

DOCKET NO. D-1993-006 CP-3

DELAWARE RIVER BASIN COMMISSION

**New Castle County Department of Special Services
Middletown-Odessa-Townsend Regional Wastewater Treatment Plant Renewal
New Castle County, Delaware**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by New Castle County's Department of Special Services (NCC or docket holder) on April 1, 2013 (Application) and supplemented by information submitted on June 26, 2013, for renewal of the docket holder's existing wastewater treatment plant (WWTP) and its related discharge. National Pollutant Discharge Elimination System (NPDES) Permit No. DE0050547 for this facility was issued by the Delaware Department of Natural Resources and Environmental Control (DNREC) on October 3, 2012, effective on August 15, 2012.

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 (Compact)*. The Water Resources Agency for New Castle County at the University of Delaware has been notified of pending action. A public hearing on this project was held by the DRBC on March 11, 2014.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew approval of the docket holder's existing 2.5 million gallon per day (mgd) Middletown-Odessa-Townsend (M-O-T) WWTP and spray irrigation facility, and its related discharge. There are no modifications to the existing WWTP proposed.

2. Location. The project WWTP and associated spray irrigation fields are located off of old Corbit Road, ½ mile east of the Town of Odessa, New Castle County, Delaware. The WWTP also will continue to discharge to an unnamed tidal tributary to the Appoquinimink River, a tributary to the Delaware River Water Quality Zone 5 at River Mile 50.88 - 6.2 - 0.2. (Delaware River – Appoquinimink River – UNT Appoquinimink River).

The project outfall is located in the Delaware River Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	39° 27' 15"	75° 38' 26"

3. Area Served. The docket holder's WWTP will continue to serve the towns of Middletown, Odessa and Townsend (M-O-T) and contiguous, unincorporated areas of New Castle County, Delaware.

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 2.5 mgd WWTP provides advanced treatment of wastewater via a sequencing batch reactor (SBR) treatment process, chemical neutralization and precipitation, tertiary filtration, and ultraviolet light disinfection and discharged via spray irrigation applied to spray fields located adjacent to the WWTP. Any treated wastewater effluent that cannot be applied via spray irrigation is discharged to an unnamed tributary of Appoquinimink River.

b. Facilities. The existing WWTP facilities and processes consist of two (2) internally-fed drum screens, equalization of the screened influent, a two-train SBR unit with a chemical feed system, two (2) tertiary filtration (cloth filters), ultraviolet light disinfection system, and a lined lagoon for the storage of treated effluent prior to spray irrigation. The WWTP also includes sludge handling in the form of an aerobic digester with a lined storage lagoon equipped with surface aerators.

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 wells owned and operated by the Artesian Water Company and individual wells. The water withdrawal from the Artesian Water Company system is described in detail in Docket No. D-2003-022 CP-3, which was approved on December 12, 2006.

d. NPDES Permit / DRBC Docket. DNREC issued NPDES Permit No. DE0050547 for the project surface water discharge on October 3, 2012, which includes final effluent limitations for the project discharge to surface waters classified by the DNREC as a tidal fresh water body. The following average monthly effluent limits are among those listed in the NPDES permit that meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES permit

OUTFALL 001 (UNT Appoquinimink River)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES permit
Total Suspended Solids	15 mg/l	As required by NPDES permit
CBOD (5-Day at 20° C)*	34.8 lbs/day (daily average) (92.5% minimum removal)	As required by NPDES permit
Total Kjeldahl Nitrogen (TKN) (5-1 to 9-31) (moving annual cumulative average)	10.4 lbs/day (daily average) 3,796 lbs.	As required by NPDES permit
Enterococcus	33 colonies per 100 ml as a geo. avg.	As required by NPDES permit

* DNREC's TMDL allocation of 50.1 lbs/day CBOD₂₀ is more stringent than DRBC's CBOD₂₀ wasteload allocation of 75 pounds per day. 50.1 lbs/day is equivalent to a daily average of 41.7 pounds of BOD₅, or 34.8 pounds of CBOD₅, and shall not be exceeded. The raw waste CBOD₅ shall be reduced by at least 92.5% as a monthly average prior to discharge, which is more stringent than DRBC's Water Quality Zone 5 % removal requirement of 87.5%.

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

OUTFALL 001 (UNT Appoquinimink River)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids *	Monitor & Report	One Per quarter

* See Condition II.q.

State of Delaware Spray Irrigation Permit No. LTS 3005-93-04 approved by DNREC on March 3, 2004, requires the docket holder to monitor the ground water quality, water table elevation, soil and soil moisture, and vegetation. Ground water quality monitoring includes the following parameters: Specific Conductivity, Temperature, Total Dissolved Solids, Total Kjeldahl Nitrogen, Nitrate-Nitrogen, Ammonia-Nitrogen, Total Phosphorus, Chloride, pH, and Fecal Coliform. Permit No. LTS 3005-93-04 permit also includes effluent limitations for the treated wastewater effluent to be applied to the spray irrigation fields. The average daily limits provided below do not meet effluent requirements of the DRBC for surface water discharges, but reflect reasonable levels for crop growth.

EFFLUENT TABLE A-3: DRBC Parameters Included in Spray Irrigation permit

Discharge to Spray Irrigation Fields		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	5.5 to 8.4 at all times	As required by NPDES permit
Total Suspended Solids	90 mg/l	As required by NPDES permit
BOD (5-Day at 20o C)	50 mg/l	As required by NPDES permit
Fecal Coliform	200 colonies per 100 ml as a geo. avg.	As required by NPDES permit

e. **Relationship to the Comprehensive Plan.** The WWTP was first added to the Comprehensive Plan on October 26, 1977 via Docket No. D-1974-165 CP-1. The WWTP approval was modified as described in the following dockets:

DOCKET NO.	APPROVAL DATE	WWTP MODIFICATION
D-1993-006 CP-1	March 24, 1993	Upgrade & Expansion
D-1993-006 CP-2	May 10, 2006	Upgrade & Expansion

B. **FINDINGS**

The purpose of this docket is to renew the approval of the docket holder's existing 2.5 mgd WWTP and spray irrigation facility. There are no modifications to the existing WWTP proposed.

Total Dissolved Solids

Zone 5 stream quality objectives do not explicitly include Total Dissolved Solids (TDS). As a consequence, the Commission finds that basin-wide TDS requirements are not always applied in Zone 5. The Commission reserves the right, in accordance with the WQR and the Rules of Practice and Procedure, to apply the basin-wide TDS requirements in Zone 5 when and where it determines that the requirements are necessary to protect water uses in Zone 5.

At the project surface water discharge location, the unnamed tributary to the Appoquinimink River is tidal.

There are no surface water intakes of record for public water supply downstream of the project discharge.

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-1993-006 CP-3 below:

a. The project described in Docket No. D-1993-006 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1993-006 CP-3; and

b. Docket No. D-1993-006 CP-2 is terminated and replaced by Docket No. D-1993-006 CP-3.

c. The project and the appurtenant facilities described in the Section A “Physical Features” of this docket shall be continued in the Comprehensive Plan.

II. The project and appurtenant facilities as described in the 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 DNREC in its NPDES permit and its Spray Irrigation Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

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*.

d. The docket holder shall comply with the requirements contained in Effluent Tables in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results directly to the DRBC Project Review Section. 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 discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 4°F (2.2°C) from September to May and 1.5°F (0.8°C) from June to August, nor shall such discharge result in a stream temperature exceeding 86°F (Zone 5).

i. 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.

j. 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.

k. 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).

l. 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.

m. 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.

n. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges 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 (or the later date established by an extension that has been timely requested and approved), 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 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.

p. 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.

q. 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.

r. Nothing in this docket constitutes a defense to any penalty action for past conduct of the docket holder or ongoing activity not authorized by this approval. In particular, renewal of this docket does not resolve violations – whether in the past or continuing – of provisions of the Delaware River Basin Compact (“Compact”) or any rule, regulation, order or approval duly issued by the Commission or the Executive Director pursuant to the Compact. The Commission reserves its right to take appropriate enforcement action against the docket holder, including but not limited to recovery of financial penalties consistent with Section 14.17 of the Compact, for any and all such prior or continuing violations.

s. 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.

BY THE COMMISSION

DATE APPROVED: March 12, 2014

EXPIRATION DATE: March 12, 2019