

DOCKET NO. D-2007-31 CP-1

DELAWARE RIVER BASIN COMMISSION

Discharge to a Tributary of Special Protection Waters

City of Easton

Water Treatment Plant Discharge

City of Easton, Northampton County, Pennsylvania

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) by Easton Suburban Water Authority on behalf of the City of Easton on August 28, 2007 (Application), for review of water filtration plant filter backwash discharge. The Pennsylvania Department of Environmental Protection (PADEP) issued National Pollutant Discharge Elimination System (NPDES) Permit No. PA0051632 on June 1, 2005 for this project.

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 Lehigh Valley Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on July 16, 2008.

A. DESCRIPTION

- 1. Purpose.** The purpose of this project is to approve the discharge of up to 0.75 million gallons per day (mgd) of filter backwash from the docket holders' existing water filtration plant to the Delaware River.
- 2. Location.** The project is located in the City of Easton near North Delaware Drive. The project outfall to the Delaware River is located in Water Quality Zone 1D at River Mile 185.2. The outfall is located in the Lower Delaware Special Protection Water Area, and has been classified as Significant Resource Waters.

The project outfall is located in the Martins Creek Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
1	40° 42' 43"	75° 11' 48"

3. **Area Served.** The outfall discharges filter backwash from a holding lagoon located at the docket holder's water filtration plant.

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 docket holder operates a water treatment plant adjacent to the Delaware River. The filter backwash and filter press filtrate holding tank discharge has a capacity of 0.75 million gallons per day.

b. **Facilities.** The facilities are above the 100-year flood zone.

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

The docket holder's water filtration plant discharges to waters classified as SPW and is required to have available emergency power. The City of Easton water filtration plant has a generator available for emergency power supply.

The docket holder's water filtration plant is staffed 24 hours per day, and is not required to provide a remote alarm system that continuously monitors plant operations.

The docket holder's water filtration plant does not discharge to Outstanding Basin Waters (OBW), and is not required to have a nonvisible discharge plume.

The docket holder's water filtration plant has prepared and implemented an emergency management plan suitable to Commission standards.

The docket holder's expanded water filtration plant is required to discharge effluent that is consistent with "Best Demonstrable Technology" (BDT) effluent limit.

c. **Water withdrawals.** The potable water supply in the project service area is supplied by the City of Easton. The water withdrawal from the Delaware River is described in detail in Docket No. D-99-62 CP, which was approved on February 28, 2007.

d. **NPDES Permit / DRBC Docket.** The NPDES Permit No. PA0051632 approved by PADEP on June 1, 2005, includes final effluent limitations for the project discharge of 0.75 mgd to surface waters classified by the PADEP as (TSF) Trout Stocking. The following average monthly effluent limits are among those listed in the NPDES permit.

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

OUTFALL 001		
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

The minimum level of wastewater treatment for discharges directly to Special Protection Waters is “Best Demonstrable Technology (BDT)”. The docket holder is required to meet the BDT effluent limits. BDT for disinfection is required to be ultraviolet (UV) light disinfection or equivalent disinfection.

EFFLUENT TABLE A-2: DRBC Required Effluent Limits Not Included in NPDES Permit

OUTFALL 001 (Lagoon)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	1,000 mg/l *	Quarterly **
Total Suspended Solids	10 mg/l *	As required by NPDES permit
Dissolved Oxygen *	6 mg/l minimum	Quarterly *
CBOD (5-Day at 20°C) *	10 mg/l * (85% minimum removal*)	Quarterly *
Ammonia Nitrogen *	1.5 mg/l *	Quarterly *
Total Nitrogen *	10 mg/l	Quarterly *
Nitrate Nitrogen*	Monitor & Report Only *	Quarterly *
Fecal Coliform	50 colonies /100 ml * UV Disinfection *,***	Quarterly *
Phosphorous *	2.0 mg/l *	Quarterly *

* DRBC Requirement

** See Condition II. v.

*** See Condition II. e.

e. Relationship to the Comprehensive Plan. The existing facilities were included in the Comprehensive Plan by Resolution No. 62-14. Docket No. D-68-31 CP approved an 8 mgd Water Filtration Plant and was approved by the Commission on October 22, 1968. Docket No. D-71-63 CP approved a 10 mgd Water Filtration Plant and withdrawal, and was approved on November 30, 1977. The expansion of the 10 mgd Water Filtration Plant to 16 mgd and the increase in the surface water allocation from 10 mgd to 13 mgd was approved by Docket No. D-99-62 CP on February 28, 2007. The discharge from the Water Filtration Plant was not previously approved by the Commission. This docket will include the docket holder’s Water Filtration Plant discharge to the Comprehensive Plan.

The docket holder’s WWTP was added to the Comprehensive Plan by D-87-10 CP on May 27, 1987.

B. FINDINGS

On January 19, 2005, September 26, 2005, September 27, 2006, September 26, 2007 and May 14, 2008, the DRBC approved interim amendments to its Water Quality Regulations (WQR) that provide increased protection for waters that the Commission classifies as Special Protection Waters. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan area was approved for Special Protection Water designations. (Lower SPW)

The docket holder's Water Filtration Plant discharge is located in the Lower Delaware Special Protection Waters. The minimum level of wastewater treatment for discharges directly to Special Protection Waters is "Best Demonstrable Technology (BDT)". The docket holder is required to meet the BDT effluent limits.

Additionally, WQR Section 3.10.3.A.d.7) provides that "BDT requirements for disinfection shall be ultraviolet light disinfection or an equivalent disinfection process that results in no harm to aquatic life, does not produce toxic chemical residuals, and results in effective bacterial and viral destruction".

The docket holder has indicated it will be pursuing a no discharge option (which would require the recirculation of the processed wastewater from its water filtration treatment plant into its raw water system). The implementation of this no discharge option requires the approval of PADEP. Condition II. e. in the Decision section provides a schedule that allows the docket holder a reasonable time to pursue the no discharge option with PADEP. It also requires the docket holder to comply with the BDT disinfection requirements if the docket holder's request is disapproved or not acted upon in a reasonable time by the date included in the condition.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *Water Quality Regulations* of the DRBC.

Article 3.10.3A.2.e.1) and 2) of the *Water Quality Regulations, Administrative Manual - Part III*, requires that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of Special Protection Waters must submit for approval a Non-Point Source Pollution Control Plan that controls the new or increased non-point source loads generated within the portion of the applicant's service area which is also located within the drainage area of Special Protection Waters. The service area of the docket holder is located within the drainage area to the Special Protection Waters. Accordingly, Special Conditions II. q. and r. have been included in the Decision section of this docket.

The service area associated with the existing Water Filtration Plant provides approximately 4 mgd to the City of Easton. Additionally, almost 6 mgd is provided to the Easton

Suburban Water Authority (ESWA), which supplies water to parts of West Easton, Wilson, and Glendon Boroughs, and Forks, Palmer, Bethlehem, Williams and Lower Nazareth Townships. The City of Easton, West Easton, Wilson and Glendon Boroughs, as well as Forks, Palmer, Bethlehem, Williams, Lower Nazareth, and Lower Mt. Bethel Townships are regulated by the PADEP as Stormwater Phase II municipalities and are permitted by PADEP as such. In addition, all of the Stormwater Phase II municipalities mentioned above, plus Plainfield Township have participated in Pennsylvania ACT-167 Watershed Plans. The “Bushkill Creek, Catasauqua Creek, Coplay Creek, Fry’s Run, Hokendauqua Creek, Jordan Creek, Martins/Jacoby Creek, Monocacy Creek, Nancy Run, Saucon Creek, Trout/Bertsch Creeks, Delaware River Sub-basins and Lehigh River Sub-basins Watersheds Act 167 Stormwater Management Plan Water Quality Update”, which is also known as the “Global Update”, was adopted on June 14 and 15th, 2006 by Lehigh and Northampton Counties, respectively. The “Global Update” includes all of the municipalities in the service area. After county adoption, the “Global Update” is then forwarded to PADEP for approval, and within six months of PADEP approval, the municipalities within the Plan’s study area are required to update their existing stormwater ordinances to implement the “Global Update”. The primary reason for the “Global Update” was to include water quality criteria to the previous plan, which only included peak release rates. The “Global Update” satisfies the NPSPCP requirements of the Commission.

Prior to PADEP approval of the “Global Update”, no new connections within the service areas of Easton and ESWA will be approved until either:

- 1) the municipalities within either service area adopt and implement amended stormwater ordinances in accordance with the PADEP Phase II requirements

or

- 2) until the docket holder or ESWA receives written notice from the Executive Director that the sponsor of a new connection has a DRBC approved NPSPCP.

Six (6) months after PADEP’s approval of the “Global Update”, no new connections within either service area will be approved until the municipalities within the service area adopt and implement amended stormwater ordinances in accordance with the PADEP approved “Global Update” requirements.

Near the project site, the Delaware River has an estimated seven-day low flow with a recurrence interval of ten years of 1,050 mgd (1630 cfs). The ratio of this low flow to the average design wastewater discharge (0.75 mgd / 1.16 cfs) is 153:1

The nearest surface water intake of record for public water supply downstream of the project discharge is operated by the North Penn and North Wales Water Authority, near Point Pleasant, PA, at River Mile 158, approximately 27 miles downstream.

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-2007-31 CP-1 below, 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 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 NPDES 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 comply with the requirements contained in the Effluent Tables 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.

e. i. On or before December 1, 2008 the docket holder shall submit a permit request to PADEP (copy to DRBC) for the request for approval to recirculate the backwash water from the backwash water treatment plant (no-discharge option). Failure to obtain DRBC Executive Director approval of an extension of this date shall result in the docket holder complying with the requirements in paragraph iii. below.

ii. On or before May 1, 2009 a determination for approval or denial obtain approval from PADEP for the no discharge option. If the approval is granted, the docket holder shall submit a schedule to implement the no discharge option. The no discharge option shall be implemented no later than May 1, 2010. If the request for a no discharge option is granted the SPW requirements Section 3.10.3.A.d.7) (Best Demonstrable technology for disinfection) will not be required for the docket holder's discharge from its Water Filtration Plant. If the request for a no discharge option is denied by PADEP or not acted upon by PADEP, or the docket holder does request or receive approval from the DRBC Executive Director of an extension of this date the docket holder shall comply with paragraph iii. below.

iii. On or before July 15, 2009 the docket holder shall prepare and submit to the DRBC Executive Director and PADEP an engineering study that will evaluate the addition of UV Disinfection or an equivalent disinfection process to the discharge from Outfall 001 (lagoon overflow) or another effective location. The docket holder's submission shall include the docket holder's selected alternative and an implementation schedule.

1. Within one hundred twenty (120) days of the receipt by the docket holder of all required written approvals from DRBC Executive Director and PADEP, the docket holder shall prepare and issue a final bid specification package for the implementation or installation of the DRBC approved disinfection alternative.

2. Within ninety (90) days of the receipt of bids in response to above a contract shall be executed to begin either the construction or installation of the agreed upon alternative and / or the implementation of the selected alternative in accordance with the implementation schedule submitted and approved above.

3. The docket holder shall implement the selected alternative in accordance with the implementation schedule submitted and approved above.

(iv) The docket holder may request of the Executive Director a modification to the schedule contained above. Such requests shall be in writing and shall include supporting documentation for the requested modification.

f. 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.

g. 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*.

h. 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.

i. 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.

j. 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. (Non-tidal, Non-trout Waters)

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

l. 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.

m. 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.

n. 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.

o. Prior to allowing connections from any new service areas or any new developments, the docket holder shall either submit and have approved by the Executive Director of the DRBC a Non-Point Source Pollution Control Plan (NPSPCP) in accordance with Section 3.10.3.A.2.e, or receive written confirmation from the Executive Director of the DRBC that the new service area is in compliance with a DRBC approved NPSPCP.

p. The Non-Point Source Pollution Control Plan (the “Global Update” Act 167 Stormwater Management Plan Water Quality Update) required for the docket holder and ESWC’s service areas meet the general requirements of DRBC *Water Quality Regulations*, Article 3.10.3.A.2.e.1). Prior to PADEP approval of the “Global Update”, no new connections within either service area will be approved until either

i. the municipalities within the service areas adopt and implement amended stormwater ordinances in accordance with the PADEP Phase II requirements

or

ii. until the docket holder or ESWA receives written notice from the Executive Director that the sponsor of a new connection has a DRBC approved NPSPCP.

Six (6) months after PADEP's approval of the "Global Update", no new connections within either service area will be approved until the municipalities within the service areas adopt and implement amended stormwater ordinances in accordance with the PADEP approved "Global Update" requirements.

q. 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.

r. 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.

s. 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*.

t. 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: July 16, 2008

EXPIRATION DATE: May 31, 2010