

DOCKET NO. D-2006-025 CP-2

DELAWARE RIVER BASIN COMMISSION

Special Protection Waters

**Pennsylvania American Water Company – Milford Landing System
Groundwater Withdrawal
Westfall Township, Pike County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted by Pennsylvania American Water Company (PAWC) to the Delaware River Basin Commission (DRBC or Commission) on December 20, 2016 (Application), for a renewal and approval of an existing allocation of groundwater and review of a groundwater withdrawal project. This docket was previously approved by the Commission on February 28, 2007. The project wells were reviewed under the Pennsylvania Safe Drinking Water Act for public water supply permits and approved by the Pennsylvania Department of Environmental Protection (PADEP) on November 29, 2006 (PADEP Permit No. 5206502).

The Application was reviewed for continued inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Pike County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on August 16, 2017.

A. DESCRIPTION

1. Purpose. The purpose of this project is to renew the approval of an existing groundwater withdrawal project to supply up to 10.26 million gallons per month (mgm) of water to the docket holder's Milford Landing distribution system from existing Well 3 and new Well 5A. Well 5A will be replacing existing Well 5. PAWC is not requesting an increase in groundwater withdrawal allocation.

2. Location. The project wells are located in the Delaware River Watershed, within the drainage area to the Upper Delaware Special Protection Waters, in Westfall Township, Pike County, Pennsylvania. The Delaware River near the project site is designated by the PADEP as Warm Water Fishes (WWF) and Migratory Fishes (MF). Wells 3 and 5A are completed in the Quaternary unconsolidated sands and gravels.

Specific location information has been withheld for security reasons.

3. **Area Served.** The docket holder’s distribution system serves the Milford Landing area in Westfall Township, Pike County, Pennsylvania. The service area is outlined on a map entitled “Milford Landing Water System Service Area” submitted with the Application. For the purpose of defining 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.** PAWC Milford Landing system supplies water to an estimated population of 468 via 180 connections and 20 commercial connections. The average and maximum groundwater demand for this project are 0.043 million gallons per day (mgd) and 0.101 mgd, respectively. The docket holder projects to serve a population of 702 via 225 connections and 75 commercial connections within the next ten years. The projected average and maximum demand is estimated to be 0.081 mgd and 0.331 mgd, respectively. The allocation of 10.26 mgm should be sufficient to meet the future demands of the PAWC system.

b. **Facilities.** The existing project wells have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	WELL SCREENED INTERVAL (FT. TO FT.)	PUMP CAPACITY (GPM)	YEAR DRILLED
3	164	164’/ 6”	No screening	52	1988
5A	208	163’/ 8”	163 - 203	230	2016

The supply water from Wells 3 and 5A will be pumped to the existing well house, chlorinated and discharged to 20 feet of 6-inch, 20 feet of 12-inch and 60 feet of 36-inch contact main that provides adequate chlorine contact time before entering a 180,000 gallon standpipe tank. The 180,000 gallon standpipe tank provides in excess of 20 minutes of chlorine contact time prior to entering equalization and fire protection storage to the distribution system.

All water service connections are metered.

All wells are metered.

Prior to entering the distribution system, the water will be treated by sodium hypochlorite for disinfection and sodium hydroxide for pH control.

The project pumphouse floor and wellheads are above the 100-year flood elevation.

The water system is presently not interconnected with any other distribution system.

c. **Other.** Wastewater is conveyed to the Municipal Authority of Westfall Township’s sewage treatment facility most recently approved by DRBC Docket No. D-2002-023 CP-5 on December 4, 2013. The PADEP issued its most recent NPDES Permit No. PA0061611

on December 20, 2013 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the proposed project.

d. **Cost.** The overall cost of the proposed well is estimated to be \$151,500.

e. **Relationship to the Comprehensive Plan.** PAWC Wells 1 and 2 were included in the Comprehensive Plan via DRBC Docket No. D-2006-033 CP-1 issued on February 28, 2007. PAWC Well 3 was included in the Comprehensive Plan via DRBC Docket No. D-2006-033 CP-2 issued on July 18, 2007. Issuance of this docket will continue the groundwater withdrawal project in the Comprehensive Plan.

B. **FINDINGS**

Well 5A is replacing Well 5. A partial failure was identified in the Well 5 screening during a 2013 downhole video inspection, and a temporary liner was installed to stabilize the well under pumping conditions. The liner reduced the well screen diameter from 8-inch to 4-inch, which in turn reduced the pumping capacity from 178 gpm to approximately 28 gpm. The loss in well capacity presented water supply reliability challenges to the system. Well 5A was installed to supply PAWC with the water supply it needs for its system.

Special Protection Waters

In 1992, the DRBC adopted Special Protection Waters 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 were 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.

On July 16, 2008, the DRBC approved amendments to its *Water Quality Regulations* 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 Waters designation and clarity on definitions and terms were updated for the entire program.

Article 3.10.3A.2.e.1). and 2). of the *Water Quality Regulations, Administrative Manual - Part III*, states 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 docket holder's service area which is also located within the drainage area of Special Protection Waters. The wells providing water supply to the PAWC are located

within in the drainage area to the Special Protection Waters. Since this project does not entail additional construction and expansion of facilities or service areas and there are not any new or increased non-point source loads associated with this approval, the non-point source pollution control plan requirement is not applicable at this time. Accordingly, Special Condition C.II.y. has been included in the Decision section of this docket.

Water Audits for Public Water Supply Systems Serving Greater than 100,000 gpd

Section 2.1.8 of the Water Code states that it is the policy of the Commission to establish a standardized water audit methodology for owners of water supply systems serving the public to ensure accountability in the management of water resources. Voluntary Water Audits were encouraged for public water supply systems through December 31, 2011 (Section 2.1.8.B.). Effective January 1, 2012, the owners of each public water supply system are required to implement an annual calendar year water audit program conforming to IWA/AWWA Water Audit Methodology (AWWA Water Loss Control Committee (WLCC) Water Audit Software) and corresponding AWWA guidance (Section 2.1.8.C). Water audits shall be submitted annually to the Commission by March 31. PAWC submitted their most recent Water Audit on March 29, 2017.

Well 5A Hydrogeologic Evaluation

On March 17, 2016, Well 5A was drilled to a depth of 208 feet. One hundred and sixty-three (163) feet of 8" diameter casing was installed and grouted. The well was screened between 163 feet and 203 feet.

On September 26 through September 29, 2016, a 72-hour continuous-rate pumping test was conducted to assess withdrawal capabilities of Well 5A and the underlying aquifer characteristics and potential impacts to the local hydrologic system. The average pumping rate of the test on Well 5A was approximately 510 gallons per minute (gpm). Discharge from the pumping well was conveyed approximately 500 feet south directly into the overflow drain of the nearby stormwater basin. Well 5A was pumped for a total period of 4,325 minutes.

Groundwater response monitoring was conducted in the pumping well (Well 5A) and four (4) observation wells (monitored electronically and manually) and a temporary drive point piezometer installed in the stormwater basin. Observation points ranged in distance to the pumping well from approximately 30 feet (Well 5) to approximately 606 feet (Well 3).

Prior to the start of the pumping test, the water level in Well 5A was 19.98 feet below top of casing (btoc). Maximum drawdown observed at the pumping well, after approximately 72 hours of pumping at a rate of 510 gpm, was 69.01 feet (water level of 88.99 feet btoc). Drawdown as a result of pumping was observed in all four observation wells. The drawdowns ranged from 0.41 feet in Well 3 (furthest observation well from pumping well) to 5.91 feet of drawdown in Well 5 (closest observation well to pumping well). Drawdown as a result of the withdrawals from the Well 5A was not observed in the temporary piezometer.

The observed drawdown data was used to calculate aquifer parameters to characterize the underlying aquifer. The average transmissivity value for Well 5A test data was 7,871 ft²/day using various methods at the test rate of 510 gpm. A Storativity value was calculated from the drawdown data observed at the four (4) observation wells monitored during the pumping test, the values ranged between 0.001 and 0.101. The storage coefficients are indicative of unconfined conditions.

The DRBC has reviewed the Hydrogeologic Report for the Well 5A pumping test. No adverse impacts are expected to occur to the local hydrologic system due to the pumping from Well 5A.

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The docket holder estimates that the project withdrawals, used for the purpose of public water supply, result in a consumptive use of 10 percent of the total water use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

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-2006-025 CP-2 below:

a. The projects described in Docket No. D-2006-025 CP-1 is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-2006-025 CP-2; and

b. Docket No. D-2006-025 CP-1 is terminated and replaced by Docket No. D-2006-025 CP-2.

c. The project and the appurtenant facilities described in the Section A “Physical features” shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section A “Physical features” 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.

b. The wells and operational records shall be available at all times for inspection by the DRBC.

c. The wells shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

d. During any month, the combined withdrawal from all well sources shall not exceed 10.26 mgm. Well 5A and Well 3 shall not operate together if Well 5A is operating above 178 gpm. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM INSTANTANEOUS RATE (GPM)	MONTHLY ALLOCATION (MGM)
3	52	2.32
5A	230	10.26

e. The wells shall be equipped with readily accessible capped ports and minimum ½ inch inner diameter (ID) drop pipes so that water levels may be measured under all conditions. Existing wells are to be similarly equipped, where possible, with readily accessible ports and ½ inch ID drop pipes as repairs or modifications are made at each existing well.

f. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

g. Each new water service connection shall include a water meter in accordance with the DRBC’s Resolution No. 87-7 (Revised).

h. In accordance with DRBC Resolutions No. 87-6 (Revised) and No. 2009-1, the docket holder shall continue to implement to the satisfaction of the PADEP, the systematic program to monitor and control leakage within the water supply system. The program shall at a minimum include: periodic surveys to monitor leakage, enumerate non-revenue water and determine the current status of system infrastructure; recommendations to monitor and control leakage; and a schedule for the implementation of such recommendations. The docket holder shall proceed expeditiously to correct leakages and unnecessary usage identified by the program.

i. In accordance with DRBC Resolution No. 2009-1 and Section 2.1.8 of the Water Code, the docket holder shall implement an annual calendar year water audit program conforming to IWA/AWWA Water Audit Methodology (AWWA Water Loss Control Committee (WLCC) Water Audit Software) and corresponding guidance. Water audits shall be submitted annually to the Commission by March 31.

j. The docket holder shall implement to the satisfaction of the PADEP, the continuous program to encourage water conservation in all types of use within the facilities

served by this docket approval. The docket holder will report to the PADEP on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

k. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

l. The docket holder shall implement its Water Conservation Plan as approved by PADEP, and shall report to the PADEP on actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

m. The docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.

n. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission.

o. 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.

p. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

q. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 CFR 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges 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, 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.

r. 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).

s. 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).

t. 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).

u. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

v. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the permit holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the permit holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via email (using addresses posted on the DRBC website); or (b) written notice to the Executive Director and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the permit holder shall provide written notice to all potentially affected water users of the permit holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the permit holder's project withdrawal shall be repaired, replaced or mitigated at the permit holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the permit holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

w. 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.

x. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the

Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

y. 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.

z. 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: September 13, 2017

EXPIRATION DATE: December 13, 2027