

DOCKET NO. D-2007-025 CP-3

DELAWARE RIVER BASIN COMMISSION

Discharge to a Tributary of Special Protection Waters

**Upper Makefield Township
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) by CKS Engineers, Inc. on behalf of Upper Makefield Township (docket holder) on September 22, 2016 (Application), for renewal the existing wastewater treatment plant (WWTP) and its discharge. National Pollutant Discharge Elimination System (NPDES) Permit No. PA0244236 for this facility was issued by the Pennsylvania Department of Environmental Protection (PADEP) on September 1, 2016, effective October 1, 2016.

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 August 16, 2017.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew approval of the docket holder's existing 0.05555 million gallons per day (mgd) WWTP and its discharge. The WWTP is referred to as The Enclave WWTP and formerly called the Gray Tract WWTP. The WWTP has a hydraulic design capacity of 0.07 mgd.

2. Location. The WWTP discharge will continue to discharge treated effluent to Houghs Creek at River Mile 140.5 – 3.7 (Delaware River – Houghs Creek) via Outfall No. 001, within the drainage area to the Lower Delaware Special Protection Waters (SPW), in Upper Makefield Township, Bucks County, Pennsylvania as follows:

| OUTFALL NO. | LATITUDE (N) | LONGITUDE (W) |
|--------------------|---------------------|----------------------|
| 001 | 40° 16' 27" | 74° 55' 47" |

3. Area Served. The docket holder's WWTP will continue to serve Enclave, White Farm, and Melsky Tract subdivisions, approximately 237 homes and units, all located in Upper Makefield Township, Bucks County, Pennsylvania. For the purpose of defining the Area Served, Section B (Type of Discharge) and D (Service Area) of the docket holder's Application

are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. Physical Features.

a. Design Criteria. The docket holder will continue to operate its existing 0.05555 mgd WWTP utilizing Membrane Bioreactor (MBR) systems with ultraviolet (UV) disinfection. No modifications to the existing WWTP are proposed.

b. Facilities. The WWTP consists of an influent pump station, two 10,000-gallon equalization tanks with grinder pumps, two MBR treatment systems operating in parallel. Each MBR system consists of an influent automatic fine opening, a 5,988-gallon anoxic tank, an aeration tank, a 6,605-gallon membrane tank with biological recirculation air lift, and an aerobic digester, a 7,000-gallon sludge holding tank. In addition, the existing facilities consists of a 5,000-gallon effluent equalization tank and two UV disinfection units.

The docket holder's wastewater treatment facility 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 wastewater treatment facility 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 docket holder's existing wastewater treatment facility does not discharge to Outstanding Basin Waters (OBW), and is not required to have a nonvisible discharge plume in accordance with the Commission's SPW requirements.

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

Wasted sludge will continue to be hauled off-site by a licensed hauler for disposal at a state approved facility.

c. Water withdrawals. The potable water supply in the project service area is provided by Upper Makefield Township. The water withdrawal from the Delaware River is described in detail in Docket No. D-2007-024 CP-1, which was approved on March 12, 2008.

d. NPDES Permit / DRBC Docket. NPDES Permit No. PA0244236 was issued by the PADEP on September 1, 2016 (effective October 1, 2016) and includes final effluent limitations for the project discharge of 0.05555 mgd to surface waters classified by the PADEP as Warm Water, Migratory Fisheries (WWF, MF). 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 A-1: DRBC Parameters Included in NPDES Permit

| OUTFALL 001 (Discharge to Houghs Creek) | | |
|---|---------------------------------------|-----------------------------|
| 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 | 6.0 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 (5-1 to 10-31) (11-1 to 4-30) | 1.5 mg/l 3.0 mg/l | As required by NPDES Permit |
| Fecal Coliform | 50 colonies per 100 ml as a geo. avg. | As required by NPDES Permit |
| Phosphorus | 0.1 mg/l | As required by NPDES Permit |
| Total Nitrogen | 10 mg/l | As required by NPDES Permit |
| Nitrate-Nitrite as N | Monitor & Report | As required by NPDES Permit |
| Total Dissolved Solids* | 1,000 mg/l** | As required by NPDES Permit |

*DRBC Requirement

**See DECISION Condition C.II.t.

e. **Cost.** There are no construction costs associated with this WWTP renewal.

f. **Relationship to the Comprehensive Plan.** The WWTP was added to the Comprehensive Plan by DRBC Docket No. D-2007-025 CP-1, which approved a 0.020 mgd WWTP on March 12, 2008. The WWTP's design was modified to increase the plant's capacity to 0.05555 mgd, the docket's approval was continued on May 5, 2010 via Docket No. D-2007-025 CP-2. Issuance of this docket will continue approval of the docket holder's WWTP in the Comprehensive Plan (See DECISION Condition C.I.c.).

B. FINDINGS

The purpose of this docket is to renew the approval of the existing 0.05555 mgd WWTP and its related discharge. No modifications to the WWTP are proposed. Discharge from the WWTP began in February 2017.

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 River 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 expansion of (facilities/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, DECISION Conditions C.II.m. has been included in this docket.

At the docket holder’s WWTP discharge, the Houghs Creek has an estimated seven-day low flow with a recurrence interval of ten years (Q_{7-10}) of 0.0097 mgd (0.015 cfs). The ratio of this low flow to the hydraulic design wastewater discharge from the 0.05555 mgd WWTP is 0.175 to 1.

The nearest surface water intake of record for public water supply is located on the Delaware River approximately 7 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 are in compliance with Commission effluent quality requirements, where applicable.

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

C. DECISION

- I. Effective on the approval date for Docket No. D-2007-025 CP-3 below:
 - a. The project described in Docket No. D-2007-025 CP-2 is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-2007-025 CP-3; and
 - b. Docket No. D-2007-025 CP-2 is terminated and replaced by Docket No. D-2007-025 CP-3; and
 - c. The project and the appurtenant facilities described in Section A “Physical Features” of this docket shall be continued in the Comprehensive Plan.

II. The project and appurtenant facilities as described in Section A “Physical Features” of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its NPDES Permit.

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

c. The facility shall be operated at all times to comply with the requirements of the Commission’s *WQR* and Flood Plain Regulations (*FPR*).

d. The docket holder shall comply with the requirements contained in the EFFLUENT TABLES in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results electronically to the DRBC Project Review Section via email aemr@drbc.state.nj.us on the **Annual Effluent Monitoring Report Form** located at this web address: <http://www.state.nj.us/drbc/programs/project/pr/info.html>. 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.

e. 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*.

f. 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.

g. 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.

h. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served Section of this docket, which incorporates by reference Sections B (Type of Discharge) and D (Service Area) of the docket holder’s Application to the extent consistent with all other conditions of this DECISION Section.

i. 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.

j. 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).

k. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

l. 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, in order to ensure proper control, use and management of the water resources of the Basin.

m. 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 is in compliance with a DRBC approved NPSPCP.

n. 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 CFR 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. In the event that 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 against the docket holder pending the grant or denial of the application for docket approval.

o. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations (see 18 CFR 401.43).

p. 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 CFR 401.43).

q. 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 CFR 401.43).

r. 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.

s. 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. 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.

t. 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.

u. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

v. 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.

BY THE COMMISSION

DATE APPROVED: September 13, 2017

EXPIRATION DATE: September 30, 2021