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DOCKET NO. D-2002-017 CP-4

DELAWARE RIVER BASIN COMMISSION

Discharge to a Tributary of Special Protection Waters

**Upper Makefield Township
Heritage Hills Wastewater Treatment Plant
Upper Makefield Township, Bucks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) on February 17, 2023 (Application), for renewal of the docket holder's existing wastewater treatment plant (WWTP) and its discharge. The docket holder's WWTP is allowed to discharge up to 0.05 mgd to surface water via Outfall No. 001 and up to 0.159 mgd to land via 14 (fourteen) groundwater recharge basins via Outfall No. 002. In an emergency, the docket holder is permitted to discharge up to 0.172 mgd of treated effluent to the Delaware River via Outfall No. 001. The Pennsylvania Department of Environmental Protection issued National Pollutant Discharge Elimination System (NPDES) Permit No. PA0052035 for this discharge.

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 Bucks County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on May 8, 2024.

A. DESCRIPTION

- 1. Purpose.** The purpose of this docket is to renew approval of the docket holder's existing WWTP and its discharge.
- 2. Location.** The docket holder's WWTP is located at Heritage Hills Drive in Upper Makefield Township, Bucks County, Pennsylvania. The WWTP will continue to discharge

treated effluent to 14 (fourteen) groundwater recharge basins in the Traditions residential development via Outfall No. 002 or to the Delaware River at River Mile 141.9 via Outfall No. 001, within Water Quality Zone 1E of the Lower Delaware Special Protection Waters (SPW).

The location of the WWTP outfall in the Delaware River Watershed is as follows:

| OUTFALL NO. | LATITUDE (N) | LONGITUDE (W) |
|-------------|---------------|---------------|
| 001 | 40° 17' 39" | 74° 52' 10" |
| 002 | 40° 17' 10.3" | 74° 53' 9" |

3. Area Served. The docket holder's WWTP will continue to serve Heritage Hills and Traditions residential developments and portions of Upper Makefield Township, Bucks 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 Heritage Hills WWTP utilizes an oxidation ditch treatment process. Outfall No. 001 typically discharges no more than 0.05 mgd of treated effluent and Outfall No. 002 conveys up to 0.159 mgd of treated effluent to fourteen (14) groundwater recharge basins located in the Traditions residential development. In an emergency the docket holder is permitted to discharge up to 0.172 mgd of treated effluent to the Delaware River via Outfall No. 001 and must submit a report to the PADEP describing the need as part of the monthly discharge monitoring report (DMR) submitted.

The WWTP is designed for an annual average flow of 0.172 mgd, and a hydraulic design capacity of 0.1 mgd.

5. Facilities. The WWTP facilities consist of a comminutor, an influent equalization basin, an oxygen uptake tank, two (2) anoxic tanks, a splitter box, two (2) oxidation channels, a flow distribution box, two (2) clarifiers, an aerobic sludge digester, an ultraviolet disinfection system, a tertiary sand filter and two effluent pump stations. The plant has retained its chlorine equipment for emergency use, if needed.

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

The docket holder's WWTP is not staffed 24 hours per day and shall have 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 hauled off-site for disposal in accordance with the NPDES Permit No. PA0052035.

6. **Water Withdrawals.** The docket holder's water withdrawal is described in detail in Docket No. D-2007-024 CP-2, which was approved on December 13, 2017..

7. **NPDES Permit / DRBC Effluent Requirements.** NPDES Permit No. PA0052035 issued by the PADEP includes final effluent limitations for the project discharge to surface waters classified by the PADEP as supporting warm water and migratory fishes (WWF, MF). 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 0.172 mgd and effluent requirements for Outfall No. 002 are based on a discharge rate of 0.159 mgd to the docket holders 14 recharge basins.

8. **Relationship to the Comprehensive Plan.** The existing WWTP was included in the Comprehensive Plan by Docket No. D-2002-017 CP on August 28, 2002. The WWTP approval was renewed and/or modified by Docket Nos. D-2002-017 CP-2 and D-2002-017 CP-3, on December 10, 2014 and December 12, 2018, respectively. Issuance of this docket will continue the WWTP and its discharge in the Comprehensive Plan.

B. **FINDINGS**

The docket holder applied to renew approval of their existing WWTP and its discharge. The docket holder's WWTP is allowed to discharge up to 0.05 mgd to surface water via Outfall No. 001 and up to 0.159 mgd to land via 14 (fourteen) groundwater recharge basins via Outfall No. 002. In an emergency, the docket holder is permitted to discharge up to 0.172 mgd of treated effluent to the Delaware River via Outfall No. 001.

1. **Special Protection Waters**

In 1992, the DRBC adopted SPW requirements, as part of the DRBC *Water Quality Regulations (WQR)*, designed to protect existing water quality in applicable areas of the Delaware River Basin. One hundred twenty miles of the Delaware River from Hancock, New York downstream to the Delaware Water Gap has been classified by the DRBC as SPW. This stretch includes the sections of the river federally designated as "Wild and Scenic" in 1978 -- the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area -- as well as an eight-mile reach between Milrift and Milford, Pennsylvania which is not federally designated. The SPW regulations apply to this 120-mile stretch of the river and its drainage area.

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.

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 and service area and there are no new or increased non-point source loads associated with this approval, the NPSPCP requirement is not applicable at this time. Accordingly, Section C. DECISION condition C.2. has been included in this docket.

2. Other

Near the docket holder's WWTP discharge, the Delaware River has an estimated seven-day low flow with a recurrence interval of ten years (Q_{7-10}) of 801 mgd (1240 cfs). The ratio of this low flow to the hydraulic design wastewater discharge rate from the 0.1 mgd WWTP is 8010 to 1 (801 mgd / 0.1 mgd).

The nearest surface water intake of record for public water supply is located on the Delaware River approximately 4.6 River Miles downstream of the docket holder's WWTP and is operated by Pennsylvania American Water Company.

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-2002-17 CP-4 below, the project described in Docket No. D-2002-17 CP-3 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. 2002-17 CP-4; Docket No. D-2002-17 CP-3 is terminated and replaced by Docket No. D-2002-17 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 & 002 (Delaware River & Recharge Basins) | | |
|---|--|-----------------------------|
| PARAMETER | LIMIT | MONITORING |
| pH (Standard Units) | 6 to 9 at all times | As required by NPDES Permit |
| Total Suspended Solids | 10 mg/l | As required by NPDES Permit |
| Dissolved Oxygen | 5.0 mg/l (minimum at all times) | As required by NPDES Permit |
| CBOD ₅ (at 20° C) | 10 mg/l 85% Minimum Removal | As required by NPDES Permit |
| Ammonia Nitrogen | 3 mg/l | As required by NPDES Permit |
| Fecal Coliform | 200 colonies per 100 ml as a geo. Avg. | As required by NPDES Permit |
| Phosphorus | Monitor & Report | As required by NPDES Permit |
| Nitrate as N (5/1 – 9/30) | Monitor & Report | As required by NPDES Permit |
| Total Nitrogen | Monitor & Report. | As required by NPDES Permit |

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 & 002 (Delaware River) | | |
|---------------------------------------|------------------|-----------------|
| PARAMETER | LIMIT | MONITORING |
| Total Dissolved Solids* | Monitor & Report | One Per Quarter |
| CBOD ₅ (at 20° C) Influent | Monitor Only | Monthly |

* See Section C. DECISION condition C.6.

Other Conditions

2. 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.
3. 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.
4. The discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 5°F, nor shall such discharge result in stream temperatures exceeding 87°F.
5. 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*.
6. 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.
7. 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.

8. 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 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.

9. 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.

10. 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.

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

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

13. 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.

14. 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.

15. 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.

16. 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).

17. 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.

18. 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).

19. 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).

20. 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).

21. 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.

22. 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:

EXPIRATION DATE: May 8, 2030