

Application Type Renewal
 Facility Type Non-Municipal
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0031747
 APS ID 1102709
 Authorization ID 1465161

Applicant and Facility Information

Applicant Name	<u>Glen Mills Schools</u>	Facility Name	<u>Glen Mills School STP</u>
Applicant Address	<u>PO Box 5001</u> <u>Concordville, PA 19331-5001</u>	Facility Address	<u>185 Glen Mills Road</u> <u>Glen Mills, PA 19342-1743</u>
Applicant Contact	<u>Don Kaeser</u>	Facility Contact	<u>John Dean</u>
Applicant Phone	<u>(610) 459-8100</u>	Facility Phone	<u>(484) 824-2569</u>
Client ID	<u>43176</u>	Site ID	<u>239938</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Thornbury Township</u>
Connection Status		County	<u>Delaware</u>
Date Application Received	<u>November 28, 2023</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted		If No, Reason	
Purpose of Application	<u>Renewal</u>		

Summary of Review

The applicant requests renewal of an NPDES permit to discharge treated sewage from the Glen Mills School STP. The treatment plant consists of one bar screen, one equalization tank, one aeration tank, three clarifiers, four sand filters, primary and secondary chlorination tanks and a sludge holding tank.

DMR review shows few noncompliance occurrences with the effluent limits in the past year. A minor exceedance in TRC on July 2022: reported value 1.26 mg/L which is 0.06 over 1.2 mg/L

There are no changes in the treatment units, influent quality, stream designation etc. The proposed limits are same as the existing limits.

Act 14 Notifications:

Thornbury Township - October 5, 2023
 Delaware County - October 5, 2023

The site inspection was conducted on 5/11/2023 by William Collins and the site was in good condition.

WQM 7.0 Model was ran and there is no change in the limits.

Approve	Deny	Signatures	Date
X		<i>Charley Yang</i> Charley Yang / Environmental Engineering Specialist	March 7, 2024
X		<i>Pravin Patel</i> Pravin C. Patel, P.E. / Environmental Engineer Manager	03/07/2024

Summary of Review

Permit Conditions:

- A. No Stormwater
- B. Acquire Necessary Property Rights
- C. Proper Sludge Disposal
- D. Abandon STP when Municipal Sewers Available
- E. Chlorine Optimization
- F. Operator Notification
- G. Fecal Coliform Reporting
- H. Operations and Maintenance Plan
- I. Solids Management

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.	<u>001</u>	Design Flow (MGD)	<u>.15</u>
Latitude	<u>39° 55' 26.37"</u>	Longitude	<u>-75° 29' 33.71"</u>
Quad Name	<u></u>	Quad Code	<u></u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Chester Creek (TSF, MF)</u>	Stream Code	<u>00520</u>
NHD Com ID	<u>25607067</u>	RMI	<u>13.9</u>
Drainage Area	<u>25.7 mi²</u>	Yield (cfs/mi ²)	<u>0.51</u>
Q ₇₋₁₀ Flow (cfs)	<u>6.11</u>	Q ₇₋₁₀ Basis	<u>streamstats</u>
Elevation (ft)	<u>206.34</u>	Slope (ft/ft)	<u>0.00947</u>
Watershed No.	<u>3-G</u>	Chapter 93 Class.	<u>TSF, MF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>CAUSE UNKNOWN, CAUSE UNKNOWN, FLOW REGIME MODIFICATION, FLOW REGIME MODIFICATION, SILTATION, SILTATION</u>		
Source(s) of Impairment	<u>URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS, URBAN RUNOFF/STORM SEWERS</u>		
TMDL Status	<u></u>	Name	<u></u>

Changes Since Last Permit Issuance: receiving waters information was updated

Other Comments:

Treatment Facility Summary				
Treatment Facility Name: Glen Mills School STP				
WQM Permit No.		Issuance Date		
2396401		02/16/1996		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended Aeration With Solids Removal	Hypochlorite	0.15
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.15		Not Overloaded	Aerobic Digestion	Other WWTP

Changes Since Last Permit Issuance:

Other Comments:

Compliance History

DMR Data for Outfall 001 (from January 1, 2023 to December 31, 2023)

Parameter	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23	JAN-23
Flow (MGD) Average Monthly	0.05	0.0352	0.0309	0.0389	0.0375	0.0405	0.0366	0.027	0.0406	0.0372	0.0374	0.0445
Flow (MGD) Daily Maximum	0.162	0.1077	0.0449	0.0692	0.0593	0.0885	0.1294	0.034	0.0813	0.0623	0.0692	0.0784
pH (S.U.) Instantaneous Minimum	6.91	6.95	7.02	7.22	6.92	7.14	7.26	7.13	6.98	7.11	6.93	7.06
pH (S.U.) Instantaneous Maximum	8.16	7.93	7.52	7.64	7.72	7.66	7.84	7.74	7.76	7.78	7.83	7.82
DO (mg/L) Instantaneous Minimum	10.3	7.28	8.25	7.46	7.44	7.1	8.31	7.99	8.04	9.03	9.78	9.48
TRC (mg/L) Average Monthly	0.44	0.41	0.4	0.4	0.3	0.4	0.40	0.3	0.3	0.4	0.4	0.4
TRC (mg/L) Instantaneous Maximum	0.68	0.72	0.7	0.8	1.03	1.11	1.18	0.56	0.88	0.73	0.68	1.18
CBOD5 (lbs/day) Average Monthly	< 1	< 0.5	< 0.5	< 0.6	< 0.6	< 2.0	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6	< 0.9
CBOD5 (mg/L) Average Monthly	< 2	< 2	< 2.0	< 2	< 2.0	< 4.0	< 2.0	< 2	< 2	< 2	< 2	< 2
TSS (lbs/day) Average Monthly	< 0.5	< 0.3	< 1	< 1	< 1	< 2.0	< 1	< 28	< 1	< 1	< 1	< 2
TSS (mg/L) Average Monthly	< 1	< 1	< 4	< 4	< 4.0	< 4.0	< 4	< 4	< 4	< 4	< 4	< 4
Total Dissolved Solids (lbs/day) Average Quarterly	426			303			129			147		
Total Dissolved Solids (mg/L) Average Quarterly	426			411			394			444		
Fecal Coliform (No./100 ml) Geometric Mean	< 2	< 2	< 1	< 1	< 1	< 2.0	< 1	< 1	< 1	< 1	< 1	< 1

**NPDES Permit Fact Sheet
Glen Mills Schs STP**

NPDES Permit No. PA0031747

Fecal Coliform (No./100 ml) Instantaneous Maximum	< 2	< 2	< 1.0	< 1	< 1	33	< 1.0	< 1	< 1	< 1	< 1	< 1
Total Nitrogen (lbs/day) Average Monthly	< 7	< 6	6	6	6	11	6	7	8	8	7	10
Total Nitrogen (mg/L) Average Monthly	< 16.5	< 25	22.8	19.5	18.3	25.2	22.7	29.3	28.7	26.9	25.4	22.4
Ammonia (lbs/day) Average Monthly	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03	< 0.04	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03	< 0.05
Ammonia (mg/L) Average Monthly	< 0.08	< 0.06	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1
Total Phosphorus (lbs/day) Average Monthly	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2
Total Phosphorus (mg/L) Average Monthly	0.34	0.41	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.5	0.5	0.4

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .15
Latitude 39° 55' 27.23" **Longitude** -75° 29' 32.00"
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:

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (Attachment) determined the following parameters were candidates for limitations:

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

Parameter	Limit (mg/l)	SBC	Model
CBOD ₅	25	Average Monthly	WQM 7.0
TSS	30	Average Monthly	DRBC
NH ₃ -N (5/1 TO 10/31)	10	Average Monthly	WQM 7.0
NH ₃ -N (11/1 TO 4/30)	20	Average Monthly	Seasonal limit
DO	4.0	Inst. Min	WQM 7.0
TRC	0.5/1.2	Ave. Mon./Inst.Max.	Spread sheet
Fecal Coliform	200/1000	Geo.Mean/Inst.Max.	Chapt. 93/DRBC
pH	6.0 to 9.0 at all times	Chapt. 93	
Total Phosphorus (5/1 to 10/31)	1.0	Average Monthly	existing
Total Phosphorus (11/1 to 4/30)	2.0	Average Monthly	Seasonal limit
Total Nitrogen	Report	Average Monthly	Existing / data collection
TDS	Report	Average Quarterly	Data Collection

Comments:

Best Professional Judgment (BPJ) Limitations

Comments:

Anti-Backsliding

N/A

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” (386-0400-001), 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	Average Weekly	Minimum	Average Monthly	Maximum	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	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	1/day	Grab
CBOD5	31	XXX	XXX	25	XXX	50	1/week	24-Hr Composite
TSS	38	XXX	XXX	30	XXX	60	1/week	24-Hr Composite
Total Dissolved Solids	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	25	XXX	XXX	20.0	XXX	40	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	13	XXX	XXX	10.0	XXX	20	1/week	24-Hr Composite
Total Phosphorus Nov 1 - Apr 30	2.5	XXX	XXX	2.0	XXX	4	1/week	24-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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Phosphorus May 1 - Oct 31	1.3	XXX	XXX	1.0	XXX	2	1/week	24-Hr Composite

Compliance Sampling Location:

Other Comments: