

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

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0061182
APS ID 610603
Authorization ID 1385788

Applicant and Facility Information

Applicant Name	<u>Blue Ridge Real Estate Company</u>	Facility Name	<u>Big Boulder WWTP</u>
Applicant Address	<u>PO Box 707</u> <u>Blakeslee, PA 18610</u>	Facility Address	<u>54 Round Pond Road</u> <u>Blakeslee, PA 18610</u>
Applicant Contact	<u>Bruce Beaty</u>	Facility Contact	<u>Ryan Detweiler</u>
Applicant Phone	<u>(570) 443-8433</u>	Facility Phone	<u>(570) 772-8314</u>
Client ID	<u>53226</u>	Site ID	<u>1761</u>
Ch 94 Load Status	<u>-</u>	Municipality	<u>Kidder Township</u>
Connection Status	<u>-</u>	County	<u>Carbon</u>
Date Application Received	<u>February 15, 2022</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>February 15, 2022</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 0.225 MGD of treated sewage to Tributary 4388 to Tunkhannock Creek, a high-quality cold water and migratory fish designated receiving stream (HQ-CWF, MF) in State Water Plan watershed 02-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. WQM permit 308404 (issued 7/20/2011) expanded the treatment capacity of the WWTP from 0.225 MGD to 0.265 MGD. The WWTP is to discharge the first 0.04 MGD to absorption beds and the rest through Outfall 001.

As in the previous permit renewal, recent data from stream gage 01447720 (Tobyhanna Creek near Blakeslee, PA) was used to generate the Q₇₋₁₀ and low flow yield to model the discharge. Drainage areas, RMLs and elevations have been updated slightly using USGS StreamStats and DEP's eMapPA (see attached).

WQM 7.0 modeling did not recommend more stringent limitations for Ammonia-N, D.O., or CBOD₅. The TRC calculation spreadsheet recommended slightly more stringent limitations for TRC that will come into effect one year after the permit effective date. eDMR results indicate the permittee can meet the updated limitations. Two updated modeling inputs lowered the recommended TRC limitations when compared to the modeling performed during the previous renewal. The drainage area at Outfall 001 went from 2.09 mi² to 1.97 mi² and is derived using the delineation feature of USGS StreamStats. The delineation point chosen in StreamStats matches the location shown on the topographic map submitted with the permit application. The number of samples to be taken went from 4/month to 30/month and is based on the fact that the facility utilizes chlorine for primary disinfection. WQM permit No. 1308404 approved the installation of an ultraviolet radiation disinfection system, but the system is not currently utilized.

The Toxics Management Spreadsheet recommended monitoring/reporting for Total Copper and Total Zinc. Quarterly monitoring/reporting is included in the permit for those metals.

Approve	Deny	Signatures	Date
X		<i>Brian Burden</i> Brian Burden, E.I.T. / Project Manager	December 12, 2022
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	12-13-22

Summary of Review

Fecal Coliform, pH, TSS, Total Dissolved Solids and Total Phosphorus limitations are carried over from the previous permit. Monthly monitoring/reporting requirements for Total Nitrogen (TKN + NO₂ + NO₃-N) are carried over from the previous renewal. Monitoring/reporting for TKN is added to the Part A table and monitoring/reporting for NO₃-N is replaced with monitoring/reporting for NO₂+NO₃-N. As per DEP guidance, quarterly monitoring/reporting is added to the permit for E.Coli. The minimum monitoring frequency for all parameters with limitations are consistent with Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (doc. No. 362-0400-001) with the exception of the DRBC parameter TDS. The minimum monitoring frequency for Dissolved Oxygen is updated from 1/week to 1/day.

DRBC Docket D-1985-025-4 did not include any additional limitations or monitoring requirements at Outfall 001.

Tributary 4388 to Tunkhannock Creek is subject to the Lehigh River Watershed TMDL (dated March 27, 2009) for AMD. Annual monitoring/reporting requirements for the metals of concern (Aluminum, Iron & Manganese) are included in this renewal.

All non-template Part C Special Conditions from the previously issued permit are included in this permit:

III. WATER QUALITY MANAGEMENT PERMIT NO. 1308404 SPECIAL CONDITIONS

A. Groundwater monitoring shall be conducted in accordance with the hydrogeologic monitoring and sampling plan previously submitted. The sampling and reporting shall be semi-annual. The following samples/measurements will be taken: Field water levels, Field pH, Conductivity, Total Coliforms, Fecal Coliforms, Chlorides, Nitrogen (nitrate), Total N, TSS, and Nitrogen (nitrite). All analytical results will be forwarded to the Department at the following address:

*Department of Environmental Protection
Clean Water Management Program
2 Public Square
Wilkes-Barre, PA 18701-1915.*

B. This facility has an NPDES Permit to discharge 225,000 gallons per day (gpd) of treated wastewater to an Unnamed Tributary to Tunkhannock Creek. The facility currently discharges 20,000 gpd to Absorption Areas 1 and 2 and any wastewater in excess of 20,000 gpd is discharged to the stream. Absorption Area 3 consisting of six (6) at-grade beds shall receive an additional 20,020 gpd limiting the wastewater to be stream discharged to that flow exceeding 40,020 gpd. Each of the six at-grade beds shall be dosed at 3,340 gpd.

C. The on-lot sewage disposal system shall be maintained and operated in accordance with the engineer's report and operation agreement submitted as part of a previous permit renewal application.

There are no open WPC NPDES violations for the client that would warrant withholding issuance of the final permit. The existing permit expires on 1/31/2023 and the renewal application was submitted in a timely manner.

Sludge use and disposal description and location(s): The permit application indicates 6.27 dry tons of sludge/biosolids were hauled to the Greater Hazleton Joint Sewer Authority WWTP via Environmental Service Corp. during the previous year.



WQM
Modeling.pdf



TRC Calculation.pdf
TMS PA0061182.pdf



StreamStats
Outfall 001.pdf



StreamStats
Tunkhannock Creek



DRBC Docket
1985-025-4.pdf



Lehigh River
TMDL.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*, 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>0.225</u>
Latitude	<u>41.04903°</u>	Longitude	<u>-75.57240°</u>
Quad Name	<u>Blakeslee</u>	Quad Code	<u>1041</u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Tributary 4388 to Tunkhannock Creek (HQ-CWF, MF)</u>	Stream Code	<u>4388</u>
NHD Com ID	<u>26282971</u>	RMI	<u>0.4</u>
Drainage Area	<u>1.97 mi²</u>	Yield (cfs/mi ²)	<u>0.25</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.49</u>	Q ₇₋₁₀ Basis	<u>Gage 01447720</u>
Elevation (ft)	<u>1687</u>	Slope (ft/ft)	<u>0.019</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</u>		
PWS Waters	<u>Lehigh River</u>	Flow at Intake (cfs)	<u>107.5 (using same LFY)</u>
PWS RMI	<u>63</u>	Distance from Outfall (mi)	<u>~30</u>

Other Comments: The latitude/longitude provided in the permit application for Outfall 001 doesn't match the discharge location shown on the topographic map. The location shown on the topographic map was used for modeling purposes.

Treatment Facility Summary				
Treatment Facility Name: Big Boulder WWTP				
WQM Permit No.		Issuance Date		
1308404		7/20/2011		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended aeration with solids removal	Sodium Hypochlorite	0.265
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.265	551	Not Overloaded	Holding Tank	Hauled to GHJSA

Changes Since Last Permit Issuance: Both the permit application and most recent inspection report do not list UV disinfection as a process utilized at the WWTP. eDMR results show a constant chlorine residual. The WWTP does not currently utilize UV disinfection.

Development of Effluent Limitations

Outfall No. 001
 Latitude 41.04903°
 Wastewater Description: Sewage Effluent

Design Flow (MGD) 0.225
 Longitude -75.57240°

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)
	40.0	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	50.0	IMAX	-	-
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0	Average Weekly	133.102(b)(2)	92a.47(a)(2)
	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)

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model / Basis
Ammonia-N May 1 – Oct 31	3.0	Average Monthly	Previous Modeling
	6.0	IMAX	
Ammonia-N Nov 1 – Apr 30	9.0	Average Monthly	
	18.0	IMAX	
Total Phosphorus	0.5	Average Monthly	Previous Modeling
	1.0	IMAX	
Dissolved Oxygen	6.0	Minimum	Previous Modeling
Total Residual Chlorine	0.21	Average Monthly	2022 TRC Calculation Spreadsheet
	0.70	IMAX	
Total Dissolved Solids	1,000	Average Quarterly	DRBC Docket
	2,000	IMAX	

Comments: The TRC limitations come into effect 1 year after the permit effective date.