

**DOCKET NO. D-1978-041 CP-3**

**DELAWARE RIVER BASIN COMMISSION**

**Lower Frederick Township  
Wastewater Treatment Plant Modification  
Lower Frederick Township, Montgomery County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Gannet Fleming, Inc. on behalf of Lower Frederick Township (the docket holder) on May 13, 2015 (Application) for review of a modification to the docket holder's existing wastewater treatment plant (WWTP). The Pennsylvania Department of Environmental Protection (PADEP) issued National Pollutant Discharge Elimination System (NPDES) Permit No. PA0050105 for the project WWTP on August 21, 2015.

The Application was reviewed for inclusion of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Montgomery County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on September 15, 2015.

**A. DESCRIPTION**

**1. Purpose.** The purpose of this docket is to approve the upgrade and expansion of the docket holder's existing WWTP. The upgrade consists of replacing the existing extended aeration / activated sludge treatment system with a sequencing batch reactor (SBR) treatment system, along with improvements to the existing headworks and sludge handling, the addition of filtration and post-equalization, and the replacement of the existing chlorine contact disinfection system with ultraviolet light (UV) disinfection. Additionally, the WWTP will be expanded from 0.2 million gallons per day (mgd) to 0.5 mgd.

**2. Location.** The project WWTP is located off of Springmount Road, just southwest of its intersection with Main Street, in Lower Frederick Township, Montgomery County, Pennsylvania. The project WWTP discharges to Perkiomen Creek, which is tributary to the Schuylkill River, at River Mile 92.47 – 32.3 – 13.4 (Delaware River – Schuylkill River – Perkiomen Creek).

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

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 16' 15"	75° 27' 34"

3. **Area Served.** The project WWTP will continue to serve Lower Frederick Township in Montgomery County, Pennsylvania.

For the purpose of defining the Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. **Physical features.**

a. **Design criteria.** The existing WWTP is designed to treat an average annual flow of 0.2 mgd utilizing an extended aeration / activated sludge treatment system. The project upgrade includes replacing the existing treatment system with an SBR treatment system and expanding the WWTP from 0.2 mgd to 0.5 mgd.

b. **Facilities.** The existing WWTP consists of an influent pump station, a bar screen and grinder, two (2) parallel extended aeration tanks, a clarifier, a chlorine contact disinfection tank, sodium bisulfite dechlorination, and a sludge holding tank.

The proposed upgrades consist of constructing a new headworks building with a vertical mechanical screen and influent pumping, replacing the two (2) extended aeration tanks with two (2) new SBR tanks, adding a new post-equalization tank, adding a new cloth media disk filter, replacing the existing chlorine contact tanks with UV disinfection, and adding a re-aeration chamber. The SBRs will feature a chemical feed system for the removal of phosphorous. The sludge handling tank will be retrofitted with coarse bubble aeration.

DRBC Docket No. D-1978-041 CP-2 approved a modification to the docket holder's existing WWTP to replace the chlorine contact disinfection system with a UV disinfection system; however, that project was never constructed. The replacement of the chlorine contact system with UV disinfection will be performed as part of the project approved by this docket (D-1978-041 CP-3).

The docket holder has not submitted site plans for the project upgrade and expansion. The final plans and specifications are required to be submitted to DRBC for approval by the Executive Director prior to the initiation of construction of the WWTP modifications approved in this docket (see Condition II.i. in the Decision section).

Several of the proposed facilities are located in the flood hazard area. The docket holder has indicated that the proposed tankage and improvements located in the flood hazard area are located outside the floodway, in the flood fringe, and will be flood-proofed up to the flood protection elevation (100-year flood elevation plus one foot). This will be accomplished by setting the elevations of the tops of the proposed tanks above the flood protection elevation. See the FINDINGS section of this docket and Condition II.r. in the Decision section.

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 groundwater wells owned and operated by the Schwenksville Borough Authority, as described in detail in Docket No. D-2003-029 CP-2, which was approved by the DRBC on September 12, 2013.

**d. NPDES Permit / DRBC Docket.** PADEP issued NPDES Permit No. PA0050105 for the existing WWTP on August 21, 2015, which includes effluent limitations for the existing WWTP (at 0.2 mgd) and the proposed WWTP expansion (at 0.5 mgd) to surface waters classified by the PADEP as warm water fishery (WWF) and migratory fishery (MF).

The following average monthly effluent limits, based on an annual average flow of 0.2 mgd and 0.5 mgd, are among those listed in the NPDES permit and meet or are more stringent than the effluent requirements of the DRBC, and are in effect before and after the WWTP upgrades and expansion are constructed.

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

<b>OUTFALL 001 (Perkiomen Creek)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
pH (Standard Units)	6.0 to 9.0	As required by NPDES permit
Total Suspended Solids	20 mg/l	As required by NPDES permit
CBOD (5-Day at 20° C)	15 mg/l (85 % minimum removal)	As required by NPDES permit
CBOD (5-Day at 20° C) Influent	Monitor & Report	As required by NPDES permit
Ammonia Nitrogen	3.0 mg/l	As required by NPDES permit
Fecal Coliform	200 col. / 100 ml as a geo. avg.	As required by NPDES permit
Total Dissolved Solids	Monitor & Report*	As required by NPDES permit

\* The NPDES permit requires monitor and report only for TDS for the proposed WWTP expansion to 0.5 mgd; however, the docket holder is required by this docket to meet a TDS effluent concentration limit of 1,000 mg/l after the WWTP upgrade and expansion to 0.5 mgd goes into operation (See EFFLUENT TABLE A-2 below).

The following average monthly effluent limits of the DRBC and are in effect after the project upgrades are completed and the upgraded WWTP goes into operation.

**EFFLUENT TABLE A-2 DRBC Parameters in effect after the project upgrades are completed**

<b>OUTFALL 001 (Perkiomen Creek)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
Total Dissolved Solids*	1,000 mg/l	Quarterly

\* See DECISION Condition II.v.

**e. Cost.** The overall cost of this project is estimated to be \$6,355,000.00.

f. **Relationship to the Comprehensive Plan.** The existing WWTP was included in the Comprehensive Plan by DRBC Docket No. D-1978-041 CP-1 on July 25, 1979 and modified via Docket No. D-1978-041 CP-2 on May 6, 2009. This docket (D-1978-041 CP-3) approves the upgrade and expansion of the WWTP.

## B. **FINDINGS**

This docket approves the upgrade and expansion of the docket holder's existing WWTP. The upgrade includes replacing the existing extended aeration / activated sludge treatment system with a sequencing batch reactor (SBR) treatment system and expanding the WWTP from 0.2 mgd to 0.5 mgd.

### **DRBC Flood Plain Regulations**

Several of the proposed improvements to the WWTP are located in the flood hazard area (FEMA-designated 100-year flood zone) of Perkiomen Creek. The docket holder has indicated that the proposed tankage and improvements located in the flood hazard area are located outside the floodway, in the flood fringe, and will be flood-proofed up to the flood protection elevation by setting the elevations of the tops of the proposed tanks above the flood protection elevation. Section 6.3.4 of the Commission's Flood Plain Regulations (FPR) allows certain uses, including waste treatment facilities, within the flood fringe to be authorized by special permit. The upgrade and expansion to the existing WWTP is designed to comply with the Commission's FPR. This docket constitutes a special use permit for the project in accordance with Section 6.3.4 of the Commission's Flood Plain Regulations for wastewater treatment facilities within floodway and flood fringe areas. In accordance with Section 6.3.4.B.5 of the FPR, the docket holder is required to prepare a Flood Emergency Plan, which shall include plans and procedures for actions to be taken in the event of flooding at the WWTP site. The written Flood Emergency Plan is required to be submitted to the Executive Director for approval prior to the initiation of construction of the WWTP modifications approved in this docket. Additionally, the docket holder is required to submit site plans and profile plans indicating the proposed improvements are located outside the floodway, and the elevations of the tops of the proposed tanks are above the flood protection elevation. The site plans and profile plans are required to be submitted to DRBC for approval by the Executive Director prior to the initiation of construction of the proposed upgrade and expansion (See DECISION Condition II.r.).

At the WWTP discharge location, Perkiomen Creek has an estimated seven-day low flow with a recurrence interval of ten years (Q-7-10) of 9.6 mgd (14.9 cfs). The ratio of this low flow to the design wastewater discharge from the expanded WWTP (0.5 mgd) is 19 to 1.

The nearest surface water intake of record for public water supply downstream of the project discharge is operated by Aqua Pennsylvania, and is located on the Perkiomen Creek approximately 12 miles 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 *Water Quality Regulations* (WQR) of the DRBC.

### C. DECISION

I. Effective on the approval date for Docket No. D-1978-041 CP-3 below:

a. The project described in Docket No. D-1978-041 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1978-041 CP-3; and

b. Docket No. D-1978-041 CP-2 is terminated and replaced by Docket No. D-1978-041 CP-3.

c. The project and the appurtenant facilities described in the Section A “Physical Features” of this docket shall be added to 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 PADEP in its NPDES permit and Part II 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 and FPR.

d. The docket holder shall comply with the requirements contained in EFFLUENT TABLE A-1 in Section A.4.d. of this docket prior to the project upgrades and expansion going into operation. After the WWTP upgrades and expansion are completed and go into operation, the docket holder shall comply with the requirements contained in EFFLUENT TABLES A-1 & A-2 in Section A.4.d. 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/application/index.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. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams.

i. The docket shall submit final constructions plans and specifications for the proposed upgrade and expansion and have the plans approved by the Executive Director prior to the initiation of construction of the WWTP modifications approved in this docket. The docket holder shall construct the WWTP modifications in accordance with the plans approved by the Executive Director.

j. Within 10 days of the date that construction of the project has started, the docket holder shall notify the DRBC of the starting date and scheduled completion date.

k. Within 30 days of completion of construction of the approved project, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement (“Statement”) signed by the docket holder’s professional engineer for the project. The Statement must (1) either confirm that construction has been completed in a manner consistent with any and all DRBC-approved plans or explain how the as-built project deviates from such plans; (2) report the project’s final construction cost as such cost is defined by the project review fee schedule in effect at the time the application was made; and (3) indicate the date on which the project was (or is to be) placed in operation. In the event that the final project cost exceeds the estimated cost used by the docket holder to calculate the DRBC project review fee, the statement must also include (4) the amount of any outstanding balance owed for DRBC review. The outstanding balance will equal the difference between the fee paid to the Commission and the fee calculated on the basis of the project’s final cost, using the formula and definition of “project cost” set forth in the DRBC’s project review fee schedule in effect at the time application was made.

l. The WWTP modification shall be completed within three years of approval of this docket or the docket holder shall demonstrate to the Executive Director that it has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval. If the modifications have not been completed by the expiration date of this docket and the docket holder does not submit a cost analysis demonstrating substantial funds have been expended, Commission approval of the modification to the existing WWTP shall expire. If the docket expires under this condition, the docket holder shall file a new application with the Commission and receive Commission approval prior to initiating construction of any modifications.

m. 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.

n. 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.

o. 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).

p. 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.

q. 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.

r. This docket constitutes a special permit under Section 6.4 of the Commission's FPR. The approval is conditioned on the submitting a Flood Emergency Plan detailing the actions to be taken in the event of flooding, and site plans and profile plans indicating the proposed improvements are located outside the floodway and the elevations of the tops of the proposed tanks are above the flood protection elevation. The Flood Emergency Plan and site and profile plans are to be submitted to the Executive Director for approval prior to the initiation of construction of the WWTP upgrade and expansion approved in this docket.

s. 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.

t. 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.

u. 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.

v. 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.

w. 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.

x. 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: September 16, 2015**

**EXPIRATION DATE: April 30, 2021**