CBOD5	25		
				NH3-N	1.72	3.44	
				Dissolved Oxygen			5

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.038	= Q stream (cfs)	0.5	= CV Daily
0.16	= 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)
0.5	= 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 = 0.068	1.3.2.iii	WLA cfc = 0.059
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.025	5.1d	LTA_cfc = 0.034

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.031	AFC
		INST MAX LIMIT (mg/l) = 0.102	

DRBC Docket 1993-062CP-4.pdf

Agreement of Settlement - Lake Ac