

DOCKET NO. D-2000-55 CP-2

DELAWARE RIVER BASIN COMMISSION

**Upper Uwchlan Township
Wastewater Treatment Plant Expansion and Modification
Upper Uwchlan Township, Chester County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Upper Uwchlan Township on June 27, 2008 (Application), for review of the construction and expansion/modification of the existing Upper Uwchlan Township Route 100 Regional Wastewater Treatment Plant. The Pennsylvania Department of Environmental Protection (PADEP) provided an internal review and recommendation to DRBC of Water Quality Management Permit No. 1500421 Amendment No. 4 on September 4, 2008.

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 Chester County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on September 24, 2008.

A. DESCRIPTION

1. Purpose. The purpose of this project is to upgrade and expand the existing 0.3 mgd Upper Uwchlan Township Route 100 Regional WWTP to 0.6 mgd. The current upgrade is the 2nd of 3 planned phases, which will ultimately result in a capacity of 0.8 mgd. Treated effluent will be disposed via land application using both drip and spray irrigation on open space in new subdivisions being developed in the sewer service area.

2. Location. The project WWTP is located north of the Village of Eagle, in Upper Uwchlan Township, Chester County, Pennsylvania. The WWTP will land apply treated effluent in both the Pickering Creek watershed (Water Quality Zone 4 at River Mile 92.47-36.45-14.6 (Delaware River – Schuylkill River – Pickering Creek)) and Marsh Creek watershed (Water Quality Zone 5 at River Mile 70.73 - 1.74 - 19.91 - 12.34 - 2.68 - 0.94 - 1.35 (Delaware River -

Christina River - Brandywine Creek - East Branch Brandywine Creek - Black Horse Creek - unnamed tributary to Black Horse Creek)). No discharge is proposed to Pickering or Marsh Creeks or their tributaries.

The project WWTP is located as follows:

LATITUDE (N)	LONGITUDE (W)
40° 05' 42"	75° 41' 40"

3. Area Served. The docket holder's WWTP will receive wastewater flows from existing and proposed development along the Route 100 corridor in Upper Uwchlan Township, Chester 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 a two-cell aerated lagoon facility designed to provide treatment to 0.3 mgd. The docket holder proposes to modify and expand the WWTP to provide 0.6 mgd treatment capacity. The upgraded WWTP will utilize a two basin sequencing batch reactor (SBR) for treatment.

b. Facilities. The existing WWTP consists of an automatic influent screen, two influent pumps, a two-cell aerated lagoon separated with floating baffle, a storage lagoon to polish and hold treated effluent when conditions prevent irrigation, influent and effluent flow meters, chlorination system, and effluent pumps to convey treated effluent to individual land application sites.

The expanded 0.6 mgd WWTP will provide treatment of 0.2 mgd in the existing aerated lagoons, with the remainder of the lagoon volume used for additional storage. A new two-basin SBR will be constructed along with chemical feed equipment for pH adjustment of influent, a new SBR influent flow meter, and post SBR equalization tank. The 0.2 mgd treatment from the aerated lagoon and 0.4 mgd SBR will operate in parallel. A third influent pump will be installed to supplement the two existing pumps. A new aerobic sludge digester will be constructed, along with a centrifuge sludge dewatering facility including sludge feed pumps, and a dumpster conveyor. No interruption of the existing components will be required for construction of Phase 2.

Ultimately the Phase III WWTP will treat 0.8 mgd to meet projected demand over the next 15 additional years.

Prior facilities and processes for the WWTP have been described in DRBC Dockets Nos. D-2000-55 CP and D-93-10 CP, approved by DRBC on April 19, 2001 and June 23, 1993, respectively.

The docket holder's WWTP has a generator available for emergency power supply to the screen, influent pumps, and SBR system. The sludge handling facilities, effluent pumps, and disinfection facilities will not be operated in emergency situations.

The project facilities are above the 100-year flood zone.

Wasted sludge will be hauled off-site by a licensed hauler for deposit at a State-approved facility.

c. Water withdrawals. The potable water supply in the project service area is provided by Aqua America.

d. NPDES Permit / DRBC Docket. The Water Quality Management Sewerage Permit No. 1500421 Amendment No. 4, internally approved by PADEP on September 4, 2008, includes final effluent limitations for the project effluent land application. 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 PADEP Water Quality Management Permit for Upper Uwchlan Township Route 100 Regional WWTP

Land Application of Treated Effluent (Description)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES permit
Total Suspended Solids	30 mg/l (85% minimum removal*)	As required by NPDES permit
CBOD (5-Day at 20° C)	25 mg/l (85% minimum removal*)	As required by NPDES permit
Fecal Coliform	200 colonies per 100 ml	As required by NPDES permit

* DRBC Requirement

e. Cost. The overall cost of this project is estimated to be \$6,125,000.

f. Relationship to the Comprehensive Plan. The project was previously included in the Comprehensive Plan on April 19, 2001 by DRBC Docket No. D-2000-55 CP.

B. FINDINGS

Upper Uwchlan Township is applying for a docket to modify the existing Route 100 Regional Wastewater Treatment Plant and to expand from 0.3 mgd to 0.6 mgd.

PADEP Act 537 Plan approval for the project was received on April 12, 2000. The proposed STP discharge is not expected to have an adverse impact upon March Creek Reservoir or the ground water, however, PADEP had required the docket holder to monitor the groundwater on a quarterly basis under Phase I of the Part II Permit. The docket holder has indicated that the groundwater monitoring program will continue under the Phase II of the Part II Permit. The groundwater monitoring program will include quarterly sampling to ensure that static water level, sampling depth, turbidity, temperature, pH, conductivity, chloride, total phosphorus, ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, Kjeldahl nitrogen, suspended solids, and total dissolved solids are within PADEP water quality standards. Annual groundwater monitoring includes fecal coliform, total coliform, alkalinity, sulfate, COD, BOD5, MBAS, total solids, settleable solids, total iron, and total manganese. As the project site was formerly used for petroleum storage, PADEP had required the docket holder to remediate a small area of the property where gasoline and diesel fuel-related pollutants were found in the soil. The docket holder indicated that the PADEP required soil remediation has been completed. The completed remediation activities included the removal of 212 cubic yards of petroleum contaminated soil in the area where several buildings once stood. The contaminated soil was removed from the site and disposed of at a soil disposal/recycling facility in New Jersey. Remediation documentation was submitted to PADEP and on March 20, 2000, PADEP issued a release of liability. The docket holder indicated that there are no outstanding remediation requirements for the site.

The docket holder indicated that the WWTP discharge lost via evaporation/transpiration is estimated at 30% for spray irrigation and 0% for drip irrigation leaving the remaining effluent available for recharging the local groundwater table. The project discharge limits are in compliance with Commission effluent quality requirements, where applicable.

The 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* of the DRBC.

Near the project site, the Pickering Creek has an estimated seven-day low flow with a recurrence interval of ten years of 0.016 mgd (0.01 cfs). The ratio of this low flow to the average

design wastewater discharge from the Upper Uwchlan Township Route 100 Regional WWTP plant is 0.03 to 1.

The nearest surface water intake of record for public water supply downstream of the project is Aqua PA for the Brandywine Creek portion and Aqua PA for the Pickering Creek portion of the site.

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.

C. DECISION

- I. Effective on the approval date for Docket No. D-2000-55 CP-2 below:
 - a. Docket No. D-2000-55 CP is terminated and replaced by Docket No. D-2000-55 CP-2.
 - b. 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 Part II Permit and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s. Commission approval of this docket is contingent on the PADEP’s approval of the Part II permit.
 - 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 *Water Quality Regulations* of the DRBC.
 - d. The docket holder shall maintain and make available to DRBC upon request, records identifying the sources, volumes and characteristics of all wastewaters and sludges treated at the WWTP, as well as the dates when off-site wastes were received and treated. Records are to be retained for 5 years.

e. The docket holder shall comply with the requirements contained in the Effluent Table in Section A.4.d. of this docket. The docket holder shall submit DRBC required monitoring results directly to DRBC (Project Review Section). The monitoring results shall be submitted annually absent any observed limit violations. If a DRBC effluent limit is violated, the docket holder shall submit the results and provide a written explanation within 30 days of the violation the action(s) the docket holder has taken to correct the violation and protect against a future violation.

f. 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*.

g. 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.

h. 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.

i. 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.

j. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams.

k. 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.

l. Upon completion of construction of the approved project, the docket holder shall submit a statement to the DRBC, signed by the docket holder's engineer or other responsible agent, advising the Commission that the construction has been completed in compliance with the approved plans, giving the final construction cost of the approved project and the date the project is placed into operation.

m. This docket approval shall expire three years from date below unless prior thereto the docket holder has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

n. The docket holder is permitted to treat and discharge the categories of wastewaters defined in the “Area Served” section of this docket.

o. 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.

p. 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).

q. 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.

r. 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.

s. A complete application for the renewal of this docket, or a notice of intent to cease the operations (withdrawal, discharge, etc.) approved by this docket by the expiration date, must be submitted to the DRBC at least 12 months prior to the expiration date below (unless permission has been granted by the DRBC for submission at a later date), using the appropriate DRBC application form. 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 this 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. The docket holder and any other person aggrieved by a reviewable action or decision taken by the Executive Director or Commission pursuant to this docket may seek an administrative hearing pursuant to Articles 5 and 6 of the Commission's *Rules of Practice and Procedure*, and after exhausting all administrative remedies may seek judicial review pursuant to Article 6, section 2.6.10 of the *Rules of Practice and Procedure* and section 15.1(p) of the Commission's *Compact*.

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.

BY THE COMMISSION

DATE APPROVED:

EXPIRATION DATE: September 4, 2013

DRAFT