Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0044709**
Facility Type	**Non-Municipal**	APS ID	**857053**
Major / Minor	**Minor**	Authorization ID	**1441140**

Applicant and Facility Information

Applicant Name	**Perlman Operating LLC, d.b.a. B'nai B'rith Perlman Camp**	Facility Name	**B'nai B'rith Perlman Camp WWTP**
Applicant Address	11820 Parklawn Drive, Suite 402 Rockville, MD 20852-2556	Facility Address	661 Rose Hill Road Lake Como, PA 18437-1011
Applicant Contact	Rachel Levine, Director	Facility Contact	Brian Warring, Caretaker
Applicant Phone	(301) 231-5300	Facility Phone	(570) 635-9250
Client ID	315776	Site ID	271806
Ch 94 Load Status	Not Overloaded	Municipality	Buckingham Township
Connection Status	-	County	Wayne
Date Application Received	May 15, 2023	EPA Waived?	Yes
Date Application Accepted	May 30, 2023	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 0.048 MGD of treated sewage into Shehawken Creek, a High Quality, Cold-Water Fishery, Migratory Fish (HQ-CWF, MF) receiving stream in State Water Plan Basin 1-A (Shehawken – Rattlesnake 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.

The facility is a seasonal summer youth camp that operates during the months of June, July, and August.

Limitations for pH, $CBOD_5$, Total Suspended Solids (TSS), and Fecal Coliform are technology-based and carried over from the previous permit.

Limitations for Dissolved Oxygen (DO) and Ammonia-Nitrogen are water quality-based and carried over from the previous permit.

WQM 7.0 modeling did not recommend stricter limits.

The Total Residual Chlorine (TRC) Calculation Spreadsheet did not recommend stricter limitations than the previous permit. The IMAX technology-based limitation (1.6 mg/L) has been maintained in the permit and is to be sampled "daily when discharging" in the event the facility uses chlorine for cleaning purposes or as a back-up disinfection option, (see requirements under Part C.I.E).

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	September 24, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	9-30-24

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Summary of Review

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 annual monitoring and reporting for Total Nitrogen, Total Phosphorous, Total Kjeldahl Nitrogen, and Nitrate-Nitrite as N has been maintained in this permit.

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 Outfall 001 coordinates provided in the renewal application are along Shehawken Creek. These coordinates are over half a mile from the wastewater treatment plant (WWTP). The permittee was asked to confirm these coordinates were accurate. The permittee's consultant provided information to show that the WWTP discharges to a pipe that runs along Rose Hill Road to Shehawken Creek. Pictures of the outfall location in the creek were also provided. Effluent samples are taken after the UV Disinfection System at the plant. The location of the outfall pipe at the creek is not suitable for foot traffic on a regular basis.

There are no representative stream gages in the vicinity of the outfall. USGS StreamStats was used to model the flow. River Mile Index (RMI) values were obtained using the Department's eMapPA, drainage areas were delineated using USGS's StreamStats interactive map, and elevations were obtained using the elevation profile tool on StreamStats. Modeling can be seen starting on page 6 of this fact sheet.

The existing permit expired on January 31, 2024 and the application for renewal was received on time.

A Water Management System Inspection query indicated that on September 12, 2024 a Compliance Evaluation was performed.

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

1. 06/21/2024 - Violation ID 8192765 – Violation Code B5A – Failure of a public water system to obtain a permit. (Safe Drinking Water - Program Specific ID: 2640455).

2. 06/21/2024 - Violation ID 8192766 – Violation Code B6A – Other violations deemed to be significant deficiencies. (Safe Drinking Water - Program Specific ID: 2640455).

Sludge use and disposal description and location(s): As provided by the permittee, sludge is hauled to the Endicott Wastewater Treatment Plant in Endicott, NY by Septic Surgeons.

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.

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Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.048
Latitude	41º 53' 27.14"	Longitude	-75º 20' 9.27"
Quad Name	Hancock	Quad Code	0343
Wastewater Description:	Sewage Effluent		
Receiving Waters	Shehawken Creek (HQ-CWF)	Stream Code	6596
NHD Com ID	25862230	RMI	4.79
Drainage Area	6.7 mi^2	Yield (cfs/mi^2)	0.039
Q_{7-10} Flow (cfs)	0.26	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1,316.19	Slope (ft/ft)	-
Watershed No.	1-A	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)	~ 154

Treatment Facility Summary

Treatment Facility Name: B'nai B'rith Perlman Camp WWTP

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Single Basin Activated Sludge SBR	Ultraviolet	0.016 (2021-2022)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.048	96	Not Overloaded	Holding Tank	Hauled

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Compliance History

DMR Data for Outfall 001 (from August 1, 2023 to July 31, 2024)

Parameter	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23
Flow (MGD) Average Monthly	0.022847	0.009591										0.012225
Flow (MGD) Daily Maximum	0.032948	0.02921										0.03683
pH (S.U.) Instantaneous Minimum	8.25	8.17										8.31
pH (S.U.) Instantaneous Maximum	8.35	8.25										8.39
DO (mg/L) Instantaneous Minimum	8.51	8.54										8.73
TRC (mg/L) Instantaneous Maximum	GG	GG										GG
CBOD5 (mg/L) Average Monthly	18.0	< 3.0										7.0
TSS (mg/L) Average Monthly	16.0	< 5.0										< 5.0
Fecal Coliform (No./100 ml) Geometric Mean	172.0	< 9.0										6.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	800.0	20.0										8.0
Nitrate-Nitrite (mg/L) Annual Average								< 31.78				
Total Nitrogen (mg/L) Annual Average								32.53				
Ammonia (mg/L) Average Monthly	4.34	< 1.0										< 1.0
TKN (mg/L) Annual Average								< 0.70				
Total Phosphorus (mg/L) Annual Average								4.36				

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Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.048
Latitude 41º 53' 27.75" **Longitude** -75º 20' 9.48"
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	1.6	IMAX	-	92a.48(b)(2)
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 and Permits
Ammonia-Nitrogen	5.0	Average Monthly	
May 1 – Oct 31	10.0	IMAX	
Ammonia-Nitrogen	15.0	Average Monthly	
Nov 1 - Apr 30	30.0	IMAX	
Nitrate-Nitrite as N	Report	Annual Average	
Total Nitrogen	Report	Annual Average	
Total Kjeldahl Nitrogen	Report	Annual Average	
Total Phosphorus	Report	Annual Average	

Anti-Backsliding

No limitations were made less stringent.

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Modeling Using USGS StreamStats:

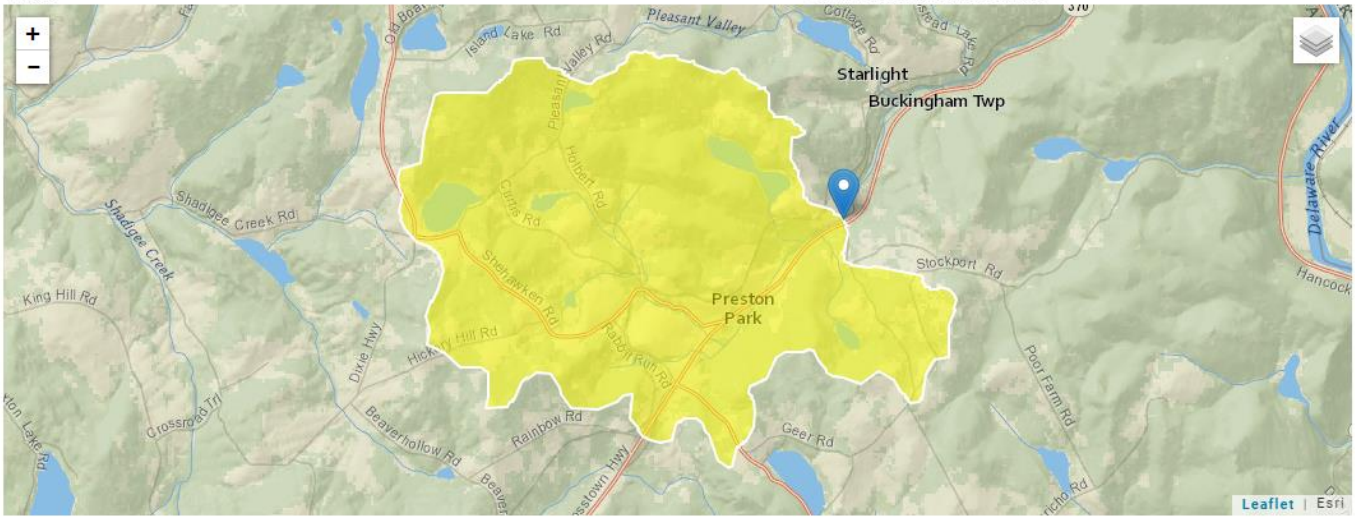
At Outfall 001 on Shehawken Creek:

RMI	Elevation (ft)	Drainage Area (mi^2)	Q_{7-10} Flow (cfs)
4.79	1,316.9	6.7	0.26

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{0.26\ ft^3/sec}{6.7\ mi^2} = \mathbf{0.039}\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240924124743203000
Clicked Point (Latitude, Longitude):	41.89094, -75.33578
Time:	2024-09-24 08:48:04 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	6.7	square miles

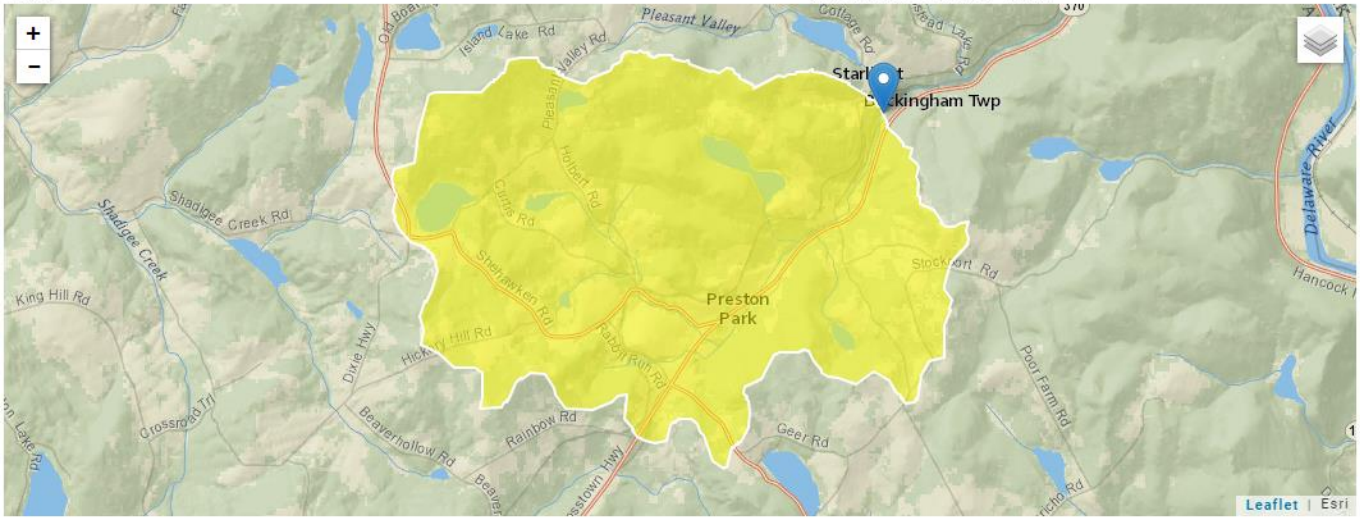
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.717	ft^3/s
30 Day 2 Year Low Flow	1.03	ft^3/s
7 Day 10 Year Low Flow	0.26	ft^3/s

At confluence with Unnamed Tributary to Shehawken Creek (6609):

RMI	Elevation (ft)	Drainage Area (mi^2)
3.937	1,237.06	7.77

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240924125348005000
Clicked Point (Latitude, Longitude):	41.90153, -75.32990
Time:	2024-09-24 08:54:10 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	7.77	square miles

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01A	6596	SHEHAWKEN 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)
4.790	Perlman	PA0044709	0.048	CBOD5	25		
				NH3-N	10.42	20.84	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.26	= Q stream (cfs)	0.5	= CV Daily
0.048	= 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 = 1.136	1.3.2.iii	WLA cfc = 1.100
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.423	5.1d	LTA_cfc = 0.639

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

WQM 7.0.pdf

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Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	September 24, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	9-30-24