Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0029530**
Facility Type	**Non-Municipal**	APS ID	**1134095**
Major / Minor	**Minor**	Authorization ID	**1521770**

Applicant and Facility Information

Applicant Name	**Palisades School District**	Facility Name	**Palisades High School STP**
Applicant Address	Palisades School District 39 Thomas Free Drive	Facility Address	9220 Old Easton Road
	Kintnersville, PA 18930		Kintnersville, PA 18930
Applicant Contact	Alan Crouthamel	Facility Contact	Alan Crouthamel
Applicant Phone	(610) 847-5131	Facility Phone	(610) 847-5131
Client ID	7149	Site ID	256624
Ch 94 Load Status	Not Overloaded	Municipality	Nockamixon Township
Connection Status		County	Bucks
Date Application Received	March 24, 2025	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: NPDES permit amendment and renewal.

Summary of Review

The Pa Department of Environmental Protection (PADEP/Department) received an NPDES permit amendment and renewal application from Cowan Associates, Inc. (consultant) on behalf of Palisades School District (permittee) on March 24, 2025 for Permittee's Palisades High School STP (facility). This is a minor sewage facility with a design flow of 0.0215 MGD that discharges into UNT to Gallows Run (TSF, MF) in state watershed 2-D. The current permit will expire on March 31, 2026. The terms and conditions of the current permit is automatically extended since the renewal application was received at least 180 days prior to expiration date. Renewal NPDES permit application under Clean Water Program are not covered by PADEP's PDG per 021-2100-001. This fact sheet is developed in accordance with 40 CFR §124.56.

Changes to existing permit: Added: E. Coli. New limits will be effective after construction/operation of new plant

Sludge use and disposal description and location(s): Digested sludge are hauled-off by licensed hauler.

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
√		Reza H. Chowdhury, E.I.T. / Project Manager 	April 11, 2025
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	04/14/2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0215
Latitude	40º 32' 1.44"	Longitude	-75º 10' 48.63"
Quad Name	Riegelsville	Quad Code	1444
Wastewater Description:	Effluent		
Receiving Waters	UNT of Gallows Run (CWF, MF)	Stream Code	03283
NHD Com ID	26054324	RMI	0.62
Drainage Area	2.22 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.222	Q_{7-10} Basis	See below
Elevation (ft)	270.78	Slope (ft/ft)	
Watershed No.	2-D	Chapter 93 Class.	CWF, MF
Existing Use	**CWF**	Existing Use Qualifier	Ch. 93
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	**None**	Name	

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°C)	20	Default
Hardness (mg/L)	100	Default

Nearest Downstream Public Water Supply Intake		BCWSA New Hope	
PWS Waters	Delaware River	Flow at Intake (cfs)	
PWS RMI	73.32	Distance from Outfall (mi)	26.47

Changes Since Last Permit Issuance: The permittee is proposing to retrofit the existing treatment facility to remove existing treatment process tanks and install a new MBR treatment system, repair deterioration in existing corrugated metal culvert pipe under site access drive crossing an UNT to Gallows Run, and install a rip-rap stream bank repair where the plant's effluent discharge pipe has been exposed due to erosion. A Part II WQM permit amendment application was submitted for these works which will be reviewed concurrently with this NPDES permit. This application was originally submitted as an amendment, but since the current permit will expire on March 31, 2026, the Department decided to return the amendment fees and treat this application for amendment and renewal. A Preliminary Treatment Requirement (PTR) letter was issued on February 19, 2025 for the new treatment plant that listed Preliminary Effluent Limits (PELs) for the upgraded treatment plant, which in turn was the basis of the MBR design. The development of effluent limitations will be based on the limits in the PTR letter, unless a more stringent limit is justified.

Stream Flow:
The USGS's web based watershed delineation tool StreamStats (accessible at https://streamstats.usgs.gov/ss/, accessed on April 10, 2025) was utilized to determine the drainage area at discharge point. The drainage area at Outfall 001 was found to be 2.22 mi^2. A default yield of 0.1 cfs/mi^2 was used to calculate the Q_{7-10} at the discharge point. The calculated Q_{7-10} is 0.222 cfs. Default Q_{1-10}:Q_{30-10} of 0.64 and default Q_{30-10}:Q_{7-10} of 1.36 (per 391-2000-007) will be used for modeling. It should be noted that the available flow at the outfall is greatly reduced compared to previous versions of the permit. The source of original higher Q_{7-10} couldn't be located.

PWS Intake:

The nearest PWS intake is BCWSA's New Hope intake in New Hope Borough, on Delaware River at RMI 73.32. It is approximately 26.47 miles downstream of the outfall 001. The discharge from this facility is expected not to affect the intake.

Wastewater Characteristics:
Default pH of 7.0 S.U, discharge temperature of 25°C, default discharge hardness of 100 mg/l will be used for modeling, as appropriate.

Background data:
Default pH of 7.0, default temperature of 20°C, and default hardness of 100 mg/l will be used for modeling, as appropriate.

Antidegradation (93.4):
The effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The receiving stream is designated as Cold-Water Fishes (CWF) and Migratory Fishes (MF.) No High-Quality stream is impacted by this discharge. No Exceptional-Value water is impacted by this discharge.

Class A Wild Trout Fisheries:
No Class A Wild Trout Fisheries are impacted by this discharge.

Treatment Facility Summary

Treatment Facility Name: Palisades High School STP

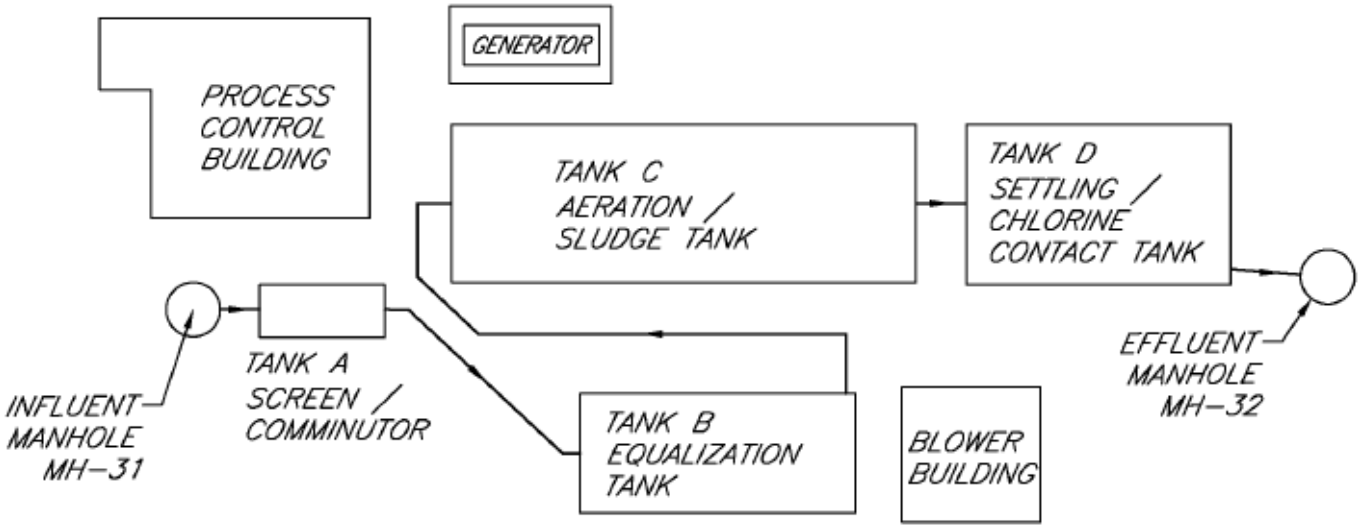
WQM Permit No.	Issuance Date
0989460 A-2	Under review
0989460 A-1	11/30/1989
0989460	08/14/1989

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	MBR	UV	0.0215

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0215	26	Not Overloaded	Holding tank	Other WWTP

Other Comments:
Palisades School District owns a treatment plant named Palisades High School STP, located in 9220 Old Easton Road, Kitnersville, PA 18930. The STP serves Palisades school district's elementary, middle, and senior high schools. This is a minor sewage treatment plant with a design flow of 21,500 GPD. The treated effluent is discharged into an UNT to Gallows Run, which has a Ch. 93 designation of CWF, MF.

The current treatment plant is an extended aeration activated sludge system with chlorine disinfection. Structural inspection of the treatment tanks performed by Cowan Associates, Inc. on February 20 and 21, 2023 revealed a number of deficiencies in the partially buried steel tanks. Critical repairs were performed in the influent equalization tank and chlorine contact tank. The permittee decided to construct a plant upgrade and replace the deteriorating tanks with new structures. Construction of these upgrades is anticipated for summer 2026 when the schools are closed. Existing treatment setup is as follows:



Existing tanks B, C, and D will be removed. Existing pumps, blowers, and process piping associated with these structures will also be removed. The influent manhole, effluent manhole, and standby generators are proposed to be retained and reused. Process control and blowers will be removed from the existing buildings. The buildings are proposed to be retained for non-treatment uses.

The new Membrane Biological Reactor (MBR) package plant is proposed to be installed above grade, adjacent to the location of the existing tanks C and D. Tank A, with the existing comminutor and coarse screen, will be retained. An influent pump station will be constructed downstream of Tank A to lift gravity flows into the MBR plant. The proposed MBR plant includes UV disinfection in lieu of chemical disinfection of treated effluent. Existing discharge from MH-32 to Outfall 001 will be retained.

Influent flow data from 2022-2024 was reviewed to assess current hydraulic loading. Organic loading was evaluated through five influent grab samples performed in May 2024 during dry weather. Impacts to plant flow in wet weather prompted an investigation of I&I in the sewage collection system in 2023. As a result of this investigation, work was performed to reduce I&I, including a sewer main spot repair, manhole lining, and installation of inflow dishes in manholes along Church Hill Road.

Construction for new treatment plant proposes the following general sequence:

1. Prepare Tank B to serve as holding tank.
2. Empty and clean Tanks C & D.
3. Demolish Tank C, Tank D, piping, and appurtenances.
4. Install proposed influent pump station.
5. Place new MBR package plant and sludge holding tank. Connect influent piping, effluent piping, and electrical supply.
6. Startup of new plant and place MBR into operation.
7. Decommission holding tank operation, Tank B.

Typical summer flows for 2022 through 2024 was averaged 5,420 GPD and Tank B has capacity of 14,212 gallons, providing approximately 2.8 days holding.

Details of the proposed MBR will be discussed in the WQM permit documents. Due to low strength influent, a supplemental carbon source will be provided. Micro C 2000 will be used as carbon supplement. The calculations show that at permitted flow, the plant will require addition of 125 lbs./day of Micro C. Actual feed rate will be determined by the plant operator during school, off-hour, and summer flow conditions. A 400-gallon storage tank is proposed to provide a minimum of 30 days of storage at 13 gpd feed rate.

Biosolids Handling:
Sludge waste produced will be collected in a holding tank which will be hauled off by a licensed hauler. The design calculation shows the plant will waste an average of 326 GPD at permitted flow. The holding tank is sized to provide a storge for a minimum of 5-days with 2-ft freeboard.

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.020838	0.016439	0.014581	0.009093	0.009	0.007610	0.006713	0.011314	0.0104	0.0165	0.0227	0.0284
pH (S.U.) IMIN	7.01	7.12	7.20	7.44	6.77	7.64	7.89	7.79	7.63	7.70	7.64	7.43
pH (S.U.) IMAX	8.70	8.42	8.33	8.29	8.52	8.45	8.83	8.41	8.51	8.51	8.42	8.72
DO (mg/L) IMIN	6.31	5.26	5.05	6.09	5.68	6.30	7.70	7.60	7.31	6.10	5.59	5.56
TRC (mg/L) Average Monthly	0.3	0.3	0.26	0.2	0.3	0.2	0.2	0.2	0.2	0.30	0.33	0.2
TRC (mg/L) IMAX	0.7	1.0	0.6	0.6	1.5	0.7	0.6	0.7	0.5	0.6	0.9	0.7
CBOD5 (lbs/day) Average Monthly	0.6	0.19	0.04	0.5	0.41	0.81	0.11	0.40	0.20	0.25	0.14	0.96
CBOD5 (lbs/day) Raw Sewage Influent Average Monthly	12.7	5.6	11.1	5.5	6.92	4.51	0.6	2.63	3.1	7.8	6.93	15.8
CBOD5 (mg/L) Average Monthly	3.0	2.25	4.5	6.0	4.0	3.5	2.5	2.5	2.5	2.50	2.0	5.0
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	62.5	83.3	63	61.5	67.5	53.0	13.5	20.5	23.5	70.0	49.5	85.0
TSS (lbs/day) Average Monthly	2.6	0.38	0.07	0.41	0.62	0.7	0.44	1.5	0.28	0.35	1.1	1.0
TSS (lbs/day) Raw Sewage Influent Average Monthly	25.6	5.4	7.66	7.5	7.5	3.6	0.33	1.43	2.73	13.9	6.12	11.6
TSS (mg/L) Average Monthly	8.0	4.5	7.5	10	6	11.0	18.5	13.0	3.0	3.0	8.0	5.0
TSS (mg/L) Raw Sewage Influent Average Monthly	90.0	92.0	63.5	82.5	74.0	50.5	7.0	9.5	27.5	116.0	44	59.5
Fecal Coliform (CFU/100 ml) Geometric Mean	5.0	3.8	1.0	1.0	2.4	9.0	1.0	1.0	1.0	1.0	1.0	1.0
Fecal Coliform (CFU/100 ml) IMAX	25.0	15.0	1.0	1.0	3.0	82.0	1.0	1.0	1.0	1.0	1.0	1.0
Total Nitrogen (lbs/day) Average Monthly	0.3	0.06	1.4	0.2	0.05	0.01	0.78	0.02	0.10	0.60	0.08	1.8
Total Nitrogen (mg/L) Average Monthly	2.50	0.50	12.5	2.50	0.50	0.50	1.41	0.50	0.95	6.58	0.50	7.79

Ammonia (lbs/day) Average Monthly	0.13	0.01	1.7	0.12	0.24	0.06	0.06	0.009	0.05	0.31	0.07	1.7
Ammonia (mg/L) Average Monthly	0.9	0.16	9.9	1.2	2.3	0.58	0.24	0.05	0.96	3.2	1.6	5.4
Total Phosphorus (lbs/day) Average Monthly	0.1	0.19	0.08	0.51	0.20	0.03	1.43	0.49	0.94	0.08	0.04	0.47
Total Phosphorus (mg/L) Average Monthly	1.29	1.55	0.72	5.33	1.90	1.17	2.58	8.55	8.38	0.96	0.28	1.99

Compliance History

Effluent Violations for Outfall 001, from: April 1, 2024 To: February 28, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TRC	10/31/24	IMAX	1.5	mg/L	1.2	mg/L
TRC	10/31/24	IMAX	1.5	mg/L	1.2	mg/L

Summary of Inspections:
August 29, 2023: CEI conducted. No violation noted during the inspection. The receiving stream had slight solids deposition but no obvious areas of concern.

May 13, 2022: CEI conducted. No violation noted during the inspection. Recommendations were made including keeping a written log of the pH calibration, upgrade the clarifier unit to ensure structural integrity, and calibration of the flow meter.

October 21, 2020: CEI conducted. No violation noted during the inspection. The plant looked to be functioning adequately. Final effluent looked clear and no solids were present in the outfall. The clarifier baffles and weirs appeared warped and possibly eroded in certain places. Recommended that the permittee should consider plans to upgrade the plant due to the age of the plant.

Other Comments: The treatment plant is proposed to be replaced by an MBR process.

Existing Limits

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	XXX	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.) Sep 1 - Jun 30	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
pH (S.U.) Jul 1 - Aug 31	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
Dissolved Oxygen Sep 1 - Jun 30	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Dissolved Oxygen Jul 1 - Aug 31	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/week	Grab
Total Residual Chlorine (TRC) Sep 1 - Jun 30	XXX	XXX	XXX	0.5	XXX	1.2	1/day	Grab
Total Residual Chlorine (TRC) Jul 1 - Aug 31	XXX	XXX	XXX	0.5	XXX	1.2	1/week	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	4.5	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids	5.4	XXX	XXX	30.0	XXX	60	2/month	8-Hr Composite
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	2/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	2/month	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	3.6	XXX	XXX	20.0	XXX	40	2/month	8-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	2.3	XXX	XXX	13.0	XXX	26	2/month	8-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

Existing Limits

PELs proposed:

Parameter	Concentration (mg/l)		
	Monthly Average	Weekly Average	Instantaneous Maximum
CBOD5 (May 1 – Oct 31)	10		20
CBOD5 (Nov 1 – Apr 30)	20		40
Total Suspended Solids	10		20
Ammonia-Nitrogen (May 1- Oct 31)	1.5		3.0
Ammonia-Nitrogen (Nov 1- Apr 30)	4.5		9.0
E-coli	Report only		
Fecal Coliform (CFU/100 ml)	50 Geo Mean		1,000
Dissolved Oxygen	Minimum of 6.0 at all times		
Total Residual Chlorine*	0.5		1.2
pH	Within the range of 6 to 9 standard units at all times		
Total Nitrogen	10		20
Total Phosphorus	2.0		4.0

* We recommend disinfection be Ultraviolet or other equivalent disinfection process that results in no harm to aquatic life, does not produce chemical residuals and results in effective bacterial and viral destruction.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .0215
Latitude 40º 32' 1.00" **Longitude** -75º 10' 49.00"
Wastewater Description: 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)

Mass-Based Limits

The federal regulation at 40 CFR 122.45(f) requires that effluent limits be expressed in terms of mass, if possible. The regulation at 40 CFR 122.45(b) requires that effluent limitations for POTWs be calculated based on the design flow of the facility. The mass-based limits are expressed in pounds per day and are calculated as follows:

Mass based limit (lb/day) = concentration limit (mg/L) × design flow (mgd) × 8.34

Model input data

The following data will be used for modeling, as needed:

- Discharge pH 7.0 (Default)
- Discharge Temperature 25°C (Default)
- Discharge Hardness 100 mg/l (Default)
- Stream pH 7.0 (Default)
- Stream Temperature 20.0°C (Default)
- Stream Hardness 100 mg/l (Default)

The following two nodes were used in modeling:

Node 1: At the outfall 001 on UNT to Gallows Run (03283)
Elevation: 270.78 ft (National Map-Advanced Viewer, 04/10/2025)
Drainage Area: 2.22 mi^2 (StreamStats Version 3.0, 04/10/2025)
River Mile Index: 0.62 (PA DEP eMapPA)
Low Flow Yield: 0.1 cfs/mi^2
Q_{7-10}: 0.222 cfs
Discharge Flow: 0.0215 MGD

Node 2: At confluence with Gallows Run RMI 0.0
Elevation: 203.24 ft (National Map-Advanced Viewer, 04/10/2025)
Drainage Area: 6.31 mi^2 (StreamStats Version 3.0, 04/10/2025)
River Mile Index: 0.0 (PA DEP eMapPA)
Low Flow Yield: 0.1 cfs/mi^2

Discharge Flow: 0.0 MGD

WQM 7.0 Model
WQM 7.0 version 1.11 is a water quality model designed to assist DEP to determine appropriate effluent limits for $CBOD_5$, NH_3-N and DO. The model simulates two basic processes. In the NH_3-N module, the model simulates the mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to NH_3-N water quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of $CBOD_5$ and NH_3N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model was utilized for this permit renewal by using Q_{7-10} and current background water quality levels of the stream.

NH_3-N
WQM 7.0 suggested NH_3-N limit of 13 mg/l as monthly average and 26 mg/l as IMAX limit to protect water quality standards. As stated in page 2 of this report, PEL for ammonia is 1.5 mg/l during May 1- October 31. The treatment plant design shows the proposed facility is designed to treat at or below PEL levels. The current limits will be continued until the MBR is constructed and operational. At that time, new PEL limits will be effective. The mass limit for MBR plant is calculated by the equation provided in page 9 of this report.

CBOD5
WQM 7.0 suggests CBOD5 limit of 25.0 mg/l as AML during the summer season. PEL limit during summer season is 10 mg/l as AML. Existing limits will be continued and final PEL limits will be effective after the MBR plant is constructed and operational. Mass limits are calculated per equation on page 9 of this report.

DO
WQM 7.0 suggests minimum DO of 6.0 mg/l which is the model input. Current minimum DO limit of 5.0 will be continued and final limit will be effective once the MBR plant is constructed and operational.

Toxics Management Spreadsheet (TMS)
Toxics modeling wasn't conducted since this is a minor facility and doesn't receive waste from industrial or commercial contributors.

Other Requirements:

Total Nitrogen:
PADEP's SOP BCW-PMT-033 recommends monitoring for Total Nitrogen for facilities with design flow more than 2000-GPD, which is also supported by Pa Code 25 Ch. 92a.61. The PEL for Total Nitrogen is 10 mg/l as AML due to the discharge being into Delaware River's SPW. Monitoring will be continued and PEL limits will be applied at upgraded MBR plant.

Total Phosphorus:
Same as Total Nitrogen, PEL proposed TP limit of 2.0 mg/l for SPW consideration. Current monitoring will be continued and PEL will be applied at upgraded MBR plant.

Fecal Coliform:
The seasonal effluent limitations for fecal coliform are based on Chapter 92a (§ 92a.47(4) & (5)) of DEP's regulations. The PEL for Fecal Coliform is 50/100 ml as Geo Mean and 1,000/100 ml and IMAX for SWP consideration. The current limits will be continued and new limits will be applied at the upgraded plant.

E. Coli:
Pa Code 25 § 92a. 61 requires monitoring of E. Coli. DEP's SOP titled "Establishing Effluent Limitations for Individual Sewage Permits (BCW-PMT-033, revised March 24, 2021) recommends annual E. Coli monitoring for minor sewage dischargers with design flow between 2,000 GPD to 50,000-GPD. This requirement will be applied from this permit term.

pH:
The TBEL for pH is above 6.0 and below 9.0 S.U. (40 CFR §133.102(c) and Pa Code 25 §§ 95.2(1), 92a.47) which are existing limits and will be carried over.

Total Suspended Solids (TSS):
There is no water quality criterion for TSS. The existing limits of 30 mg/L average monthly and 60 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment, 25

Pa. Code § 92a.47 and 40CFR 133.102(b) until the plant is upgraded. Once the MBR is constructed and operational, the new AML of 10 mg/l will be applied. The mass limits are calculated with the equation on page 9 of this report.

Total Residual Chlorine (TRC):
The current limits will be continued until MBR plant is constructed and operational. Once new plant is operational, UV Transmittance in % will be effective at same frequency as TRC.

Monitoring Frequency and Sample Types:
Otherwise specified above, the monitoring frequency and sample type of compliance monitoring for existing parameters are recommended by DEP's SOP and Permit Writers Manual and/or on a case-by-case basis using best professional judgment (BPJ).

Flow, influent BOD5, and influent TSS Monitoring Requirement:
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii). Influent BOD_5 and TSS monitoring requirements are established in the permit per the requirements set in Pa Code 25 Chapter 94.

Anti-Backsliding
Anti-backsliding prohibition is justified in sections where an exception is justified for the affected pollutant(s). For remaining pollutants, this prohibition isn't applicable since the proposed limits are at least as stringent as were in current permit.

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 End of Interim Period 1.

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		
TRC Sep 1 - Jun 30	XXX	XXX	XXX	0.5	XXX	1.2	1/day	Grab
TRC Jul 1 - Aug 31	XXX	XXX	XXX	0.5	XXX	1.2	1/week	Grab
Dissolved Oxygen Sep 1 - Jun 30	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Dissolved Oxygen Jul 1 - Aug 31	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/week	Grab
CBOD5	4.5	XXX	XXX	25.0	XXX	50	2/month	8-Hr Composite
TSS	5.4	XXX	XXX	30.0	XXX	60	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	2/month	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	3.6	XXX	XXX	20.0	XXX	40	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	2.3	XXX	XXX	13.0	XXX	26	2/month	8-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite

Compliance Sampling Location: At Outfall 001

Other Comments: None

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	XXX	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.) Sep 1 - Jun 30	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
pH (S.U.) Jul 1 - Aug 31	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/week	Grab
CBOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: At Outfall 001

Other Comments:

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: End of Interim Period 1 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	Instantaneous Minimum	Average Monthly	Maximum	Instant. Maximum		
CBOD5 Nov 1 - Apr 30	3.58	XXX	XXX	20.0	XXX	40	2/month	8-Hr Composite
CBOD5 May 1 - Oct 31	1.79	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
TSS	1.79	XXX	XXX	10.0	XXX	20	2/month	8-Hr Composite
DO Sep 1 - Jun 30	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
DO Jul 1 - Aug 31	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/week	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	50 Geo Mean	XXX	1000	2/month	Grab
UV Transmittance (%) Sep 1 - Jun 30	XXX	XXX	Report	XXX	XXX	XXX	1/day	Recorded
UV Transmittance (%) Jul 1 - Aug 31	XXX	XXX	Report	XXX	XXX	XXX	1/week	Recorded
Total Nitrogen	Report	XXX	XXX	10.0	XXX	20	1/month	Calculation
Ammonia Nov 1 - Apr 30	0.81	XXX	XXX	4.5	XXX	9	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	0.27	XXX	XXX	1.5	XXX	3	2/month	8-Hr Composite
Total Phosphorus	Report	XXX	XXX	2.0	XXX	4	1/month	8-Hr Composite

Compliance Sampling Location: At Outfall 001

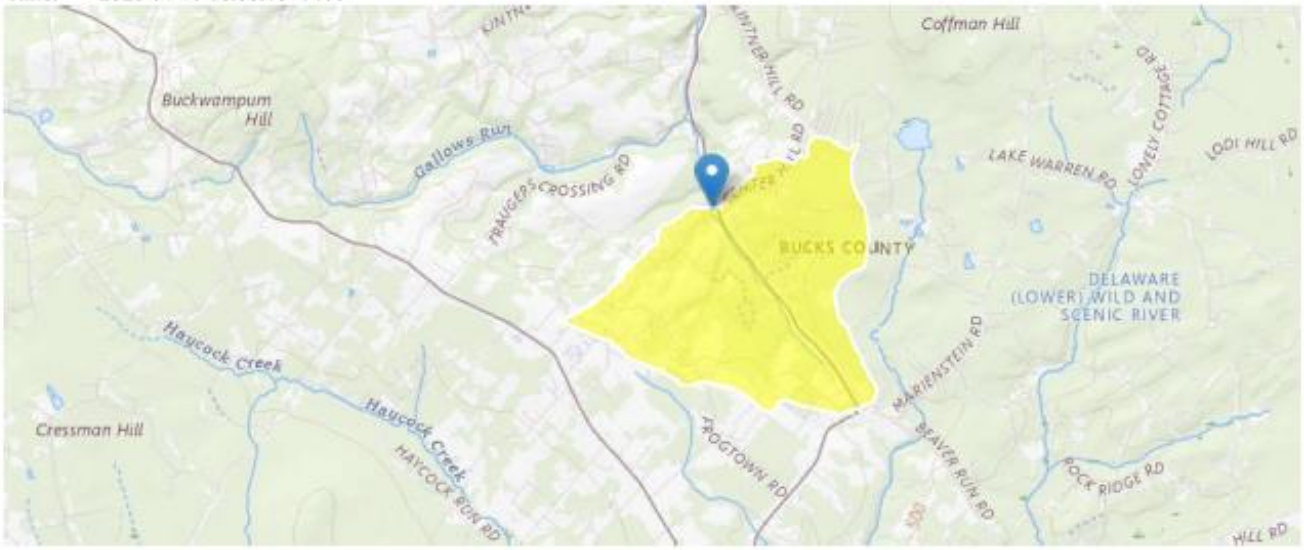
Other Comments:

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP: BCW-PMT-033
☐	Other:

StreamStats at Outfall 001

PA0029350 at Outfall 001

Region ID: PA
Workspace ID: PA20250410123743191000
Clicked Point (Latitude, Longitude): 40.53469, -75.18037
Time: 2025-04-10 08:38:18 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.014	degrees
DRNAREA	Area that drains to a point on a stream	2.22	square miles
ROCKDEP	Depth to rock	4.3	feet
URBAN	Percentage of basin with urban development	5.2692	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	5.014	degrees	1.7	6.4
DRNAREA	Drainage Area	2.22	square miles	4.78	1150
ROCKDEP	Depth to Rock	4.3	feet	4.13	5.21
URBAN	Percent Urban	5.2692	percent	0	89

Low-Flow Statistics Disclaimers [Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 1]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.347	ft^3/s
30 Day 2 Year Low Flow	0.473	ft^3/s
7 Day 10 Year Low Flow	0.144	ft^3/s
30 Day 10 Year Low Flow	0.207	ft^3/s
90 Day 10 Year Low Flow	0.339	ft^3/s

Low-Flow Statistics Citations

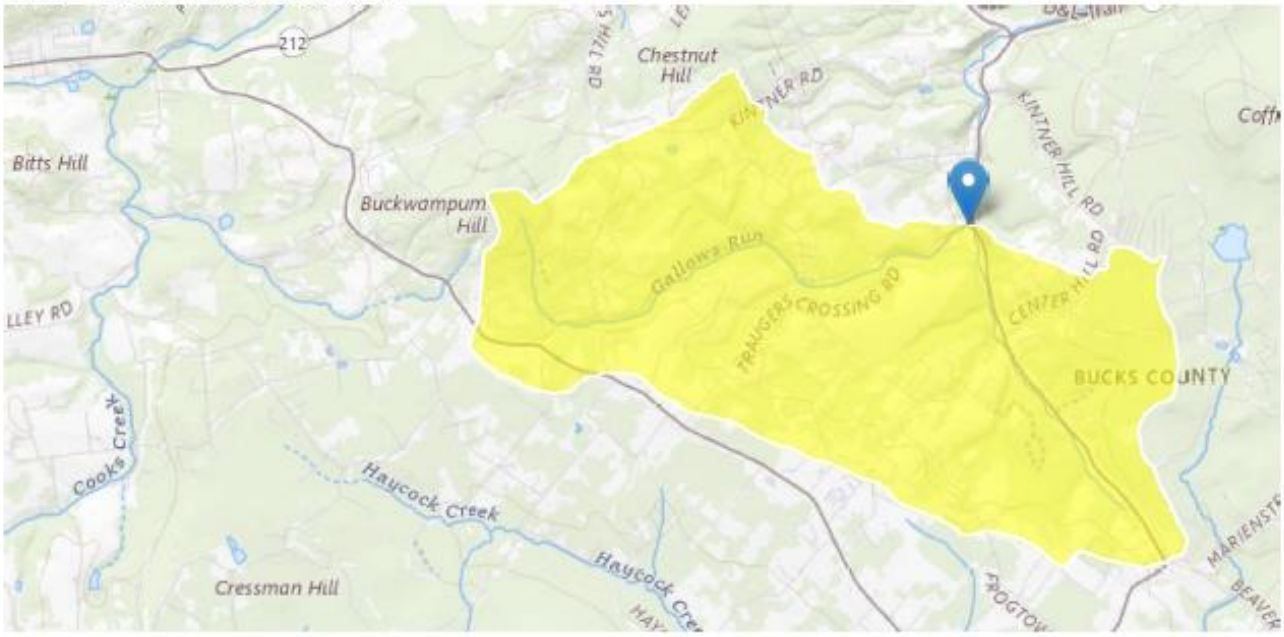
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.28.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats at node 2

PA0029530 at node 2

Region ID: PA
Workspace ID: PA20250410123955588000
Clicked Point (Latitude, Longitude): 40.54358, -75.18348
Time: 2025-04-10 08:40:35 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLOPD	Mean basin slope measured in degrees	5.8273	degrees
DRNAREA	Area that drains to a point on a stream	6.31	square miles
ROCKDEP	Depth to rock	4.5	feet
URBAN	Percentage of basin with urban development	2.4255	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 1]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLOPD	Mean Basin Slope degrees	5.8273	degrees	1.7	6.4
DRNAREA	Drainage Area	6.31	square miles	4.78	1150

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ROCKDEP	Depth to Rock	4.5	feet	4.13	5.21
URBAN	Percent Urban	2.4255	percent	0	89

Low-Flow Statistics Flow Report [Low Flow Region 1]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	1.38	ft^3/s	46	46
30 Day 2 Year Low Flow	1.76	ft^3/s	38	38
7 Day 10 Year Low Flow	0.653	ft^3/s	51	51
30 Day 10 Year Low Flow	0.862	ft^3/s	46	46
90 Day 10 Year Low Flow	1.25	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.28.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

WQM 7.0

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
02D	3283	Trib 03283 to Gallows Run	**0.620**	270.78	2.22	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Palisades HS ST	PA0029530	0.0215	0.0215	0.0215	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	6.00	8.24	0.00	0.00
NH3-N	13.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
02D	3283	Trib 03283 to Gallows Run	**0.000**	203.24	6.31	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
02D	3283	Trib 03283 to Gallows Run

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
0.620	0.22	0.00	0.22	.0333	0.02063	.411	6.74	16.4	0.09	0.410	20.65	7.00
Q1-10 Flow												
0.620	0.14	0.00	0.14	.0333	0.02063	NA	NA	NA	0.07	0.507	20.95	7.00
Q30-10 Flow												
0.620	0.30	0.00	0.30	.0333	0.02063	NA	NA	NA	0.11	0.352	20.50	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
02D	3283	Trib 03283 to Gallows Run

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.620	Palisades HS ST	15.49	26	15.49	26	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.620	Palisades HS ST	1.83	13	1.83	13	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.62	Palisades HS ST	25	25	13	13	6	6	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
02D	3283	Trib 03283 to Gallows Run

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.620	0.022	20.652	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
6.735	0.411	16.403	0.092
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.00	0.864	1.69	0.736
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.951	23.176	Owens	6
Reach Travel Time (days)			
0.410			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.041	4.82	1.64	8.14
0.082	4.64	1.59	8.14
0.123	4.48	1.55	8.14
0.164	4.32	1.50	8.14
0.205	4.16	1.46	8.14
0.246	4.01	1.41	8.14
0.287	3.87	1.37	8.14
0.328	3.73	1.33	8.14
0.369	3.60	1.29	8.14
0.410	3.47	1.25	8.14

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
02D	3283	Trib 03283 to Gallows Run

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)
0.620	Palisades HS ST	PA0029530	0.022	CBOD5	25		
				NH3-N	13	26	
				Dissolved Oxygen			6

PTR

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

February 19, 2025

Crystal Hessler
Cowan Associates, Inc
120 Penn Am Drive
Quakertown, PA 18951

Re: Preliminary Effluent Limitations
Palisades School District – PA0029530
Nockamixon Township, Bucks County

Dear Ms. Hessler:

In response to your email request dated December 16, 2024, the Department of Environmental Protection (DEP) has developed preliminary effluent limits (PELs) for a discharge of 0.0215 MGD GPD of treated wastewater from Palisades Sr High School, located in Nockamixon Township, Bucks County, to Unnamed Tributary of Gallows Run (CWF, MF). It is in the watershed 2D – Three Mile Run which is classified as Special Protection Waters (SPW) of Delaware River. Any changes in the size or location of the discharge will require a reevaluation. The PELs are as follows:

Parameter	Concentration (mg/l)		
	Monthly Average	Weekly Average	Instantaneous Maximum
CBOD5 (May 1 – Oct 31)	10		20
CBOD5 (Nov 1 – Apr 30)	20		40
Total Suspended Solids	10		20
Ammonia-Nitrogen (May 1- Oct 31)	1.5		3.0
Ammonia-Nitrogen (Nov 1- Apr 30)	4.5		9.0
E-coli	Report only		
Fecal Coliform (CFU/100 ml)	50 Geo Mean		1,000
Dissolved Oxygen	Minimum of 6.0 at all times		
Total Residual Chlorine*	0.5		1.2
pH	Within the range of 6 to 9 standard units at all times		
Total Nitrogen	10		20
Total Phosphorus	2.0		4.0

* We recommend disinfection be Ultraviolet or other equivalent disinfection process that results in no harm to aquatic life, does not produce chemical residuals and results in effective bacterial and viral destruction.

Southeast Regional Office
2 E Main Street | Norristown, PA 19401 | 484.250.5970 | Fax 484.250.5971
www.dep.pa.gov

Ms. Crystal Hessler - 2 -

Issuance of these limits does not represent approval for a discharge to the waters of the Commonwealth. This information is provided as an aide in evaluating alternative wastewater disposal methods. The final limits may differ from these limits as a result of thorough review of the permit application.

To meet the requirements of the Sewage Facilities Act, the proposed facility must be included in the municipality's Official Sewage Plan that is approved by DEP. For private projects, this may be done through the submission of sewage planning module components that are adopted by the municipality as a revision to the Official Plan. If you have not already done so, please initiate the sewage planning process by contacting Ms. Elizabeth Mahoney at emahoney@pa.gov.

When the municipality has a DEP-approved Official Plan that addresses this project, permit applications may be submitted. An NPDES permit application must be filed with DEP at least 180 days before you propose to commence the discharge of treated wastewater. A Water Quality Management (WQM) permit must be obtained from DEP prior to starting construction of the proposed facilities. Permit applications can be obtained by contacting this office or by visiting DEP's website at www.elibrary.dep.state.pa.us.

If you have any questions, please contact Vasantha Palakurti at 484.250.5198 or email at vpalakurti@pa.gov.

Sincerely,

Pravin Patel
Pravin C. Patel, P.E.
Environmental Engineer Manager
Clean Water Program

cc: Operations Section
Palisades School District
Planning Section
File