

**DOCKET NO. D-1993-006 CP-4**

**DELAWARE RIVER BASIN COMMISSION**

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

**PROCEEDINGS**

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) on March 16, 2018 (Application), for renewal of the docket holder's existing wastewater treatment plant (WWTP) and its 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 November 1, 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*. 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 May 15, 2019.

**A. DESCRIPTION**

- Purpose.** The purpose of this docket is to renew approval of the docket holder's existing 2.5 million gallons per day (mgd) Middletown-Odessa-Townsend (M-O-T) WWTP and its discharges to surface water and to land via spray irrigation.
- Location.** The docket holder's WWTP and associated spray irrigation fields are located off of old Corbit Road, approximately ½ mile east of the Town of Odessa, New Castle County, Delaware. Treated wastewater effluent from the WWTP that is unable to be spray discharged will continue to be discharged to an unnamed tidal tributary to the Appoquinimink River, a tributary to the Delaware River Water Quality Zone 5 at River Mile 50.9 - 6.2 - 0.2. (Delaware River – Appoquinimink River – UNT Appoquinimink River).

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

<b>OUTFALL NO.</b>	<b>LATITUDE (N)</b>	<b>LONGITUDE (W)</b>
001	39° 45' 40"	75° 64' 50"

3. **Area Served.** The docket holder's WWTP will continue to serve the towns of Middletown, Odessa and Townsend 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. **Design Criteria.** The docket holder's 2.5 mgd WWTP utilizes a sequencing batch reactor (SBR) treatment process, with chemical neutralization and precipitation, tertiary filtration, and ultraviolet light (UV) 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.

5. **Facilities.** The existing WWTP facilities consist of 2 internally-fed drum screens, equalization of the screened influent, a two-train SBR unit with a chemical feed system, 2 tertiary filtration (cloth filters), UV 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.

6. **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-4, which was approved on September 14, 2016.

7. **NPDES Permit / DRBC Effluent Requirements.** NPDES Permit No. DE0050547 was issued by DNREC on October 3, 2012 and includes final effluent limitations for the project discharge of 2.5 mgd to surface waters classified by the DNREC as a tidal fresh water body. EFFLUENT TABLES C-1 and C-2 included in the DECISION section of this docket, contain effluent requirements for DRBC parameters that must be met as a condition of this approval (See DECISION Condition C.1.). Effluent requirements for Outfall No. 001 are based on a discharge rate of 2.5 mgd.

8. **Relationship to the Comprehensive Plan.** The existing WWTP was included in the Comprehensive Plan by Docket No. D-1993-006 CP on March 24, 1993. The WWTP approval was renewed and/or modified in Docket Nos. D-1993-006 CP-2 and D-1993-006 CP-3 approved on May 10, 2006 and March 12, 2014, respectively. Issuance of this docket will continue the WWTP and its discharge in the Comprehensive Plan.

## B. FINDINGS

The docket holder submitted an Application to renew approval of their existing 2.5 mgd M-O-T WWTP.

### 1. CBOD<sub>20</sub> Wasteload Allocation & Monitoring

The Commission's WQR provide for the allocation of the stream assimilative capacity where waste discharges would otherwise result in exceeding such capacity. It was determined in the 1960's that discharges to the Delaware Estuary be limited to a total of 322,000 lbs/day of carbonaceous biochemical (first stage) oxygen demand (CBOD<sub>20</sub>). In accordance with the WQR, the assimilative capacity of each Delaware Estuary zone minus a reserve was originally allocated in 1968 among the individual dischargers based upon the concept of uniform reduction of raw waste in a zone (Zones 2, 3, 4 and 5). The totals and percent reduction for each zone are given in Table 1 of the Commission's *Status of CBOD<sub>20</sub> Wasteload Allocations* (Revised October 1, 2000). The docket holder's WWTP discharge is located in Water Quality Zone 5 at River Mile 50.9 - 6.2 - 0.2. (Delaware River – Appoquinimink River – UNT Appoquinimink River). Zone 5 is allocated at 67,600 lbs/day of CBOD<sub>20</sub> and has a total reduction requirement of 87.5%.

The Commission approved the most recent CBOD<sub>20</sub> allocation for the docket holder's facility of 75 lbs/day on May 11, 1993, which is continued in this docket (D-1993-006 CP-4). DNREC's NPDES Permit No. DE0050547 includes a daily average effluent limit of 34.8 lbs of CBOD<sub>5</sub>, which is equivalent to the 50.1 lbs/day CBOD<sub>20</sub> allocation. Since this allocation is more stringent than the Commission's CBOD<sub>20</sub> wasteload allocation of 75 lbs/day, compliance with the DRBC's CBOD<sub>20</sub> allocation can be demonstrated by meeting the CBOD<sub>5</sub> effluent load limit of 34.8 lbs/day contained in EFFLUENT TABLE C-1 in the DECISION section of this docket.

DNREC's NPDES permit includes a narrative requirement to reduce BOD<sub>5</sub>/CBOD<sub>5</sub> by 92.5 %, which is more stringent than DRBC's Zone 5 reduction requirement of 87.5%. However, there is no reporting requirement in the NPDES permit to demonstrate this reduction. Therefore, compliance with DRBC's 87.5% CBOD<sub>20</sub> Zone 2 reduction requirement can be demonstrated by meeting 87.5% CBOD<sub>5</sub> removal, included in EFFLUENT TABLE C-2 of this docket.

### 2. Other

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

Effective on the approval date for Docket No. D-1993-006 CP-4 below, the project described in Docket No. D-1993-006 CP-3 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1993-006 CP-4; Docket No. D-1993-006 CP-3 is terminated and replaced by Docket No. D-1993-006 CP-4; and the project and the appurtenant facilities described in Section A. DESCRIPTION of this docket shall be continued 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.state.nj.us](mailto: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. The following daily average 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 (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	As required by NPDES permit
Enterococcus	33 colonies per 100 ml as a geo. avg.	As required by NPDES permit

The following are DRBC effluent requirements for the project discharges are not listed in the NPDES Permit.

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

OUTFALL 001 (UNT Appoquinimink River)		
PARAMETER	LIMIT	MONITORING
Ammonia Nitrogen	35 mg/l	Monthly
CBOD (5-Day at 20° C) Influent	Monitor & Report	Monthly
CBOD (5-Day at 20° C)	87.5 % Minimum Removal	Monthly

### **Other Conditions**

2. 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*.

3. 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.

4. 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 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.

5. 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.

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

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

8. 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.

9. 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.

10. 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.

11. 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).

12. 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.

13. 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).

14. 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).

15. 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).

16. 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.

17. 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.

**BY THE COMMISSION**

**APPROVAL DATE:**

**EXPIRATION DATE:      October 31, 2027**

DRAFT