

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

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0061204
 APS ID 797238
 Authorization ID 1446840

Applicant and Facility Information

Applicant Name	<u>Aqua Pennsylvania Wastewater, Inc.</u>	Facility Name	<u>Lake Harmony WWTP</u>
Applicant Address	<u>762 W. Lancaster Ave.</u> <u>Bryn Mawr, PA 19010</u>	Facility Address	<u>123 Cross Hill Road</u> <u>Lake Harmony, PA 18624</u>
Applicant Contact	<u>Todd Duerr</u>	Facility Contact	<u>Robert Soltis</u>
Applicant Phone	<u>(610) 645-1122</u>	Facility Phone	<u>(570) 443-7099</u>
Client ID	<u>62614</u>	Site ID	<u>1801</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Kidder Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Carbon</u>
Date Application Received	<u>July 5, 2023</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>July 5, 2023</u>	If No, Reason	<u>-</u>
Purpose of Application	<u>Renewal of NPDES permit.</u>		

Summary of Review


The applicant is requesting renewal of an NPDES permit to discharge up to 0.4 MGD of treated sewage to Shingle Mill Run, a HQ-CWF/MF (High Quality-Cold Water Fishes / Migratory Fish) designated receiving stream in State Water Plan Basin 2-A (Upper Lehigh River). Per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than the designated use. The discharge is not expected to affect public water supplies. Effluent is also pumped to the Split Rock Golf Course for irrigation via 8" force main.

The CBOD5, Dissolved Oxygen, and Total Phosphorus limits are water quality-based and carried over from the previous permit. The technology-based pH and Fecal Coliform limits as well as the BPJ/technology-based blended limits for TSS are carried over from the previous permit.

WQM 7.0 was run to ensure compliance with the updated Ammonia-N Chapter 93 criteria. Slightly more stringent summertime limitations were recommended and will come into effect upon permit issuance. The standard 2x multiplier was used to calculate new IMAX Ammonia-N limitations and the standard 3x multiplier was used to calculate the new wintertime limitations. eDMR results for Ammonia-N indicate the permittee can meet the updated limitations. WQM 7.0 didn't recommend more stringent limitations for Dissolved Oxygen or CBOD₅.

UV is the primary means of disinfection and chlorine is used for emergency backup. The TRC calculation spreadsheet recommended slightly more stringent monthly average limitations that will come into effect upon permit issuance. Note: the stream and discharge chlorine demand values from previous modeling were utilized for the spreadsheet. TRC must be sampled for "daily when discharging" (days when chlorine is used for disinfection, cleaning, or other purposes).

The permit renewal application included analytical requirements for several parameters the permittee doesn't routinely sample for. DEP's Toxics Management Spreadsheet modeled the results and recommended effluent limitations for Total Copper (0.012 mg/L monthly average, 0.018 IMAX). Since it appears the limitations cannot be met upon permit issuance,

Approve	Deny	Signatures	Date
X		 Brian Burden, E.I.T. / Project Manager	March 8, 2024
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Program Manager	3-11-24

Summary of Review

they will come into effect three years after the permit effective date. Monitoring/reporting requirements for Total Copper are included in the permit until the limitations come into effect. Part C.II is added to the permit that includes a compliance schedule for meeting the final limitations and requirements to complete a Toxics Reduction Evaluation (TRE) for Total Copper. The permittee may also choose to conduct site-specific studies to update the TMS modeling inputs in an effort to adjust the new limitations. Since it's suspected the older piping at the facility may be the cause of elevated copper in the effluent, the requirement to complete a corrosion control feasibility study is added to Part C.IV of the permit.

The analytical result for Total Lead was non-detect, however, the quantitation limitation (QL) utilized by the laboratory (3 µg/L) did not meet DEP's target QL of 1 µg/L and limitations were recommended (0.004 mg/L monthly average, 0.010 mg/L IMAX). The permittee may conduct additional sampling for Total Lead at the target QL in an effort to remove the Total Lead limitations from the final permit. Three additional samples taken at least one week apart is requested to remodel the discharge. Note: References to Total Lead are removed from the template Part C conditions for the TRE and corrosion control feasibility study since it appears the permittee can meet the Total Lead limitations.

The TMS also recommended monitoring/reporting for Total Zinc. Zinc must be sampled for 1/quarter.

The latest DRBC docket, D-2002-006 CP-4, includes the requirements below which are incorporated into this renewal:

EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES Permit

OUTFALL 001 (Discharging to Shingle Mill Run)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	1,000 mg/l *	Quarterly
CBOD ₅ (at 20° C) Influent	Monitor & Report	Monthly, paired with CBOD ₅ effluent monitoring sample
CBOD ₅ (at 20° C)	Report Percent Removal	Monthly

Quarterly monitoring/reporting requirements for Total Nitrogen, Total Kjeldahl Nitrogen, and Nitrate-Nitrite as N are carried over from the previous renewal. Quarterly monitoring/reporting for E. Coli is added to the permit as per current guidance.

A TMDL (Total Maximum Daily Load) for the Lehigh River Watershed was approved by EPA on July 7, 2009. The TMDL addresses metals (iron, manganese and aluminum) and depressed pH associated with acid mine drainage (AMD). Waste load allocations (WLAs) are assigned to mining discharges and two industrial discharges, and load allocations/reductions are assigned to non-point sources of pollution from abandoned mines. Per the SOP for Establishing Effluent Limitations for Individual Sewage Permits, for renewals, if there are WLAs that are specific to the discharge then consistent effluent limits should be established in the permit. There are no WLAs for this facility. Since this is a sewage discharge with no industrial contributors, no appreciable quantities of these metals are expected to be present in the effluent.

There are several open WPC NPDES violations for the client from another facility (Peddlers View WWTP) that may warrant withholding issuance of the final permit. The previously issued permit expired on December 31, 2023 and the renewal application was submitted July 5, 2023.

Sludge use and disposal description and location(s): The permit renewal application indicates 57.88 dry tons of sludge was hauled by Environmental Service Corporation to the Greater Hazleton Joint Sewer Authority WWTP in the previous year.



WQM Modeling.pdf



TMS PA0061204.pdf



TRC Calculation.pdf



Watershed Information.pdf



DRBC Docket.pdf

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*,

Summary of Review

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>0.4</u>
Latitude	<u>41° 4' 37"</u>	Longitude	<u>-75° 36' 49"</u>
Quad Name	<u>Blakeslee</u>	Quad Code	<u>1041</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Shingle Mill Run (HQ-CWF, MF)</u>	Stream Code	<u>4372</u>
NHD Com ID	<u>26283063</u>	RMI	<u>0.7</u>
Drainage Area	<u>0.94 mi²</u>	Yield (cfs/mi ²)	<u>0.19</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.1786</u>	Q ₇₋₁₀ Basis	<u>Gage 01447720</u>
Elevation (ft)	<u>1640</u>	Slope (ft/ft)	<u>0.034</u>
Watershed No.	<u>2-A</u>	Chapter 93 Class.	<u>HQ-CWF, MF</u>
Existing Use	<u>-</u>	Existing Use Qualifier	<u>-</u>
Exceptions to Use	<u>-</u>	Exceptions to Criteria	<u>-</u>
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	<u>-</u>		
Source(s) of Impairment	<u>-</u>		
TMDL Status	<u>Final</u>	Name	<u>Lehigh River TMDL</u>
Background/Ambient Data		Data Source	
pH (SU)	<u>-</u>		<u>-</u>
Temperature (°F)	<u>-</u>		<u>-</u>
Hardness (mg/L)	<u>-</u>		<u>-</u>
Other:	<u>-</u>		<u>-</u>
Nearest Downstream Public Water Supply Intake		<u>HCA Roan Filter Plant (as per SDW's NERO Surface Sources GIS map)</u>	
PWS Waters	<u>Lehigh River</u>	Flow at Intake (cfs)	<u>81.7 (using 430 mi² D.A. & 0.19 cfs/mi² LFY)</u>
PWS RMI	<u>63</u>	Distance from Outfall (mi)	<u>~27</u>

Other Comments: The facility was previously known as the Split Rock WWTF.

Treatment Facility Summary				
Treatment Facility Name: Lake Harmony WWTP				
WQM Permit No.		Issuance Date		
1301407-A1		8/15/2018		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Sequencing Batch Reactor	Ultraviolet	0.4
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.4	835	Not Overloaded	Holding Tank	Hauled

Changes Since Last Permit Issuance: WQM permit amendment 1301407-A1 was issued on August 15, 2018. The project includes: new headworks building, mechanical screen, flow metering, vortex grit removal system, triplex influent pump station with force main, SBR tank rehabilitation and new SBR tank, new post equalization tank, cloth disc filter, updated chemical feed equipment, additional lamp racks for the UV disinfection system, and a new standby generator.

Development of Effluent Limitations

Outfall No. 001	Design Flow (MGD) 0.4
Latitude 41° 4' 37"	Longitude -75° 36' 49"
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
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)

Water Quality-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Model
CBOD ₅	10.0	Average Monthly	Previous modeling
	20.0	IMAX	
Dissolved Oxygen	7.0	Instant. Minimum	Previous modeling
Total Residual Chlorine	0.09	Average Monthly	2024 TRC Calculation Spreadsheet
	0.2	IMAX	Previous modeling
Total Phosphorus	1.0	Average Monthly	Previous modeling
	2.0	IMAX	
Ammonia-N May 1 – Oct 31	2.0	Average Monthly	2024 WQM 7.0
	4.0	IMAX	
Ammonia-N Nov 1 – Apr 30	6.0	Average Monthly	
	12.0	IMAX	

Best Professional Judgment (BPJ) Limitations


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

Parameter	Limit (mg/l)	SBC	Basis
Total Suspended Solids	18.0	Average Monthly	BPJ
	36.0	IMAX	

Anti-Backsliding

No limitations were removed from the permit or made less stringent.

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