pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

North East Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0061301**
Facility Type	**Non-Municipal**	APS ID	**624759**
Major / Minor	**Minor**	Authorization ID	**1134803**

Applicant and Facility Information

Applicant Name	**Inn at Starlight Lake**	Facility Name	**Inn at Starlight Lake**
Applicant Address	289 Starlight Lake Road	Facility Address	289 Starlight Lake Road
	Starlight, PA 18461-1035		Starlight, PA 18461-1035
Applicant Contact	Sari Schwartz	Facility Contact	Sari Schwartz
Applicant Phone	(570) 798-2519	Facility Phone	(570) 798-2519
Client ID	240195	Site ID	271799
Ch 94 Load Status	-	Municipality	Buckingham Township
Connection Status	-	County	Wayne
Date Application Received	March 30, 2016	EPA Waived?	Yes
Date Application Accepted	June 23, 2016	If No, Reason	-

Purpose of Application: Renewal of an existing NPDES permit to discharge treated sewage.

Summary of Review

A draft permit was issued in May 2017 for this facility. Issuance of the final permit was on hold due to open violations for the client. The permit is being re-drafted using the latest revised template. A few minor changes were made to this draft permit, including the TRC minimum monitoring frequency and inclusion of a Part C condition for UV system monitoring (see discussion below).

The applicant is requesting renewal of their NPDES permit to discharge up to 0.004 MGD (4,000 gpd) of treated sewage to an unnamed tributary to Shehawken Creek (stream code 6605), a HQ-CWF/MF receiving stream in state water plan basin 01-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. The Pennsylvania Fish and Boat Commission classifies Shehawken Creek as a stream section that supports natural reproduction of trout (from the headwaters downstream to the mouth).

The point of first use was previously determined to be at the confluence of the tributary with Shehawken Creek (see 1985 Modeling attachment). As per a more recent 2011 lake survey, the point of first use was changed to the WWTP outfall.

Limits for pH, $CBOD_5$, TSS and Fecal Coliform are technology-based and carried over from the previous permit. Previous modeling utilized data from a stream gage on Shehawken Creek near Starlight. Data is no longer available from that gage and there's no other nearby stream gages to develop a representative low flow yield (LFY). Therefore, the previously calculated LFY (0.017 cfs/mi^2) was used for modeling during this renewal. WQM modeling results (attached) indicated no need for more stringent $CBOD_5$ limitations for both the salmonid early life stages (October 1 through May 31) and the remaining summer months.

Approve	Deny	Signatures	Date
X		Brian Burden, E.I.T. / Project Manager	March 4, 2024
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Acting Environmental Engineer Manager	3-7-24

Summary of Review

WQM modeling results indicated that an average monthly NH_3-N limit of 16.0 mg/L is required for the summer months. The permittee will be required to meet the summertime limits one year after the permit effective date. Monitor and reporting requirements are added to the permit for the winter months. The parameter is to be sampled for 2/month.

The 1.2 mg/L monthly average and 2.8 mg/L IMAX limitations for Total Residual Chlorine (TRC) in the previously issued permit were technology-based limitations. As per PA Code 92a.47(a)(8) (which refers to PA Code 92a.48(b)(2)), a monthly average TRC facility-specific BAT effluent limit of 0.5 mg/L and an IMAX limit of 1.1 mg/L is applied to this permit renewal. The TRC Calculation Spreadsheet (attached) did not recommend more stringent water quality-based limitations. The permittee will be required to meet the new technology-based limits starting one year after the effective date of the permit. WQM permit application 6402401 is currently under DEP review for the installation of an ultraviolet disinfection system at the WWTP. The minimum monitoring frequency for TRC is updated to "daily when discharging". Effluent shall be monitored for TRC concentrations any day the permittee utilizes chlorine for disinfection, cleaning, or other purposes.

Monitoring frequencies for all parameters with limitations are now consistent with the recommended frequencies found in Table 6-3 of the Department's Technical Guidance for the Development and Specification of Effluent Limitations.

Quarterly monitoring and reporting requirements for Total Phosphorus and Total Nitrogen are added to the permit to monitor nutrient loadings. Quarterly monitoring and reporting requirements for Total Kjeldahl Nitrogen and Nitrate+Nitrite-Nitrogen are added to the permit to calculate Total Nitrogen. Annual monitoring/reporting requirements for E. Coli are added to the permit in accordance with current guidance.

The permit was updated using the latest revised template from August 2021. Part C conditions from the 1st draft permit are carried over in this 2nd draft permit. Requirements for monitoring UV functionality are added to Part C.


1985 Modeling.pdf


WQM Modeling.pdf


TRC Calculation.pdf


Watershed Information.pdf

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.004
Latitude	41º 54' 22.47"	Longitude	-75º 19' 56.73"
Quad Name	Hancock	Quad Code	0343
Wastewater Description:	Sewage Effluent		

Receiving Waters	Unnamed Tributary to Shehawken Creek	Stream Code	6605
NHD Com ID	25862008	RMI	0.1
Drainage Area	2.12 mi^2	Yield (cfs/mi^2)	0.017
Q_{7-10} Flow (cfs)	0.036	Q_{7-10} Basis	Shehawken Creek stream gage (no longer in use)
Elevation (ft)	1355	Slope (ft/ft)	0.065
Watershed No.	1-A	Chapter 93 Class.	HQ-CWF/MF
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	Easton Area Water System		
PWS Waters	Delaware River	Flow at Intake (cfs)	464 (based on 0.1 Yield)
PWS RMI	~110	Distance from Outfall (mi)	~155

Treatment Facility Summary

Treatment Facility Name: Inn at Starlight Lake

WQM Permit No.	Issuance Date
6485402	9/17/1985
6488405	9/16/1988

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Aeration	Chlorine Contact (as of draft permit issuance)	0.004

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.004	14	Not Overloaded	Settled	Hauled Away

Comments: The organic capacity is based on the 0.0035 lb/gal estimate from the design engineer's report of the original WQM permit application (6485402).

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.004
Latitude 41º 54' 22.47" **Longitude** -75º 19' 56.73"
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)
	50.0	IMAX	-	-
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	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)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)
	1.1	IMAX	-	-

Water Quality-Based Limitations

Pollutant	Limit (mg/l)	SBC	Model / Basis
NH_3-N* (5/1 – 10/31)	16.0	Average Monthly	WQM 7.0
	32.0	IMAX	

* summertime limitations begin one year after permit effective date