pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0030350**
Facility Type	**Municipal**	APS ID	**1027243**
Major / Minor	**Minor**	Authorization ID	**1334016**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Indian Lake Borough**	Facility Name	**Lakewood Sewage Treatment Plant**
Applicant Address	1301 Causeway Drive	Facility Address	South Peninsula Drive
	Central City, PA 15926-7621		Central City, PA 15926
Applicant Contact	Dean Snyder	Facility Contact	Dean Snyder
Applicant Phone	(814) 267-4614	Facility Phone	(814) 267-4614
Client ID	24271	Site ID	236955
Ch 94 Load Status	Not Overloaded	Municipality	Indian Lake Borough
Connection Status	No Limitations	County	Somerset
Date Application Received	November 13, 2020	EPA Waived?	Yes
Date Application Accepted	November 19, 2020	If No, Reason	

Purpose of Application: Renewal of an existing NPDES permit for the discharge of treated sewage.

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		*Derek S. Garner* Derek S. Garner / Project Manager	June 25, 2021
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	July 2, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.012
Latitude	40º 2' 25.89"	Longitude	-78º 51' 33.48"
Quad Name	Central City	Quad Code	40078
Wastewater Description:	Sewage Effluent		

Receiving Waters	Indian Lake – Clear Run Branch	Stream Code	45757
NHD Com ID	123716672	RMI	0.57
Drainage Area (mi^2)	14.9	Yield (cfs/mi^2)	0.02
Q_{7-10} Flow (cfs)	0.2980	Q_{7-10} Basis	Streamgage No. 03039200
Elevation (ft)	2,282	Slope (ft/ft)	n/a
Watershed No.	18-E	Chapter 93 Class.	CWF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Not Assessed		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

The discharge is not expected to impact any downstream public water supplies.

Treatment Facility Summary

The Lakewood Sewage Treatment Plant is a 0.012 MGD extended aeration sewage treatment plant that serves a section of the Indian Lake Borough. The facility operates under WQM Permit No. 5670406, issued July 16, 1970. Treatment at the facility consists of:

One (1) comminutor,
One (1) diversion structure,
One (1) surge tank,
One (1) aeration tank,
One (1) clarifier, and
One (1) chlorine contact tank

The disinfected effluent is discharged via Outfall 001 to Indian Lake – Clear Run Branch.

Sludge is wasted to one (1) sludge holding tank.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	Liquid Hypochlorite	0.012

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.012	≈21	Not Overloaded	Holding Tank	Other STP

Compliance Review

The following effluent violations occurred during the existing permit's term:

Submission Date	Non-Compliance Category	Parameter	Sample Value	Violation Condition	Permit Value	Unit	SBC
8/30/2016	Concentration 2 Effluent Violation	Total Residual Chlorine (TRC)	0.6865	>	0.5	mg/L	Average Monthly
9/6/2016	Concentration 2 Effluent Violation	Total Residual Chlorine (TRC)	0.68	>	0.5	mg/L	Average Monthly
10/4/2016	Concentration 2 Effluent Violation	Total Residual Chlorine (TRC)	0.75	>	0.5	mg/L	Average Monthly
11/3/2016	Concentration 2 Effluent Violation	Total Residual Chlorine (TRC)	0.8329	>	0.5	mg/L	Average Monthly
11/3/2016	Concentration 3 Effluent Violation	Total Residual Chlorine (TRC)	2.12	>	1.6	mg/L	Instantaneous Maximum
5/5/2017	Concentration 2 Effluent Violation	Total Residual Chlorine (TRC)	0.5305	>	0.5	mg/L	Average Monthly
4/9/2019	Concentration 2 Effluent Violation	Total Suspended Solids	36.5	>	30	mg/L	Average Monthly
5/3/2019	Concentration 2 Effluent Violation	Total Suspended Solids	53.5	>	30	mg/L	Average Monthly
5/3/2019	Concentration 3 Effluent Violation	Total Suspended Solids	62	>	60	mg/L	Instantaneous Maximum
9/15/2019	Concentration 2 Effluent Violation	Ammonia-Nitrogen	41.7	>	25	mg/L	Average Monthly
9/15/2019	Concentration 2 Effluent Violation	Total Suspended Solids	36	>	30	mg/L	Average Monthly
11/7/2019	Concentration 2 Effluent Violation	Ammonia-Nitrogen	26.35	>	25	mg/L	Average Monthly
7/6/2020	Concentration 2 Effluent Violation	Ammonia-Nitrogen	26.1	>	25	mg/L	Average Monthly
9/1/2020	Concentration 2 Effluent Violation	Ammonia-Nitrogen	33.25	>	25	mg/L	Average Monthly
10/5/2020	Concentration 2 Effluent Violation	Ammonia-Nitrogen	25.9	>	25	mg/L	Average Monthly
5/3/2021	Concentration 2 Effluent Violation	Total Suspended Solids	51	>	30	mg/L	Average Monthly
5/3/2021	Concentration 3 Effluent Violation	Total Suspended Solids	94	>	60	mg/L	Instantaneous Maximum

The facility was most recently inspected by DEP on May 3, 2018. The inspection indicates that all required treatment units were on-line, and no impacts were observed at the outfall.

There are no open violations associated with the permittee.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.012
Latitude 40º 2' 23.00" **Longitude** -78º 51' 32.00"
Wastewater Description: Sewage

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

Water quality modeling for the applicability of the effluent limits for dissolved oxygen, CBOD5, and ammonia-n was previously completed in DEP's WQM model. Since there has not been any noted change or negative impacts to the to the receiving water, and no substantiative change to effluent quality, DEP's standard operating procedures dictate that new modeling is not necessary.

Best Professional Judgment (BPJ) Limitations

The permit currently contains annual monitoring requirements for total nitrogen and total phosphorus. DEP recommends that the monitoring requirements remain in the permit to continue to characterize the effluent.

DEP also recommends continued influent monitoring for BOD5 and TSS to help with Chapter 94 reporting requirements.

An annual reporting requirement for E. Coli is proposed per the 2017 Triennial Review of Water Quality Standards, published in the PA Bulletin on July 11, 2020.

The permit has historically included seasonal limits for ammonia-n, based on the treatability of wastewater being significantly impacted by temperature and seasonal variance in stream flow. DEP recommends that the existing use of seasonal limits remains in the permit.

TMDL Considerations

The discharge is located within the Kiskiminetas-Conemaugh River watersheds, which has been assigned a TMDL to address impairment from abandoned mine drainage-related metals and low pH. The discharge is not assigned a wasteload allocation in the TMDL; however, previous permit renewals have required annual monitoring of AMD-related metals; total Al, Fe, and Mn, to demonstrate it is not contributing to the watersheds' impairment. DEP recommends that the annual monitoring requirements remain in the permit to continue to characterize the effluent.

Mass-based Limitations

The Lakewood Sewage Treatment Plant has historically not been assigned mass-based effluent limitations. However, 40 CFR § 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass except in any of the following cases: for pH, temperature, radiation, or other pollutants that cannot appropriately be expressed by mass limitations. Accordingly, DEP has proposed mass limits, expressed in lbs/day, for CBOD5, TSS, and ammonia-n. The mass limits were calculated by multiplying the corresponding concentration limit by the facility's annual average design flow of 0.012 MGD and a conversion factor of 8.34, and then rounded off based on DEP's policy. Establishing mass-based effluent limits will bring the permit into regulatory compliance and match permit requirements with other POTWs throughout the NPDES program.

Anti-Backsliding

No limits or monitoring requirements are less stringent than what is established in the existing permit. Anti-backsliding is not applicable.

Existing Effluent Limitations and Monitoring Requirements

The existing limits and monitoring requirements are as follows:

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.012	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	4.0	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	XXX	25	XXX	50	2/month	Grab
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Total Suspended Solids Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
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
Ammonia-Nitrogen May 1 – Oct 31	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
Ammonia-Nitrogen Nov 1 – Apr 30	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Aluminum, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Iron, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab
Manganese, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001

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)		Concentrations (mg/L)				Minimum 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	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	2.5	4.0	XXX	25.0	40.0	50	2/month	Grab
BOD5 Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
TSS	3.0	4.5	XXX	30.0	45.0	60	2/month	Grab
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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	Report	Report	XXX	Report	Report	XXX	2/month	Grab
Ammonia May 1 - Oct 31	2.5	3.7	XXX	25.0	37.5	50	2/month	Grab

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001