

DOCKET NO. D-2002-038 CP-4

DELAWARE RIVER BASIN COMMISSION

Discharge to a Tributary of Special Protection Waters

**Nazareth Borough Municipal Authority
Wastewater Treatment Plant**

Lower Nazareth Township, Northampton County, Pennsylvania

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) on August 11, 2022 (Application), for the modification to existing wastewater treatment plant (WWTP) and its discharge. The Pennsylvania Department of Environmental Protection (PADEP) issued National Pollutant Discharge Elimination System (NPDES) Permit No. PA0041742 for this discharge. The PADEP issued Water Quality Management Permit No. 4809403 for the proposed disinfection upgrade on June 7, 2022.

The application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Northampton County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on February 8, 2023.

A. DESCRIPTION

- 1. Purpose.** The purpose of this docket is to renew approval of the docket holder's existing 1.6 mgd WWTP and its discharge and to upgrade the disinfection system from chlorine disinfection to ultraviolet (UV) disinfection.
- 2. Location.** The docket holder's WWTP is located at Tatamy Road in Lower Nazareth Township, Northampton County, Pennsylvania. The WWTP will continue to discharge treated effluent to Shoeneck Creek, at River Mile 184.1 – 5.9 – 3.2 (Delaware River – Bushkill Creek – Shoeneck Creek) and is located in the drainage area to the Lower Delaware Special Protection Waters (SPW).

The location of the WWTP outfall in the Bushkill Creek Watershed is as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 43' 58"	75° 16' 59"

3. **Area Served.** The docket holder's WWTP will continue to serve Nazareth Borough, Upper Nazareth Township, Lower Nazareth Township, and small portions of Palmer Township and Bushkill Township located in Northampton County, Pennsylvania. For the purpose of defining the Area Served, the Type of Discharge and the Service Area sections from the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in Section C. DECISION of this docket.

4. **Design Criteria.** The docket holder's 1.6 mgd WWTP utilizes a sequencing batch reactor (SBR) treatment process. The existing WWTP includes a chlorination disinfection system, the proposed modification will replace chlorine disinfection with ultraviolet (UV) disinfection.

5. **Facilities.** The WWTP facilities consist of influent screening, grit removal, and influent pumping station. The WWTP treatment consists of four Intermittent Cycle Extended Aeration System (ICEAS) basins which operate as fully-automated SBR systems that utilize two zones: the pre-react zone for biological growth and the main-react zone for mixing, aeration, settling, and decanting. The ICEAS have four cycles: anoxic, oxidation, settle, and decant. During the first cycle, influent is aerated and mixed. During the second cycle, mixing stops and the aerated influent is given time to settle. During the third cycle, after settling, the top layer of treated effluent flows by gravity from the basins to disinfection and post-aeration. The existing WWTP utilizes chlorine gas to disinfect the treated effluent, which is to be replaced by an UV system with two independent UV light channels.

Sludge handling at the existing facility consists of four sludge digesters and a centrifuge.

The docket holder's WWTP discharges to waters classified as SPW and is required to have available standby power. The existing WWTP has two existing diesel generators installed capable of providing standby power.

The docket holder's WWTP is not staffed 24 hours per day and has installed a remote alarm system that continuously monitors plant operations in accordance with the Commission's SPW requirements. The existing WWTP has a remote alarm system installed that continuously monitors plant operations.

The docket holder has prepared and implemented an emergency management plan (EMP) for the existing WWTP in accordance with Commission SPW requirements.

The project facilities are not located in the 100-year floodplain.

Wasted sludge will continue to be land applied for disposal in accordance with the NPDES Permit No. PA0041742

6. **Water Withdrawals.** The potable water supply in the project service area is provided by Easton Suburban Water Authority and Pennsylvania American Water Company. The docket holder's water withdrawal is described in detail in Docket Nos. D-1999-062 CP-2 and D-1977-047 CP, which were approved on September 16, 2016 and January 13, 1988, respectively.

7. **NPDES Permit / DRBC Effluent Requirements.** NPDES Permit No. PA0041742 issued by the PADEP includes final effluent limitations for the project discharge to surface waters classified by the PADEP as supporting warm water fishes (WWF). EFFLUENT TABLES C-1 & C-2 included in Section C. DECISION condition C.1. of this docket, contain effluent requirements for DRBC parameters that must be met as a condition of this approval. Effluent requirements for Outfall No. 001 are based on a discharge rate of 1.6 mgd.

8. **Relationship to the Comprehensive Plan.** The existing WWTP was included in the Comprehensive Plan by Docket No. D-1994-069 CP-1 on December 7, 1994. The WWTP approval was renewed and/or modified by Docket Nos. listed in the table below. Issuance of this docket will continue the WWTP and its discharge in the Comprehensive Plan.

DOCKET NO.	DRBC APPROVAL DATE
D-1994-069 CP-1	December 7, 1994
D-2002-038 CP-1	September 3, 2003
D-2002-038 CP-2	March 3, 2010
D-2002-038 CP-3	March 14, 2018

B. FINDINGS

The docket holder applied to renew approval of the docket holder's existing 1.6 mgd WWTP and its discharge and to upgrade the disinfection system from chlorine disinfection to ultraviolet (UV) disinfection.

1. Special Protection Waters

On July 16, 2008, the DRBC approved amendments to its *Water Quality Regulations* (WQR) that provide increased protection for waters that the Commission classifies as SPW. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan Area was approved for SPW designation. (Lower SPW)

The docket holder's WWTP discharges to the drainage area to the Lower Delaware SPW. The docket holder's WWTP discharge is required to comply with the SPW requirements, as outlined in Article 3.10.3A.2. of the WQR.

Article 3.10.3A.2.e.1). and 2). of the Commission's WQR states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of SPW must submit for approval a Non-Point Source Pollution Control Plan (NPSPCP) that controls the new or increased non-point source loads generated within the portion of the docket holder's service area which is also located within the drainage area of SPW. The service area of the docket holder is located in the drainage area to the SPW. Since this project does not entail additional construction and/or expansion of facilities or service area and does not involve any new or increased non-point source load, the NPSPCP requirement is not applicable at this time. Accordingly, Section C. DECISION conditions C.5 and C.6 have been included in this docket.

Nazareth Borough, Upper Nazareth Township, Lower Nazareth Township, Palmer Township, and Bushkill Township (the municipalities served by the NBMA WWTP) have adopted stormwater ordinances that satisfy the NPSPCP requirements of the Commission.

2. Other

At the docket holder's WWTP discharge, the Shoeneck Creek has an estimated seven-day low flow with a recurrence interval of ten years (Q_{7-10}) of 0.17 mgd (0.26 cfs). The ratio of this low flow to the hydraulic design wastewater discharge rate from the 1.6 mgd WTP is 0.10 to 1.

The nearest surface water intake of record for public water supply is located on the Delaware River approximately 35 River Miles downstream of the docket holder's WWTP and is operated by North Penn Water Authority.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The effluent limits in the NPDES Permit conform with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge that meets the effluent requirements as set forth in the Commission's *Water Quality Regulations (WQR)*.

C. DECISION

Effective on the approval date for Docket No. D-2002-038 CP-4 below, the projects described in Docket No. D-2002-038 CP-3 is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-2002-038 CP-4; Docket No. D-2002-038 CP-3 is terminated and replaced by Docket No. D-2002-038 CP-4; and the project and the appurtenant facilities described in Section A “DESCRIPTION” of this docket shall be included in the Comprehensive Plan. The project and appurtenant facilities as described in Section A of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

Monitoring and Reporting

1. The docket holder shall comply with the requirements contained in the EFFLUENT TABLES below. The docket holder shall submit the required monitoring results electronically to the DRBC Project Review Section via email aemr@drbc.gov on the **Annual Effluent Monitoring Report Form** located at this web address: <https://www.nj.gov/drbc/programs/project/docket-app-info.html#3>. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations. The following average monthly effluent limits are among those listed in the NPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE C-1: DRBC Parameters Included in NPDES Permit

OUTFALL 001 (Discharging to Shoeneck Creek)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	30 mg/l	As required by NPDES Permit
Dissolved Oxygen	6.0 mg/l (minimum at all times)	As required by NPDES Permit
CBOD ₅ (at 20° C) (5-1 to 10-31) (11-1 to 4-30)	15.0 mg/l (85% Minimum Removal) 25.0 mg/l (85% Minimum Removal)	As required by NPDES Permit
Ammonia Nitrogen (5-1 to 10-31) (11-1 to 4-30)	1.5 mg/l; 20 lbs/day 4.5 mg/l; 60 lbs/day	As required by NPDES Permit
Fecal Coliform (5-1 to 9-30) (10-1 to 4-30)	200 colonies per 100 ml as a geo. avg. 2000 colonies per 100 ml as a geo. avg.	As required by NPDES Permit
Phosphorus	41.4 lbs/day	As required by NPDES Permit
Total Nitrogen (5-1 to 10-31) (11-1 to 4-30)	72.1 lbs/day Monitor & Report	As required by NPDES Permit
Nitrate-Nitrite as N	Monitor & Report	As required by NPDES Permit
Total Kjeldahl Nitrogen	Monitor & Report	As required by NPDES Permit
Total Dissolved Solids*	1,000 mg/l*	As required by NPDES Permit

*See Condition C.9

The following monitoring requirements and average monthly effluent limits are for DRBC parameters not listed in the NPDES Permit.

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

OUTFALL 001 (Discharging to Shoeneck Creek)		
PARAMETER	LIMIT	MONITORING
CBOD ₅ (at 20° C)	Monitor & Report Percent Removal	Monthly
CBOD ₅ (at 20° C) Influent	Monitor & Report	Monthly

2. Within 10 days of the date that construction of the project has started, the docket holder shall notify the DRBC of the starting date and scheduled completion date. Within 30 days of the date of project completion, the docket holder shall notify the DRBC of the project completion date.

3. Within 30 days of completion of construction of the approved project, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement ("Statement") signed by the docket holder's professional engineer for the project. The Statement must (1) either confirm that construction has been completed in a manner consistent with any and all DRBC-approved plans or explain how the as-built project deviates from such plans; and (2) indicate the date on which the project was (or is to be) placed in operation.

Other Conditions

4. Sound practices of excavation, backfill and reseeding shall be followed to minimize erosion and deposition of sediment in streams.
5. Prior to allowing connections from any new service areas or any new developments, the docket holder shall either submit and have approved by the Executive Director of the DRBC a NPSPCP in accordance with Section 3.10.3.A.2.e, or receive written confirmation from the Executive Director of the DRBC that the new service area complies with a DRBC-approved NPSPCP.
6. Prior to the docket holder initiating any substantial alterations or additions to the existing WWTP as defined in Section 3.10.3A2.a.16) of the Commission's *WQR*, an application must be submitted and approved by the Commission. Such an application shall be submitted prior to final design to ensure that the Commission can provide the docket holder with draft effluent limitations for SPW specific parameters as guidance for design as to not require duplication of work or cause a substantial expenditure of public funds without Commission approval. The docket holder is encouraged to contact the Commission staff during the planning stages to identify the potential effluent limitations required to meet the no measurable change parameters under SPW.
7. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.
8. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.
9. Section 2.3.10 of the Commission's *Rules of Practice and Procedure (RPP)* (18 C.F.R. 401.41), limiting the Commission's approval to three years in the absence of an expenditure of substantial funds by the project sponsor in reliance on the approval, is hereby waived for good cause shown in accordance with Section 2.9.3 (18 C.F.R. 401.123) of the same regulations. This approval shall expire on the expiration date set forth below unless prior thereto the docket holder has applied to the Commission to renew or extend this approval.

10. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 C.F.R. 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. If a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of the current docket will remain fully effective and enforceable pending the grant or denial of the application for docket approval.

11. The docket holder is permitted to treat and discharge wastewater as set forth in the Area Served Section of this docket, which incorporates by reference the Type of Discharge and Service Area sections of the docket holder's Application to the extent consistent with all other conditions of this section.

12. In accordance with the Commission's regulations at 18 C.F.R. Part 440, the docket holder is prohibited from discharging wastewater from high volume hydraulic fracturing ("HVHF") or HVHF-related activities to waters or land within the Basin. The docket holder is further prohibited from discharging hydraulic fracturing wastewater, whether treated or untreated, from sources within or outside the Basin, without obtaining the Commission's prior review and express approval in the form of a revised docket. Violation of this or any condition of this docket approval may result in enforcement, including the risk of financial penalties, pursuant to Section 14.17 of the Delaware River Basin Compact and Section 2.7.8 (18 CFR 401.98) of the Commission's Rules of Practice and Procedure.

13. The facility and operational records shall be available at all times for inspection by the DRBC.

14. The facility shall be operated at all times to comply with the requirements of the Commission's *WQR*.

15. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

16. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

17. The docket holder shall discharge wastewater in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

18. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

- 19.** The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, to ensure proper control, use and management of the water resources of the Basin.
- 20.** The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations (see 18 C.F.R. 401.43).
- 21.** This approval is transferable by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 C.F.R. 401.43).
- 22.** The docket holder shall request a name change of the entity to which this approval is issued if the name of the entity to which this approval is issued changes its name. The request for name change shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 C.F.R. 401.43).
- 23.** The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.
- 24.** Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure (RPP)*. In accordance with Section 15.1(p) of the *Delaware River Basin Compact*, cases and controversies arising under the *Compact* are reviewable in the United States district courts.

BY THE COMMISSION

APPROVAL DATE: March 8, 2023

EXPIRATION DATE: April 30, 2029