

DOCKET NO. D-2019-001 CP-1

DELAWARE RIVER BASIN COMMISSION

**Downe Township
Wastewater Treatment Plant and Collection System
Downe Township, Cumberland County, New Jersey**

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) on January 18, 2019 (Application) for inclusion of the docket holder's proposed wastewater treatment plant (WWTP) and collection system in the Commission's Comprehensive Plan. An application to amend the Lower Delaware Water Quality Management (WQM) Plan with a new Downe Township Municipal Chapter Wastewater Management Plan (WMP) was submitted to the New Jersey Department of Environmental Protection (NJDEP) on November 6, 2017 and revised on September 14, 2018 and April 3, 2019. The draft Downe Township WMP, which would serve as a municipal chapter to the Cumberland County WMP, identifies a proposed 0.146 million gallons per day WWTP to serve portions of Downe Township, including Fortescue and Gandy's Beach. A New Jersey Pollutant Discharge Elimination System (NJPDES) Permit and Treatment Works Approval for this new WWTP are pending. NJDEP cannot issue a final NJPDES permit or TWA for the proposed WWTP until the Downe Township Wastewater Management Plan has been approved and the WQM Plan amendment adopted.

The application to the DRBC was reviewed for inclusion of the project in the Comprehensive Plan. Review of the project under Section 3.8 of the *Delaware River Basin Compact* will be completed in accordance with the 2015 Administrative Agreement with The New Jersey Department of Environmental Protection. Cumberland County has been notified of pending action. A public hearing on this project was held by the DRBC on May 15, 2019.

A. DESCRIPTION

- 1. Purpose.** The purpose of this docket is to include the docket holder's proposed 0.146 million gallons per day (mgd) WWTP and its collection system in the DRBC's Comprehensive Plan in accordance with Article 11 of the DRBC Compact.
- 2. Location.** The docket holder's WWTP is proposed to be located on Block 85, Lot 2 and Block 87, Lot 1 and partly on a right-of-way in Fortescue, Downe Township, Cumberland County, New Jersey. The proposed pumping station at Gandy's Beach will be constructed at Block 2, Lot

1. The collection system sewers will be located under publicly-owned paved roads. The WWTP is proposed to discharge treated effluent to Fortescue Creek, which is a tidal tributary to Delaware River Water Quality Zone 6, at River Mile 28.0 – 0.5 (Delaware River – Fortescue Creek).

The WWTP outfall is proposed to be located in the Fortescue Creek Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001 (tentative)	39° 14' 36.46"	75° 10' 11.15"

3. **Area Served.** The docket holder's WWTP will serve Fortescue, Gandy's Beach, and miscellaneous individual lots along the path of the sewage conveyance in Downe Township, Cumberland County, New Jersey. For the purpose of defining the Area Served, the plan titled "GANDY'S BEACH AND FORTESCUE SEWER SERVICE AREA" included in 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 new 0.146 mgd WWTP is proposed to utilize an activated sludge treatment system with tertiary cloth filtration. The new WWTP will provide sewer service to a population of Fortescue, Gandy's Beach, and miscellaneous individual lots along the path of the sewage conveyance. The total estimated flow from 419 residential units and 5 commercial properties is approximately 0.130 mgd. The hydraulic design capacity of the plant is expected to be 0.17 mgd.

5. **Facilities.** The new WWTP facilities will consist of a 30,000 gallon influent chamber, an 81,250 gallon aeration chamber, a 24-ft diameter mechanical clarifier, a 20,000 gallon sludge chamber with 17 days of sludge storage, and a tertiary cloth filter.

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

6. **Water withdrawals.** Potable water supply in the project service area is provided by the Middlesex Water Company-Bayview System and private individual on-lot wells. All withdrawals are operated at withdrawal rates below the DRBC groundwater withdrawal review threshold and are not subject to Commission review and approval.

7. **Relationship to the Comprehensive Plan.** Issuance of this docket will include the project in the Comprehensive Plan.

8. **Estimated Construction Cost.** The total construction cost is estimated at approximately \$12,000,000. The construction of the system is expected to be undertaken with three Contracts with start dates ranging from 2019 to 2020.

B. FINDINGS

The docket holder submitted an application to construct a new 0.146 mgd WWTP to be included in the DRBC Comprehensive Plan. According to the *Community of Fortescue and Gandy's Beach Wastewater Collection, Conveyance, and Treatment System Preliminary Engineering Report* (Mott MacDonald, January 2, 2018), all developed properties in Fortescue and Gandy's Beach are serviced by individual on-site treatment and disposal systems (septic systems) for wastewater disposal. Due to the low elevation and proximity to Delaware Bay, these existing systems are vulnerable to flooding and storm damages. Overfilling of the holding tanks causes untreated effluent discharges to the Delaware Bay, and due to the age as well as damage to these systems, there have been issues with holdings tanks causing leaks to the groundwater table. To preserve the quality and integrity of the groundwater table as well as the waters of the Delaware Bay, the docket holder proposes to install a community-scale wastewater collection system that residents can tie into, as well as a centralized treatment plant to treat and discharge wastewater locally. There are currently approximately 333 developed properties at Fortescue and 90 developed properties at Gandy's Beach, and all of these properties are proposed to be connected to the new WWTP.

1. Sewer Servicing Alternatives

Sewer servicing alternatives were investigated for collection, treatment and disposal of wastewater from the Fortescue and Gandy's Beach communities which included: gravity, vacuum and low-Pressure collection systems; extended air and MBR Treatment Systems; and groundwater and surface water discharge disposal options. The Alpha Laval activated sludge treatment system with an additional tertiary disc filtration component, the low-pressure collection system, and surface water discharge options were selected. The components of which are described as follows:

Treatment Plant

A new treatment plant will replace the existing on-site septic systems used by all of the residents of this community. The treatment plant will be raised 8-feet from existing ground elevation so that it is constructed to one foot above the 500-year flood elevation, to increase the resiliency of this facility to the impacts of flooding. The plant will have a flow of 0.146 mgd. The proposed method of treatment to achieve the required effluent discharge limits is a filtration system provided by Alfa Laval. The treatment plant will include a 30,000-gallon influent chamber, an 81,250-gallon aeration chamber, a 24-ft diameter mechanical clarifier, a 20,000 -gallon sludge chamber with 17 days of sludge storage, and a tertiary cloth filter.

Collection System

The proposed low-pressure sewer system has a diameter ranging between 1.25" and 6" with a total length of pipe of about 58,000 LF. A grinder pump station is required at each residential connection, with clean out valves proposed every 1000 feet and air release valves at intervals of 2,000 to 2,500 feet. Lateral kits comprised of a ball and check valve will be installed between the pump discharge and street main on all installations. The system has been designed to produce self-cleaning velocities between 2 fps and 5 fps. Flow from Gandy's Beach will be conveyed to the new WWTP via a force main that will be installed along the paved roads.

Pumping Station

A pumping station is proposed at Gandy's Beach, to ensure sufficient velocities to prevent odor issues from arising during conveyance to the treatment plant.

2. Permits Required

The following permits are expected to be required for a surface water discharge to Fortescue Creek:

- Water Quality Management Plan Amendment
- Town Center/Village designation for conformance to State Development/Redevelopment Plan.
- Coastal Area Facility Review Act (CAFRA) Permit – N.J.A.C. 7:7-2.2
- Coastal Wetlands Permit - N.J.A.C. 7:7-2.3
- Waterfront Development Permit - N.J.A.C. 7:7-2.4
- New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water Permit and Treatment Works Approval
- Army Corps of Engineers Coastal & Tidal Permit under the Rivers and Harbors Act – US Coast Guard Section 9.10 Permit
- NOAA National Marine and Fisheries (NMFS) – Shellfish Growing Area
- Soil Erosion & Sediment Control
- NJDEP Environmental Impact Assessment / NEPA Environmental Assessment
- Connection to additional four properties: Tidelands permit for crossing watercourse

3. Other

This docket approves the inclusion of the proposed project in the DRBC's Comprehensive Plan. Review under Section 3.8 of the DRBC Compact is still required for this project; however, it is expected that Section 3.8 Review will be completed in accordance with the 2015 Administrative Agreement with The New Jersey Department of Environmental Protection. Under which, DRBC requirements will be included in the NJDEP NJPDES Discharge to Surface Water (DSW) Permit and Treatment Works Approval or other permits as appropriate for any program covered under the agreement.

The project is not expected to conflict with the Comprehensive Plan and shall be 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 DRBC will recommend to NJDEP effluent parameters expected to be included in the NJPDES DSW Permit for compliance with Commission effluent quality requirements and 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-2019-001 CP-1 below, the project and the appurtenant facilities described in Section A. DESCRIPTION of this docket shall be added to 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:

1. 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.
2. In accordance with 18 CFR 401.8 of the Commission's Rules of Practice and Procedure (RPP), if at any future time the Project is changed substantially from the Project as described in this docket, it will be deemed to constitute a new and different project for the purposes of Article 11 of the Delaware River Basin Compact and will require Commission amendment of the Comprehensive Plan. In accordance with the same section of the RPP, whenever a change to the Project is made, the sponsor must advise the Executive Director, who will determine whether the change is deemed substantial for purposes of this provision.
3. 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.
4. 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).
5. 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).
6. 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).
7. 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.

8. 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: June 12, 2019