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DOCKET NO. D-2002-017 CP-3

DELAWARE RIVER BASIN COMMISSION

Discharge to 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) by CKS Engineers, Inc. on behalf of Upper Makefield Township (UMT or docket holder) on July 24, 2017 (Application), for renewal of an existing wastewater treatment plant (WWTP) and its discharge. National Pollutant Discharge Elimination System (NPDES) Permit No. PA0052035 for this project was issued by the Pennsylvania Department of Environmental Protection (PADEP) on September 10, 2013 (effective October 1, 2013).

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 November 14, 2018.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew the approval of the docket holder's existing 0.173 million gallons per day (mgd) Heritage Hills WWTP and its discharges of up to 0.05 mgd to surface water and up to 0.159 mgd to land via sixteen (16) groundwater recharge basins.

2. Location. The WWTP is located on Heritage Hills Drive in Upper Makefield Township, Bucks County, Pennsylvania. The WWTP will continue to discharge to sixteen (16) 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 WWTP outfalls are located in the Delaware River Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 17' 39"	74° 52' 10"
002	40° 17' 10.3"	74° 53' 09"

3. Area Served. The docket holder's WWTP will continue to serve the Heritage Hills and Traditions residential developments and portions of 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's 0.173 mgd Heritage Hills WWTP utilizes a 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 sixteen (16) groundwater recharge basins located in the Traditions residential development. In an emergency situation the docket holder is permitted to discharge up to 0.173 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.

b. Facilities. The WWTP consists 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 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 stand by 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. The existing WWTP has a remote alarm system installed that continuously monitors plant operations.

The docket holder's existing wastewater treatment facility has prepared and implemented an emergency management plan (EMP) in accordance with Commission requirements.

The project facility is 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 docket holder’s water withdrawal is described in detail in Docket No. D-2007-024 CP-2, which was approved on December 13, 2017.

d. **NPDES Permit / DRBC Docket.** EFFLUENT TABLES A-1 and A-2 below contain effluent requirements for DRBC parameters that must be met as a condition of this approval (See DECISION Condition C.II.c.). NPDES Permit No PA0052035 was issued by the PADEP on September 10, 2013 (effective October 1, 2013) and includes final effluent limitations for the project discharge of 0.173 mgd from Outfall No. 001 to surface waters classified by the PADEP as warm water, migratory fishery (WWF,MF) and up to 0.159 mgd from Outfall No. 002 to the docket holder’s 16 recharge basins. 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 & 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	As required by NPDES Permit
Ammonia Nitrogen	3.0 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
Total Nitrogen	Monitor & Report	As required by NPDES Permit

The requirements and limits in EFFLUENT TABLE A-2 are not listed in the NPDES Permit, but are Commission basin-wide and/or SPW specific parameters that must be met as a condition of this docket approval. Monitoring began on January 1, 2015 for each parameter (See DECISION Condition C.II.d.).

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

OUTFALL 001 & 002 (Delaware River)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	Monitor & Report	Quarterly
CBOD ₅ Influent	Monitor Only	Monthly
Nitrate as N (5/1 – 9/30)	Monitor & Report	Monthly

* See DECISION Condition C.II.s.

e. **Relationship to the Comprehensive Plan.** The docket holder's 0.173 mgd Heritage Hills WWTP was incorporated into the Comprehensive Plan upon approval of Docket No. D-2002-017 CP on August 28, 2002. The approval was continued in Docket No D-2002-017 CP-2 on December 10, 2014. Issuance of this docket will continue the WWTP in the Comprehensive Plan. 3

B. **FINDINGS**

The purpose of this docket is to renew approval of the docket holder's existing 0.173 mgd WWTP and its discharge via Outfalls Nos. 001 and 002. 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 16 groundwater recharge basins. In an emergency situation the docket holder is permitted to discharge up to 0.173 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 DMR submitted. No modifications to the WWTP are proposed.

In 1992, the DRBC adopted SPW requirements, as part of the DRBC *Water Quality Regulations (WQR)*, designed to protect existing high-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 within in the drainage area to the SPW. Since this project does not entail additional construction and expansion of facilities/service area and there are not any new or increased non-point source loads associated with this approval, the NPSPCP requirement is not

applicable at this time. Accordingly, DECISION Condition C.II.p. has been included in this docket.

Near the project site, the Delaware River, has an estimated seven-day low flow with a recurrence interval of ten years of (Q_{7-10}) of 1,616 mgd (2,500 cfs). The ratio of this low flow to the hydraulic design wastewater discharge from the 0.173 mgd WWTP is approximately 9,341 to 1.

The nearest public water supply of record is located on the Delaware River approximately 4.6 river miles downstream of the project discharge 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 *Water Quality Regulations (WQR)* of the DRBC.

C. DECISION

I. Effective on the approval date for Docket No. D-2002-017 CP-3 below:

a. The project described in Docket No. D-2002-017 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-2002-017 CP-3; and

b. Docket No. D-2002-017 CP-2 is terminated and replaced by Docket No. D-2002-017 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. The facility and operational records shall be available at all times for inspection by the DRBC.

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

c. 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.

d. 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*.

e. 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.

f. 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.

g. 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.

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 make wastewater discharge 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. 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.

1. 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.

m. 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).

n. 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).

o. 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).

p. 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,

q. or receive written confirmation from the Executive Director of the DRBC that the new service area is in compliance with a DRBC approved NPSPCP.

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:

EXPIRATION DATE: September 30, 2023