Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0043362**
Facility Type	**Non-Municipal**	APS ID	**580656**
Major / Minor	**Minor**	Authorization ID	**1443564**

Applicant and Facility Information

Applicant Name	**Union Lake Hotel, t/a Camps Equinunk and Blue Ridge**	Facility Name	**Camps Equinunk and Blue Ridge**
Applicant Address	P.O. Box 808 East Hampton, NY 11937-0811	Facility Address	788 Legends Path Equinunk, PA 18417-3266
Applicant Contact	Adam K. Baker, Owner/Director	Facility Contact	Jeff White, Caretaker
Applicant Phone	(570) 224-4121	Facility Phone	(570) 224-4121
Client ID	4535	Site ID	261198
Ch 94 Load Status	Not Overloaded	Municipality	Manchester Township
Connection Status	-	County	Wayne
Date Application Received	June 6, 2023	EPA Waived?	Yes
Date Application Accepted	June 14, 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 0.06 MGD of treated sewage into an Unnamed Tributary to Little Equinunk 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 facilities are seasonal summer youth camps that operate during the months of June, July, and August. Occasionally, there are a few employees or small groups in September.

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

Limitations for $CBOD_5$ and Dissolved Oxygen (DO) are water quality-based and carried over from the previous permit.

WQM modeling recommended stricter summertime limitations for Ammonia-Nitrogen (2.1 mg/L monthly average, 4.2 mg/L IMAX). Wintertime monitoring/reporting for Ammonia-Nitrogen has also been updated to three times the new summertime limitations (6.3 mg/L monthly average, 12.6 mg/L IMAX). These limitations will come into effect three (3) years after the permit effective date (see Part A.I.B). The limitations for Ammonia-Nitrogen from the previously issued permit will be in effect the first three (3) years of the permit.

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	September 25, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	9-30-24

Summary of Review

The Total Residual Chlorine (TRC) Calculation Spreadsheet recommended a stricter limitation than the previous permit. The IMAX water quality-based limitation (0.18 mg/L) 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).

The annual monitoring and reporting for Total Phosphorus and Total Nitrogen has been maintained.

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 previous permit contained annual monitoring/reporting for Total Copper. The monitoring/reporting has been maintained for this permit due to another higher concentration being reported on the application.

The latest DRBC Docket No. D-2012-018-3 requires the addition of monthly monitoring and reporting for 85% minimum CBOD5 percent removal. The 1,000 mg/L average quarterly limitation for Total Dissolved Solids (TDS) and the monitoring/reporting for Nitrate + Nitrite as, Total Kjeldahl Nitrogen, Total Phosphorus, Total Nitrogen, and influent CBOD5 have also all been maintained.

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).

There are no representative stream gages in the vicinity of the outfall that reflect the conditions of the receiving stream and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values. Therefore, the default Low Flow Yield (LFY) of 0.1 cfs/mi^2 was used to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

The existing permit expired on December 31, 2023 and the application for renewal was received on time.

A Water Management System Inspection query indicated that on August 12, 2022 a Compliance Evaluation was performed.

There are currently no open violations for this client that warrant withholding issuance of this permit.

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application and information provided by the permittee's consultant, sludge is hauled to the Village of Owego in Owego, NY by Hallstead Sanitary Service.

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)	0.06
Latitude	41º 48' 44.24"	Longitude	-75º 11' 43.16"
Quad Name	Hancock	Quad Code	0343
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary of Little Equinunk Creek (HQ-CWF)	Stream Code	6419
NHD Com ID	25868498	RMI	1.16
Drainage Area	0.29 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.029	Q_{7-10} Basis	State-wide default
Elevation (ft)	1,424.63	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)	~ 136

Treatment Facility Summary

Treatment Facility Name: Camps Equinunk and Blue Ridge

WQM Permit No.	Issuance Date
6415404	8/4/2015

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Aeration	Ultraviolet (UV) Light	0.032 (2020-2022)

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

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	0.0417	0.00996										0.0335
Flow (MGD) Daily Maximum	0.0676	0.0924										0.0669
pH (S.U.) Instantaneous Minimum	6.0	6.5										7.04
pH (S.U.) Instantaneous Maximum	8.1	8.2										8.76
DO (mg/L) Instantaneous Minimum	5.15	7.22										7.19
TRC (mg/L) Instantaneous Maximum	GG	GG										GG
CBOD5 (mg/L) Average Monthly	11.0	18.0										9.0
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	367	394.0										346
TSS (mg/L) Average Monthly	17	22.0										< 8.0
Total Dissolved Solids (mg/L) Average Quarterly		558.0									606.75	
Fecal Coliform (CFU/100 ml) Geometric Mean	87	259.0										< 12
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	132	800.0										< 36
Nitrate-Nitrite (mg/L) Average Monthly	46.43	39.61										57.75
Total Nitrogen (mg/L) Annual Average								47.65				

Total Nitrogen (mg/L) Average Monthly	51.5	5.37										57.9
Ammonia (mg/L) Average Monthly	1.31	< 11.0										< 1.0
TKN (mg/L) Average Monthly	< 4	14.09										< 0.1
Total Phosphorus (mg/L) Annual Average								4.94				
Total Phosphorus (mg/L) Average Monthly	4.12	5.25										6.16
Total Copper (mg/L) Annual Average								0.0111				

Compliance History

Effluent Violations for Outfall 001, from: September 1, 2023 To: July 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
DO	07/31/24	Inst Min	5.15	mg/L	7.0	mg/L
CBOD5	07/31/24	Avg Mo	11.0	mg/L	10.0	mg/L
CBOD5	06/30/24	Avg Mo	18.0	mg/L	10.0	mg/L
Fecal Coliform	06/30/24	Geo Mean	259.0	CFU/100 ml	200	CFU/100 ml
Ammonia	06/30/24	Avg Mo	< 11.0	mg/L	2.4	mg/L

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.06
Latitude 41º 48' 45.00" **Longitude** -75º 11' 43.00"
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
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)
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/ Permits
Total Residual Chlorine	0.18	IMAX	TRC Spreadsheet
$CBOD_5$	10.0	Average Monthly	Previous Modeling/ Permits
	20.0	IMAX	
Ammonia-Nitrogen May 1 – Oct 31	2.1	Average Monthly	WQM 7.0
	4.2	IMAX	
Ammonia-Nitrogen Nov 1 - Apr 30	6.3	Average Monthly	
	12.6	IMAX	
CBOD5 Minimum % Removal (%)	85	Minimum Monthly Average	DRBC Docket No. D-2012-018-3
Total Dissolved Solids	1,000	Average Quarterly	Previous DRBC Docket
Total Copper	Report	Annual Average	Previous Modeling/Permits and BPJ
Nitrate-Nitrite as N	Report	Average Monthly	Previous DRBC Docket
Total Kjeldahl Nitrogen	Report	Average Monthly	
Total Nitrogen	Report	Average Monthly Annual Average	
Total Phosphorus	Report	Average Monthly Annual Average	

Anti-Backsliding

No limitations were made less stringent.

Modeling Using USGS StreamStats:

At Outfall 001 on Unnamed Tributary to Little Equinunk Creek::

RMI	Elevation (ft)	Drainage Area (mi^2)	$Q_{7\text{-}10}$ Flow (cfs)
1.16	1,424.63	0.29	0.00309

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{0.00309\ ft^3/sec}{0.29\ mi^2} = \mathbf{0.01017}\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240924175126514000
Clicked Point (Latitude, Longitude):	41.81224, -75.19534
Time:	2024-09-24 13:51:53 -0400

Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	0.29	square miles

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0132	ft^3/s
30 Day 2 Year Low Flow	0.0214	ft^3/s
7 Day 10 Year Low Flow	0.00309	ft^3/s

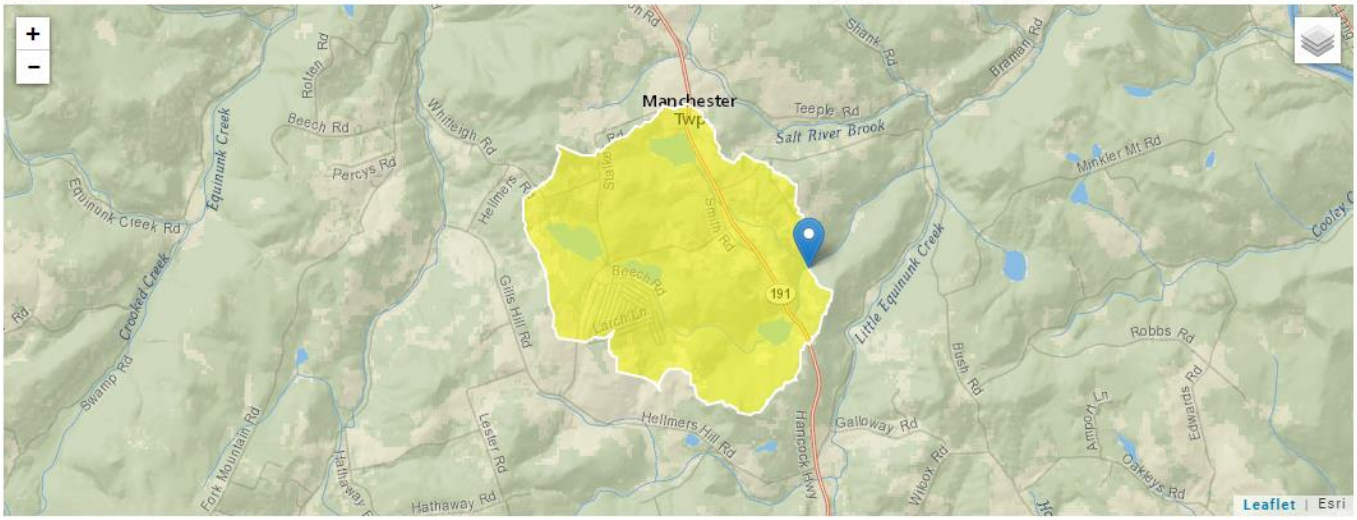
One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

At confluence with Unnamed Tributary to Little Equinunk Creek (6418):

RMI	Elevation (ft)	Drainage Area (mi^2)
0.0 (1.21 on Unnamed Tributary 6148)	1,234.2	2.96

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240924175827895000
Clicked Point (Latitude, Longitude):	41.80177, -75.18019
Time:	2024-09-24 13:58:52 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	2.96	square miles

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01A	6419	Trib 06419 of Little Equinunk 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)
1.160	Camp Equinunk	PA0043362	0.060	CBOD5	25		
				NH3-N	2.12	4.24	
				Dissolved Oxygen			4

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.029	= Q stream (cfs)	0.5	= CV Daily
0.06	= 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 =	0.119	1.3.2.iii	WLA cfc =	0.108
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	0.044	5.1d	LTA_cfc =	0.063

Source		Effluent Limit Calculations		
PENTOXSD TRG	5.1f	AML MULT =	1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.054	AFC
		INST MAX LIMIT (mg/l) =	0.178	

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

DRBC Docket 2012-018-3.pdf

Pennsylvania
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Environmental Protection

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	September 25, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	9-30-24