DOCKET NO. D-1976-089-2

DELAWARE RIVER BASIN COMMISSION

Discharge to Special Protection Waters

Blair Academy
Wastewater Treatment Plant
Blairstown Township, Warren County, New Jersey

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Blair Academy (the docket holder) on September 3, 2010 (Application), for renewal of the docket holder's existing wastewater treatment plant (WWTP) and its related discharge. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit No. NJ0022101 for the project discharge was issued by the New Jersey Department of Environmental Protection (NJDEP) on December 23, 2011.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact (Compact)*. The Warren County Planning Department has been notified of pending action. A public hearing on this project was held by the DRBC on December 9, 2014.

A. DESCRIPTION

1. **Purpose**. The purpose of this docket is to renew approval of the docket holder's existing 0.05 million gallon per day (mgd) WWTP and its related discharge. There are no modifications to the WWTP proposed.

2. **Location**. The docket holder's WWTP is located on the campus of Blair Academy, which is located on Park Street just north of its intersection with Main Street in Blairstown Township, Warren County, New Jersey. The WWTP will continue to discharge to Blair Creek, a tributary of Paulins Kill, at River Mile 207 – 10.4 – 0.5 (Delaware River – Paulins Kill – Blair Creek), which is located in the Lower Delaware Special Protection Water (SPW) area.

The project outfall is located in the Paulins Kill Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001A	40 ° 59' 11"	74 ° 57' 33"

3. **Area Served**. The docket holder's WWTP will continue to serve Blair Academy campus, which is located in Blairstown Township, Warren County, Pennsylvania. 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. **Physical features**.

a. **Design criteria**. The docket holder's 0.05 mgd WWTP will continue to utilize an extended aeration/activated sludge system and chlorine contact disinfection.

b. **Facilities**. The WWTP facilities consist of a bar screen, influent pumping, and the main treatment tank that features an aeration zone, a final settling zone (clarifier), and post aeration. Aluminum sulfate is added for phosphorous removal, chlorine is added for disinfection, and sodium bisulfate is added for dechlorination. Sludge handling consists of a sludge holding tank.

The docket holder's wastewater treatment facility discharges to waters classified as SPW and is required to have available emergency power. Emergency power is provided at the existing WWTP. (SPW)

The docket holder's wastewater treatment facility is not staffed 24 hours per day, and is required to have a remote alarm system that continuously monitors plant operations in accordance with the Commission's SPW requirements. The existing WWTP has a remote alarm system installed that continuously monitors plant operations. (SPW)

The docket holder's existing wastewater treatment facility has prepared and implemented an emergency management plan (EMP) in accordance with Commission SPW requirements. (SPW)

The docket holder's existing wastewater treatment facility does not discharge to Outstanding Basin Waters (OBW), and is not required to have a nonvisible discharge plume in accordance with the Commission's SPW requirements. (SPW)

The docket holder's existing wastewater treatment facility is not a direct discharger to SRW and is not required to provide "Best Demonstrable Technology" (BDT) as a minimum level of treatment in accordance with the Commission's SPW requirements. (SPW)

The project facilities are not located in the 100-year floodplain.

Waste sludge is 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 Blairstown Water Company. The wells

are operated at a withdrawal rate below the DRBC review threshold, and as such, do not require Commission approval.

d. NJPDES Permit / DRBC Docket. NJDEP issued NJPDES Permit No. NJ0022101 for the project discharge on December 23, 2011, which includes effluent limits for the project discharge to surface waters classified as Freshwater Two – Trout Maintenance (FW2-TM) Category 2 (C2). The following average monthly effluent limits and monitoring requirements, based on a flow of 0.05 mgd, are for DRBC parameters listed in the NJPDES permit that meet or are more stringent than the effluent requirements of the DRBC.

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

OUTFALL 001A (Blair Creek)		
PARAMETER	**LIMIT**	**MONITORING**
pH (Standard Units)	6 to 9 at all times	As required by NJPDES permit
Total Suspended Solids	30 mg/l; 85 % minimum removal	As required by NJPDES permit
BOD (5-Day at 20^{o} C)	30 mg/l; 85% minimum removal	As required by NJPDES permit
Ammonia-Nitrogen	20 mg/l	As required by NJPDES permit
Fecal Coliform	200 colonies per 100 ml as a geo. avg.	As required by NJPDES permit
Dissolved Oxygen	6.0 mg/l (daily avg. minimum)	As required by NJPDES permit
Total Phosphorous	1.0 mg/l	As required by NJPDES permit
Nitrate as N	Monitor & Report	As required by NJPDES permit

EFFLUENT TABLE A-2: DRBC Parameters Not Included in NJPDES permit

OUTFALL 001A (Blair Creek)		
PARAMETER	**LIMIT**	**MONITORING**
Total Dissolved Solids*	Monitor & Report Influent & Effluent	Monthly
Total Nitrogen	Monitor & Report	Monthly
Total Kjeldahl Nitrogen (TKN)	Monitor & Report	Monthly

* See FINDINGS section and Conditions II.n. & II.r. in DECISION section

B. FINDINGS

This docket renews the approval of the docket holder's existing 0.05 mgd WWTP. There are no modifications to the WWTP proposed.

In 1992, the DRBC adopted SPW requirements, as part of the DRBC *Water Quality Regulations* (*WQR*), designed to protect existing high water quality in applicable areas of the Delaware River Basin. One hundred twenty miles of the Delaware River from Hancock, New York downstream to the Delaware Water Gap has been classified by the DRBC as SPW. This stretch includes the sections of the river federally designated as "Wild and Scenic" in 1978 -- the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area -- as well as an eight-mile reach between Milrift and Milford, Pennsylvania which is not federally designated. The SPW regulations apply to this 120-mile stretch of the river and its drainage area. (Upper/Middle SPW)

On July 16, 2008, the DRBC approved amendments to its Water Quality Regulations (WQR) that provide increased protection for waters that the Commission classifies as SPW. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan Area was approved for SPW designation. (Lower SPW)

The docket holder's WWTP discharges to the drainage area to the Lower Delaware River and is designated as Special SPW. Therefore, the docket holder's WWTP discharge is required to comply with the SPW requirements, as outlined in Article 3.10.3A.2. of the WQR.

Total Dissolved Solids (TDS)

The docket holder was required by Docket No. D-1976-089-1 to perform monthly total dissolved solids (TDS) monitoring and meet an effluent concentration limit of 1,000 mg/l. The docket holder performed monthly TDS effluent monitoring from May, 2009 to June, 2010. Of the 14 samples taken, six (6) of the samples exceeded the 1,000 mg/l effluent limit. At the request of DRBC staff, the docket holder performed additional sampling in 2012. The additional TDS sampling included paired wastewater treatment plant influent and effluent sampling (2 samples), and drinking water sampling (5 samples) from several of the Blair Academy facility buildings' faucets, including residence halls and the dining halls. The WWTP influent and effluent averaged approximately 1,000 mg/l and the drinking water averaged approximately 500 mg/l.

DRBC staff visited the campus in October, 2014 to tour the campus facilities and the project WWTP. The reason for the increase in TDS between the water leaving the facility faucets and entering the WWTP as influent was not visibly apparent during the site visit. However, discussions with the WWTP operators indicate that the high TDS may correspond to times of low or high water usage around the campus, such as student and staff showering in the morning and/or night or mealtime kitchen dishwasher usage. This docket requires the docket holder to perform a TDS trackdown study in order to investigate the causes for the high TDS in wastewater influent and effluent, as well as performing WWTP influent and effluent TDS sampling as required by Effluent Table A-2 in Section A.d.4 of this docket.

Condition II.n. in the DECISION section of this docket requires the docket holder to submit a work plan for a TDS study within 60 days of docket approval, for approval by the Executive Director. After the TDS study work plan is approved, the docket holder is required to implement the plan within 30 days of plan approval.

Article 3.10.3A.2.e.1). and 2). of the Commission's WQR states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of SPW must submit for approval a Non-Point Source Pollution Control Plan (NPSPCP) that controls the new or increased non-point source loads generated within the portion of the docket holder's service area which is also located within the drainage area of SPW. The service area of the docket holder is located within in the drainage area to the SPW. Since this project does not entail construction and/or expansion of service area (i.e., there are new or increased non-point source loads associated with this approval), the NPSPCP requirement is not applicable at this time. Accordingly, DECISION Condition II.m. has been included in this docket.

TABLE B-1 contains the grandfathered loads that have been developed by the DRBC for the Blair Academy WWTP based on its available effluent data. Note: the grandfathered loads are based on the grandfathered flow. Available data was as follows: seasonal monthly average flow data from 2000-2004 and seasonal monthly average concentration data from 2000-2004 and 2007-2011.

Table B-1: Grandfathered Loads

	Flow (mgd)	TSS* (lbs/day)	Phosphorous* (lbs/day)	Ammonia as N* (lbs/day)	Nitrate – as N** (lbs/day)	Total Nitrogen (lbs/day)
May-Sept	0.017	1.05	0.065	0.48	2.06	***
Oct-April	0.027	1.62	0.078	0.92	1.37	***

* 2000-2004 seasonal monthly avg. effluent concentration data
** 2007-2011 seasonal monthly avg. effluent concentration data
*** No effluent data available for this parameter

At the project discharge location, the Blair Creek has an estimated seven-day low flow with a recurrence interval of ten years ($Q_{7\text{-}10}$) of 1.0 cfs (0.65 mgd). The ratio of this low flow to the average design discharge (0.05 mgd) from the project WWTP is 13:1.

The nearest surface water intake of record for public water supply downstream of the project discharge is the Easton City intake, located on the Delaware River approximately 33 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 limits in the NJPDES 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 *WQR*.

C. DECISION

I. Effective on the approval date for Docket No. D-1976-089-2 below, Docket No. D-1976-089-1 is terminated and replaced by Docket No. D-1976-089-2.

II. The project and appurtenant facilities as described in 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 NJDEP in its NJPDES 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 the EFFLUENT TABLES in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results electronically to the DRBC Project Review Section via email **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. 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.

i. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish, wildlife, and/or other aquatic life and shall avoid any injury to public or private property.

j. 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).

k. 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.

l. 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.

m. 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 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.

n. The docket holder is required to submit a work plan for a TDS study within 60 days of this docket approval, for approval by the Executive Director. The work plan shall be submitted by February 7, 2015, in accordance with the FINDINGS section of this docket. After the TDS study work plan is approved, the docket holder is required to implement the plan within 30 days of plan approval.

o. 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.

p. 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.

q. 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.

r. 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.

s. 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.

t. 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: **December 10, 2014**

EXPIRATION DATE: **April 30, 2019**