Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0020206**
Facility Type	**Municipal**	APS ID	**599520**
Major / Minor	**Minor**	Authorization ID	**1483806**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Bath Borough Authority**	Facility Name	**Bath STP**
Applicant Address	160 Mill Street	Facility Address	160 Mill Street
	Bath, PA 18014		Bath, PA 18014
Applicant Contact	George Gasper	Facility Contact	Phillip Shunk
Applicant Phone	(610) 837-0652	Facility Phone	(610) 837-0652
Client ID	44473	Site ID	445416
Ch 94 Load Status	Not Overloaded	Municipality	Bath Borough
Connection Status	No Prohibitions	County	Northampton
Date Application Received	May 3, 2024	EPA Waived?	Yes
Date Application Accepted	May 3, 2024	If No, Reason	-

Purpose of Application: Renewal of existing NPDES permit.

Summary of Review

The applicant is requesting renewal of an NPDES permit to discharge 0.51 MGD of treated sewage to Monocacy Creek, a high quality cold water and migratory fish (HQ-CWF/MF) designated receiving stream in state water plan basin 02-C (Lower Lehigh River). 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.

In June 2021, the construction of a new sewage treatment system at the existing site was completed. Major aspects of the project included construction of a new headworks, control building, and two treatment basins that was permitted under WQM permit 4818403 (issued September 20, 2018). The previously issued NPDES permit included limitations in Part A.I.C. that were to come into effect upon completion of the facility upgrade. Those limitations are included in this permit renewal and are summarized at the end of this fact sheet.

Downstream USGS gage 01452500 (Monocacy Creek at Bethlehem, PA) provided a LFY of 0.29 cfs/mi^2 for modeling the discharge. Drainage areas were delineated using USGS StreamStats, RMIs were determined using the historical streams layer of eMapPA and "measure" tool, and elevations were found using the elevation profile tool of StreamStats. More stringent limitations were not recommended by WQM 7.0, the Toxics Management Spreadsheet (TMS), or the TRC calculation spreadsheet (see attached).

As in the previous renewal, limitations were recommended for Total Copper and monitoring requirements were recommended for Total Zinc in TMS modeling. The previously calculated limitations for Total Copper are more stringent and will continue in this renewal. eDMR is adjusted in this renewal to report the Total Copper results in mg/L instead of µg/L to be consistent with other parameters. The TMS was not used to model the public water supply-sensitive pollutants due to the large distance to the nearest downstream intake (~61 stream miles to BCWSA New Hope) and the dilution available in the Delaware River.

Approve	Deny	Signatures	Date
X		Brian Burden, E.I.T. / Project Manager	January 28, 2025
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Program Manager	2-3-25

Summary of Review

Monthly influent monitoring requirements for $CBOD_5$ and TSS are continued in this renewal as well as the DRBC-initiated 85% removal requirements for both parameters. As per current DEP guidance, quarterly monitoring/reporting is added to the permit for E. Coli.

DRBC Docket No. D-1988-051 CP-4 didn't include any additional requirements to include in the NPDES permit.

Total Aluminum was monitored on a semiannual basis during the previous permit term. Since 2020, the highest reported concentration of Total Aluminum was 0.2 mg/L. Since the governing WQBEL was calculated by the TMS to be 1.83 mg/L, there appears to be no reasonable potential for exceeding Chapter 93 water quality standards and the monitoring requirements are removed from the permit.

Chloride was monitored on a semiannual basis during the previous permit term. The average concentration of Chloride in the effluent since the beginning of 2020 was 237 mg/L. There is no reasonable potential for this pollutant to negatively impact the nearest downstream public water supply, therefore, the monitoring requirements are removed from the permit.

Since the facility currently utilizes ultraviolet radiation for disinfection, the monthly average limitation for TRC is removed from the permit and the minimum monitoring frequency is updated to "Daily When Discharging". The permittee is required to monitor for TRC in the effluent only on days where the permittee utilizes chlorine at the WWTP for backup disinfection, cleaning, or any other purposes (See Part C.I.D.). Note: The Part C.I.D. condition in the previous renewal regarding TRC and UV disinfection is adjusted in this renewal.

The following template Part C.I.E. special condition for UV system monitoring is included in this renewal:

The permittee shall report operation of the ultraviolet (UV) disinfection system on a daily basis using the Daily Effluent Monitoring Form (3800-FM-BCW0435) and the parameter named "UV Functional" The permittee shall report values of "1" for Yes (i.e., the UV system is functional) and "< 1" for No (i.e., the UV system is not functional). The UV system shall be considered functional when all components that are necessary for disinfection to achieve effluent limitations in Part A of this permit are operating properly.

The monitoring frequencies for all parameters with limitations conform with the monitoring frequencies recommended in the Department's Technical Guidance for the Development and Specification of Effluent Limitations (doc. no. 362-0400-001).

There are no current or projected overloads at the treatment plant as per the most recently submitted Chapter 94 report (for calendar year 2023).

Part C special conditions from the previously issued permit are carried over in this renewal. The following conditions are adjusted or removed from the permit:

- Part C.I.F. (High Flow Management Plan) – the previous renewal required the development of this plan. This renewal requires the plan to be reviewed / updated as part of each NPDES renewal application and as needed due to facility operational or construction changes.

- Part C.I.H (WWTP completion of construction notification) – the previous renewal required notification within 60 days of completion of construction of the new WWTP. Since the new WWTP has been constructed, this condition is removed from the permit.

- Part C.III (Copper requirements) – the previous renewal included requirements for the newly implemented Total Copper limitations. This condition is removed from the permit since the limitations have already been established.

The January 3, 2012 Consent Order & Agreement (CO&A) between the permittee and DEP was terminated in a letter from DEP dated February 22, 2024. Progress reports related to the CO&A are no longer required to be submitted.

Sludge use and disposal description and location(s): The permit renewal application indicates 559.43 dry tons of sewage sludge was hauled to the Chrin Landfill via Berger Sanitation Services during the previous year.

Summary of Review

Watershed Information.pdf WQM Modeling.pdf TRC Calculation.pdf TMS PA0020206.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*, 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)	0.51
Latitude	40º 43' 21.94"	Longitude	-75º 23' 43.13"
Quad Name	Catasauqua	Quad Code	1342
Wastewater Description:	Sewage Effluent		

Receiving Waters	Monocacy Creek (HQ-CWF, MF)	Stream Code	3384
NHD Com ID	26293699	RMI	14.05
Drainage Area	7.64 mi^2	Yield (cfs/mi^2)	0.29
Q_{7-10} Flow (cfs)	2.21	Q_{7-10} Basis	Gage 01452500
Elevation (ft)	408	Slope (ft/ft)	0.0047
Watershed No.	2-C	Chapter 93 Class.	HQ-CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Impaired		
Cause(s) of Impairment	Habitat Alterations, Siltation		
Source(s) of Impairment	Agriculture, Urban Runoff / Storm Sewers		
TMDL Status	-	Name	-

Background/Ambient Data		Data Source
pH (SU)	-	-
Temperature (°F)	-	-
Hardness (mg/L)	-	-
Other:	-	-

Nearest Downstream Public Water Supply Intake	BCWSA New Hope (safe yield 108,000 gpd)		
PWS Waters	Delaware River	Flow at Intake (cfs)	-
PWS RMI	73.3	Distance from Outfall (mi)	~61

Treatment Facility Summary

Treatment Facility Name: Bath Borough Authority

WQM Permit No.	Issuance Date
4818403	September 20, 2018
4811404	August 9, 2013

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.51

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.51	1063	Not Overloaded	Aerobic Digester	Hauled to Landfill

Changes Since Last Permit Issuance: Completion of the upgrades permitted under WQM 4818403.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.51
Latitude 40º 43' 21.94" **Longitude** -75º 23' 43.13"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$ (11/1 – 4/30)	25.0 – 106.3 lbs/day	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40.0 – 170.1 lbs/day	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	50.0	IMAX	-	-
Total Suspended Solids (10/1 – 4/30)	30.0 – 127.6 lbs/day	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45.0 – 191.4 lbs/day	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)
$CBOD_5$ Minimum % Removal	85	Minimum Monthly Average	133.102(a)(3)	92a.47(a)(3)
TSS Minimum % Removal	85	Minimum Monthly Average	133.102(b)(3)	92a.47(a)(3)

Water Quality-Based Limitations

Parameter	Limit (mg/l)	SBC	Model / Basis
$CBOD_5$ (5/1 – 10/31)	20.0 – 85.0 lbs/day	Average Monthly	Previous modeling
	30.0 – 128.0 lbs/day	Average Weekly	
	40.0	IMAX	
TSS (5/1 – 9/30)	78.0 lbs/day	Average Monthly	Existing DRBC mass limitation
Fecal Coliform (10/1 – 4/30)	200 / 100 ml	Geo Mean	Previous modeling
	1,000 / 100 ml	IMAX	
Dissolved Oxygen	6.0	Minimum	Previous modeling
Total Residual Chlorine	0.49	IMAX	Previous modeling
Total Dissolved Solids	1,000 – 4,253 lbs/day	Average Monthly	Existing DRBC limitations
	2,000	Daily Maximum	
	2,500	IMAX	
Total Nitrogen (5/1 – 9/30)	51.24 lbs/day	Average Monthly	Existing DRBC mass limitation
Ammonia-N (5/1 – 9/30)	3.0 – 7.98 lbs/day	Average Monthly	Previous modeling / DRBC mass limitation
	4.5 – 19.1 lbs/day	Average Weekly	
	6.0	IMAX	
Ammonia-N (11/1 – 4/30)	9.0 – 38.2 lbs/day	Average Monthly	Previous modeling
	13.5 – 57.4 lbs/day	Average Weekly	
	18.0	IMAX	
Ammonia-N (10/1 – 10/31)	3.0 – 12.7 lbs/day	Average Monthly	Previous modeling
	4.5 – 19.1 lbs/day	Average Weekly	
	6.0	IMAX	
Nitrate as N (5/1 – 9/30)	30.82 lbs/day	Average Monthly	Existing DRBC mass limitation
Total Phosphorus	2.0 – 8.5 lbs/day	Average Monthly	Previous modeling
	4.0	IMAX	
Total Copper	0.012	Average Monthly	Previous modeling
	0.019	Daily Maximum	
	0.019	IMAX	

Anti-Backsliding: No limitations were made less stringent or removed from the permit.

Pennsylvania
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Environmental Protection

Approve	Deny	Signatures	Date
X		Brian Burden, E.I.T. / Project Manager	January 28, 2025
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Program Manager	2-3-25