pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0060623**
Facility Type	**Municipal**	APS ID	**567223**
Major / Minor	**Minor**	Authorization ID	**1337966**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Silver Lake Township Municipal Authority**	Facility Name	**Quaker Lake WWTP**
Applicant Address	P.O. Box 154	Facility Address	S.R. 4002, Quaker Lake Road
	Brackney, PA 18812		Brackney, PA 18812
Applicant Contact	Paul Adams	Facility Contact	Michael Hester
Applicant Phone	(570) 663-2637	Facility Phone	(570) 663-2625
Client ID	38471	Site ID	262541
Ch 94 Load Status	Not Overloaded	Municipality	Silver Lake Township
Connection Status	No Limitations	County	Susquehanna
Date Application Received	December 29, 2020	EPA Waived?	Yes
Date Application Accepted	December 29, 2020	If No, Reason	-
Purpose of Application	Renewal of existing NPDES permit.		

Summary of Review

The applicant is requesting renewal of their NPDES permit to discharge 0.042 MGD of treated sewage to an unnamed tributary to Little Rhiney Creek (stream code 31842), a CWF/MF designated receiving stream in state water plan basin 04-E (Great Bend Susquehanna River). 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.

The pH, $CBOD_5$, TSS, and Fecal Coliform limits are technology-based and carried over from the previous permit. The Ammonia-Nitrogen and TRC limits are water quality-based limits (see 1999 Pollution Report attachment) and carried over from the previous permit.

The low flow yield (LFY) value of 0.05 cfs/mi^2 is carried over from the previous renewal for modeling. USGS StreamStats was unable to provide an accurate estimate of the Q_{7-10} flow due to the small drainage area at the point of first use. As per the 1999 pollution report, the point of first use was determined to be the confluence with Little Rhiney Creek. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMap PA. Drainage areas were delineated using USGS's StreamStats Interactive Map and elevations were obtained using the elevation profile feature of StreamStats (see attachments). WQM 7.0 and the TRC modeling spreadsheet results indicate no need for more stringent limitations (see attachments).

Influent monitoring for BOD_5 and TSS is continued in this renewal. Monthly monitoring and reporting requirements for Total Phosphorus and Total Nitrogen were added to the previously issued permit to monitor nutrient loadings (as well as Total Kjeldahl Nitrogen and Nitrate+Nitrite-Nitrogen to calculate Total Nitrogen). There are no Total Phosphorus or Total Nitrogen wasteload allocations assigned to this non-significant Phase 5 Chesapeake Bay discharger. The monitoring frequency for nutrients is updated to 1/year for this permit cycle.

Approve	Deny	Signatures	Date
X		*Brian Burden* Brian Burden, E.I.T. / Project Manager	December 17, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	1-3-22

Summary of Review

In the previously issued permit, monitoring for pH and TRC was required 1/week. The minimum measurement frequency for those parameters should be 1/day to be consistent with Table 6-3 from DEP's "Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits" Document 362-0400-001. NPDES permit PA0060461 for Silver Lake Township Municipal Authority's Laurel Lake WWTP was issued on September 23, 2019 and falls under the same category of WWTP as the Quaker Lake facility (Table 6-3 design flow between 0.01 MGD – 0.1 MGD). A compromise was made that updated the minimum monitoring frequency for pH and TRC to 4/week for this permit term and the next permit term will require daily monitoring. The same compromise will be applied to the minimum monitoring requirements for the Quaker Lake WWTP.

The minimum monitoring frequencies for $CBOD_5$, TSS, Fecal Coliform and Ammonia-N are updated to 2/month to be consistent with Table 6-3 from DEP's "Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits" Document 362-0400-001.

1/year monitoring/reporting for E. Coli is added to the permit as per DEP guidance.

There is one open violation for this client that could warrant withholding the issuance of the final permit:

- 9/17/2020: "NPDES - Failure to utilize approved analytical methods"

DMR review of the past two years shows the following concentration limitation exceedances:

- Ammonia-N: 10/2020 – 9.06 mg/L monthly average (limitation was 3.8 mg/L)
- Fecal Coliform: 9/2021 – 275.5 No./100mL geometric mean (limitation was 200 No./100mL)
- Total Suspended Solids: 1/2020 – 33 mg/L monthly average (limitation was 30 mg/L)

The previously issued permit expired on June 30, 2021 and the application for renewal was submitted in a timely manner. EPA waiver is in effect.

Sludge use and disposal description and location(s): The latest completed sludge disposal supplemental report from November 2020 indicates Koberline Environmental hauled 34,000 gallons of liquid sludge to an unknown destination.

StreamStats 1.pdf
StreamStats 2.pdf
StreamStats Flow.pdf
Elevations.pdf
TRC Calculation.pdf
WQM 1.pdf
WQM 2.pdf
WQM 3.pdf
WQM 4.pdf
WQM 5.pdf
WQM 6.pdf
1999 Pollution Report.pdf

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)	0.042
Latitude	41º 58' 42"	Longitude	-75º 54' 26"
Quad Name	Laurel Lake	Quad Code	0338
Wastewater Description:	Sewage Effluent		

Receiving Waters	Unnamed Tributary to Little Rhiney Creek	Stream Code	31842
NHD Com ID	43488933	RMI	0.19
Drainage Area	0.24 mi^2	Yield (cfs/mi^2)	0.05
Q_{7-10} Flow (cfs)	0.012	Q_{7-10} Basis	½ of default LFY
Elevation (ft)	1420	Slope (ft/ft)	0.0618
Watershed No.	4-E	Chapter 93 Class.	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)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake	Danville Municipal Water Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	1123
PWS RMI	122.7	Distance from Outfall (mi)	~214

Treatment Facility Summary				
Treatment Facility Name: Quaker Lake WWTP				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Aerated Lagoons	Chlorine	0.011
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.042	98	Not Overloaded	Settled	Hauled

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.042
Latitude 41º 58' 42" **Longitude** -75º 54' 26"
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
$CBOD_5$	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40.0	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	50.0	IMAX	-	-
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	60.0	IMAX	-	-
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)
	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)
	10,000 / 100 ml	IMAX	-	92a.47(a)(5)

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Total Residual Chlorine	0.3	Average Monthly	1999 TRC Calculation Spreadsheet
	0.7	IMAX	
Ammonia-Nitrogen May 1 – Oct 31	3.8	Average Monthly	1999 Pollution Report
	7.6	IMAX	
Ammonia-Nitrogen Nov 1 – Apr 30	11.4	Average Monthly	1999 Pollution Report
	22.8	IMAX	