pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0053911**
Facility Type	**Municipal**	APS ID	**560024**
Major / Minor	**Minor**	Authorization ID	**1412730**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**East Bangor Borough Municipal Authority**	Facility Name	**East Bangor Municipal Authority Wastewater Treatment Plant**
Applicant Address	555 West Central Avenue	Facility Address	555 West Central Avenue
	East Bangor, PA 18013-2123		East Bangor, PA 18013-2123
Applicant Contact	Brad Wagner, Chairman	Facility Contact	David Dreisbach, WWTP Operator
Applicant Phone	(610) 856-4527	Facility Phone	(570) 656-2964
Client ID	73222	Site ID	4610
Ch 94 Load Status	Not Overloaded	Municipality	East Bangor Borough
Connection Status	-	County	Northampton
Date Application Received	October 3, 2022	EPA Waived?	Yes
Date Application Accepted	November 9, 2022	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 0.10 MGD of treated sewage into an Unnamed Tributary to Martins Creek (aka Brushy Meadow Creek), a Cold Water Fishery, Migratory Fish (CWF, MF) receiving stream in State Water Plan Basin 1-F (Jacoby – Bushkill 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.

Limitations for pH, $CBOD_5$ (November 1- April 30), Total Suspended Solids (TSS), Fecal Coliform, Dissolved Oxygen, are technology-based and carried over from the previous permit.

Limitations for Ammonia-Nitrogen, $CBOD_5$ (May 1- October 31), and Total Zinc are water quality-based and carried over from the previous permit.

The quarterly monitoring and reporting for Total Dissolved Solids (TDS), Total Nitrogen, Total Phosphorous, Total Kjeldahl Nitrogen, and Nitrate-Nitrite as N has been maintained in this permit.

Influent monitoring requirements for TSS and $CBOD_5$ has been carried over from the previous permit. The monthly influent monitoring frequency has been updated to weekly be consistent with the discharge sampling frequency.

The remaining 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).

24-hour composite sampling is now required in place of 8-hour composite sampling.

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	August 1, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	8-5-24

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 Total Residual Chlorine (TRC) Calculation Spreadsheet did not recommend stricter limitations than the previous permit. The TRC limits from the previous permit have been maintained in this permit renewal.

WQM 7.0 modeling did not recommend stricter limitations.

Pollutant sampling results for Total Zinc that were submitted with the permit application were entered into the Toxic Management Spreadsheet (TMS). The TMS did not recommend stricter limitations.

The previous permit (as well as original permitting) utilized stream gage 1446600 (Martins Creek near East Bangor, PA) as a reference gage to develop the Low Flow Yield (LFY) of 0.038 cfs/mi^2, which was used to model the discharge. However, USGS StreamStats indicates that the Statistic Date Range for the data provided for the stream gage is from 8/31/1961 – 9/28/1978. Therefore, this stream data is close to 50 years outdated and not the most accurate representation of the current stream flow. The USGS StreamStats calculated LFY and $Q_{7\text{-}10}$ would also not be representative of the mining disturbed watershed and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values. Therefore, the statewide default LFY of 0.1 cfs/mi^2 was used to model the discharge. No limitations were made less stringent. 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. Modeling can be observed starting on page 6 of this fact sheet.

The existing permit expired on January 31, 2023. The application for renewal was received on October 3, 2022. The renewal application was due by August 4, 2022; however, a 60-day administrative extension of the renewal application due date was requested via email on July 28, 2022. The renewal extension was approved via email by DEP Clean Water Acting Engineer Manager, Amy Bellanca, on July 28, 2023. Therefore, the renewal application was received by the Department on time.

A Water Management System Inspection query indicated that on February 29, 2024 a Routine/Partial Inspection was performed.

There are currently 7 open violations for this client that may need to be resolved before issuance of the final permit:

1. 10/24/2023 - Violation ID 8164307 – Violation Code C4A – Failure to operate and maintain the water system. (Safe Drinking Water - Program Specific ID: 3480049).

2. 10/24/2023 - Violation ID 8164308 – Violation Code C3B – Failure of a public water system to provide the level of treatment approved in its permit. (Safe Drinking Water - Program Specific ID: 3480049).

3. 10/24/2023 - Violation ID 8164309 – Violation Code C1G – Finished water storage is not completely enclosed. (Safe Drinking Water - Program Specific ID: 3480049).

4. 05/08/2023 - Violation ID 993913 – Violation Code 92A.44 – NPDES - Violation of effluent limits in Part A of permit (Program Specific ID: PA0053911).

5. 05/08/2023 - Violation ID 993914 – Violation Code 92A.41(A)10C – NPDES - Failure to collect representative samples (Program Specific ID: PA0053911).

6. 05/08/2023 - Violation ID 993915 – Violation Code 92A.41(A)4 – NPDES - Failure to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of a permit (Program Specific ID: PA0053911).

7. 05/08/2023 - Violation ID 993917 – Violation Code 92A.47(C) – NPDES - Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO) (Program Specific ID: PA0053911).

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to the Lehigh County Authority Pre-Treatment Wastewater Facility in Allentown, PA by Allstate Septic Systems.

Summary of Review
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)	0.10
Latitude	40º 52' 39.37"	Longitude	-75º 11' 37.96"
Quad Name	Stroudsburg	Quad Code	1144
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Martins Creek (CWF, MF)	Stream Code	61406
NHD Com ID	132737438	RMI	0.91
Drainage Area	3.79 mi^2	Yield (cfs/mi^2)	0.10
Q_{7-10} Flow (cfs)	0.379	Q_{7-10} Basis	State-wide default
Elevation (ft)	543.65	Slope (ft/ft)	-
Watershed No.	1-F	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, HABITAT ALTERATIONS, SILTATION		
Source(s) of Impairment	EROSION FROM DERELICT LAND (BARREN LAND), EROSION FROM DERELICT LAND (BARREN LAND), EROSION FROM DERELICT LAND (BARREN LAND)		
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)	~ 13.6

Treatment Facility Summary

Treatment Facility Name: East Bangor Municipal Authority

WQM Permit No.	Issuance Date	Scope
4891404	1/2/1992	Original 0.100 MGD STP for a separately permitted collection system.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Chlorination	0.0753 (2019-2021)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.10	250	Not Overloaded	Aerobic Sludge Digestor	Hauled

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.1
Latitude 40º 52' 41.50" **Longitude** -75º 11' 41.60"
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
$CBOD_5$ (11/1 – 4/30)	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			
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 (No./100 ml)	Report	IMAX	-	92a.61
Dissolved Oxygen	5.0	Minimum	-	BPJ

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
$CBOD_5$ (5/1 – 10/31)	20.0	Average Monthly	Previous Modeling
	30.0	Average Weekly	
	40.0	IMAX	
Total Residual Chlorine	0.14	Average Monthly	Previous Modeling
	0.46	IMAX	
Ammonia-Nitrogen (May 1 - Oct 31)	4.0	Average Monthly	Previous Modeling
	Report	Daily Max	
	8.0	IMAX	
Ammonia-Nitrogen (Nov 1 - Apr 30)	12.0	Average Monthly	
	Report	Daily Max	
	24.0	IMAX	
Total Zinc	0.166	Average Monthly	Previous Modeling
	0.259	Daily Max	
	0.332	IMAX	
Total Dissolved Solids	Report	Average Quarterly	Previous Permit – DRBC Requirement
		Daily Max	
Nitrate-Nitrite as N	Report	Average Quarterly	Previous Permit – Chapter 92a.61 Requirement. DRBC requested quarterly monitoring frequency in last permit. Frequency was maintained.
		Daily Max	
Total Nitrogen	Report	Average Quarterly	
		Daily Max	
Total Kjeldahl Nitrogen	Report	Average Quarterly	
		Daily Max	
Total Phosphorus	Report	Average Quarterly	
		Daily Max	

Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Average Monthly Daily Max	POTW Requirement
Total Suspended Solids Raw Sewage Influent	Report	Average Monthly Daily Max	POTW Requirement

Anti-Backsliding

No limitations were made less stringent.

Modeling with USGS Stream Gage 1446600 – Martins Creek near East Bangor, PA:

Name	Value
USGS Station Number	01446600
Station Name	Martins Creek near East Bangor, PA
Station Type	Gaging Station, continuous record
Latitude	40.9001
Longitude	-75.20184
NWIS Latitude	40.9000954
NWIS Longitude	-75.2018459
Is regulated?	false
Agency	United States Geological Survey
NWIS Discharge Period of Record	08/31/1961 - 09/28/1978

Characteristic Name	Value	Units
Drainage Area	10.4	square miles

Statistic Name	Value	Units	Preferred?	Record	percent	Citation	Comments
1 Day 10 Year Low Flow	0.1	cubic feet per second	✓	16		49	Statistic Date Range 4/1/1962 - 3/31/1978
7 Day 2 Year Low Flow	0.7	cubic feet per second	✓	16		49	Statistic Date Range 4/1/1962 - 3/31/1978
7 Day 10 Year Low Flow	0.1	cubic feet per second	✓	16		49	Statistic Date Range 4/1/1962 - 3/31/1978

$$\boldsymbol{LFY} = \frac{Q_{7-10}}{Stream\ Gage\ Drainage\ Area} \times \frac{0.1\ cfs}{10.4\ mi^2} = \mathbf{0.00962}$$

$$\boldsymbol{Stream\ Flow\ at\ Outfall} = Outfall\ 001\ Drainage\ Area \times LFY = 3.79\ mi^2 \times 0.00962 = \mathbf{0.036\ cfs}$$

Modeling Using USGS StreamStats:

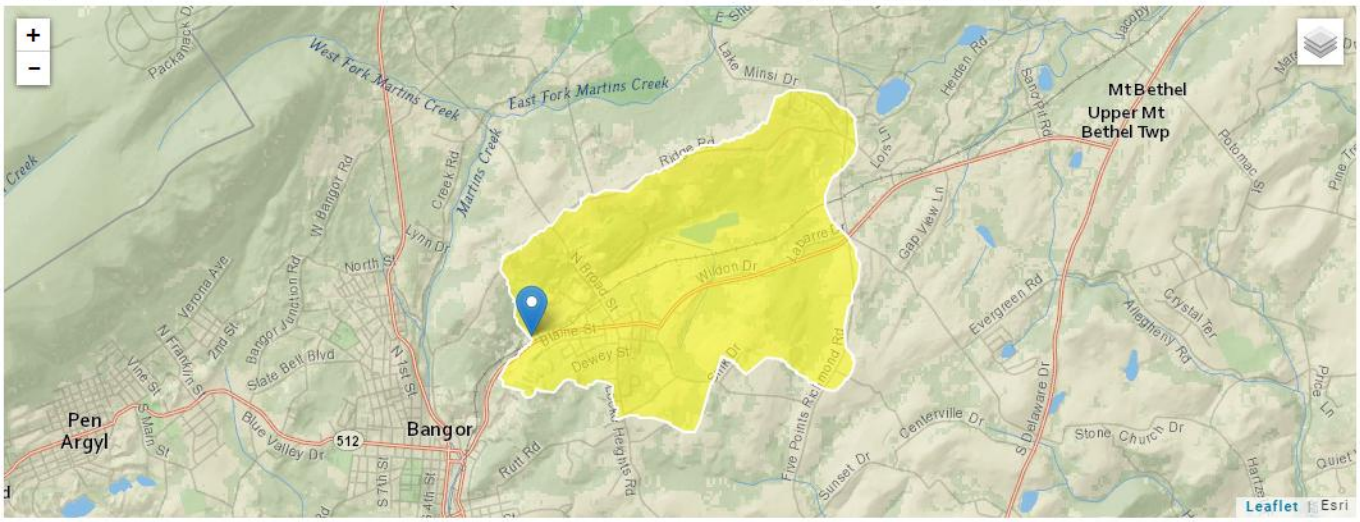
At Outfall 001 on Unnamed Tributary to Martins Creek (aka Brushy Meadow Creek):

RMI	Elevation (ft)	Drainage Area (mi^2)	Q_{7-10} Flow (cfs)
0.91	543.65	3.79	0.395

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{0.395\ ft^3/sec}{3.79\ mi^2} = \mathbf{0.104}\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240703130208462000
Clicked Point (Latitude, Longitude):	40.87825, -75.19528
Time:	2024-07-03 09:02:29 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	3.79	square miles

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

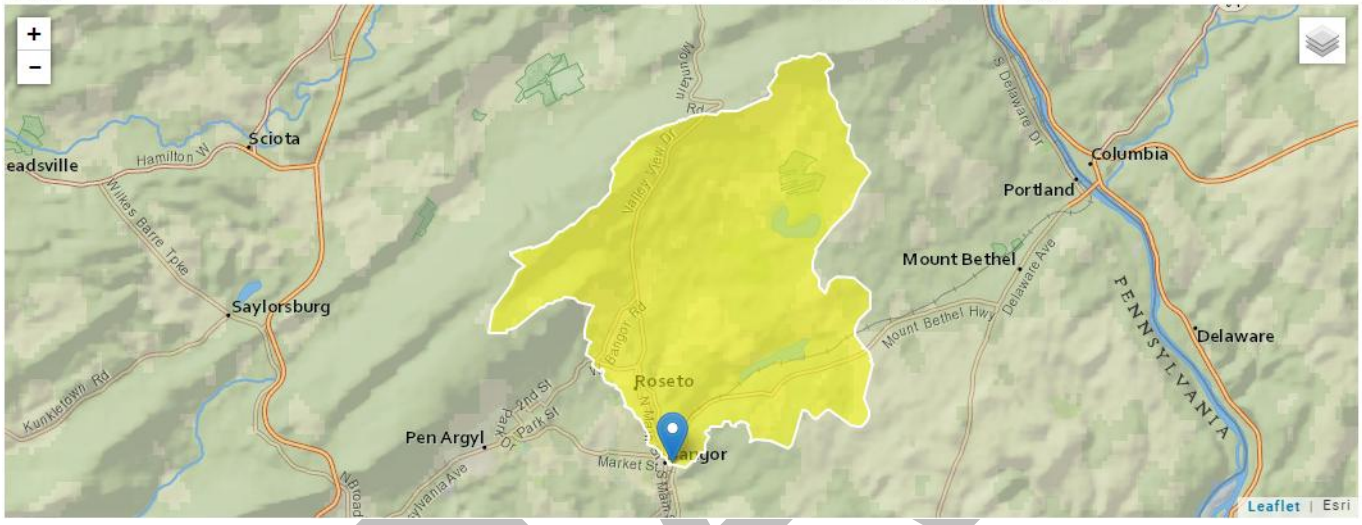
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.794	ft^3/s
30 Day 2 Year Low Flow	1.03	ft^3/s
7 Day 10 Year Low Flow	0.395	ft^3/s

At confluence with Martins Creek (4680):

RMI	Elevation (ft)	Drainage Area (mi^2)
0.0 7.85 (on Martins Creek)	498.78	13.6

StreamStats Report

Region ID:	PA
Workspace ID:	PA20240703131226513000
Clicked Point (Latitude, Longitude):	40.86537, -75.20476
Time:	2024-07-03 09:12:50 -0400



Parameter Code	Parameter Name	Value	Units
DRNAREA	Drainage Area	17.4	square miles

Using the state-wide Low-Flow Yield (LFY) of 0.1 cfs/mi^2:

$$\frac{0.1\ ft^3/sec}{mi^2} \times 3.79\ mi^2 = \frac{\mathbf{0.379\ ft^3}}{\mathbf{sec}}$$

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	August 1, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	8-5-24