

DOCKET NO. D-2000-019 CP-3

DELAWARE RIVER BASIN COMMISSION

**Southeastern Pennsylvania
Ground Water Protected Area**

**Warminster Municipal Authority
Groundwater Withdrawal
Warminster Township, Bucks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) on August 2, 2021, for renewal of an allocation of groundwater and review of a groundwater water withdrawal project (Application). The project wells were reviewed under the Pennsylvania Safe Drinking Water Act for a public water supply construction permit and approved by the Pennsylvania Department of Environmental Protection (PADEP) as indicated below in Section A.5.

The Application was reviewed for continuation of this project in the Comprehensive Plan and for approval under Section 3.8 and for a withdrawal permit under Section 10.3 of the *Delaware River Basin Compact*. The Bucks County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on February 9, 2022.

A. DESCRIPTION

- 1. Purpose.** The purpose of this docket is to renew the approval of an existing supply of groundwater for public water supply from existing Wells 1, 2, 3, 5, 6, 7, 9, 10, 13, 14, 15, 24, 26, 37, 43, 44 and 45. The total allocation of groundwater will remain 125 million gallons per month (mgm). The approval will also remove Wells 4, 36, 39 and NATC-10 from the docket.
- 2. Location.** The project wells are completed in the Stockton Formation and located in the Little Neshaminy Creek and Pennypack Creek Watersheds in Warminster Township, Bucks County, Pennsylvania. The Little Neshaminy Creek and Pennypack Creek near the project site are all designated by the PADEP as Warm Water Fishes (WWF) and Migratory Fishes (MF).

Specific location information has been withheld for security reasons.

3. **Area Served.** The docket holder's wells serve Warminster Township, Ivyland Borough and a portion of Warwick Township as delineated on the service area map entitled "Water System Overview Map, Warminster Municipal Authority" submitted with the previous renewal 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. **Design Criteria.** The docket holder supplies potable water to an estimated population of 30,974 via 10,125 domestic connections, 469 commercial connections, 134 industrial connections and 84 other public and institutional connections. The average and maximum groundwater demand for this project are 0.386 million gallons per day (mgd) and 0.441 mgd, respectively. The docket holder projects an average and maximum water demand of 2.830 mgd and 3.106 mgd, respectively, by the year 2032. The Warminster Municipal Authority (WMA) water distribution system currently purchases on average 2.612 mgd of water from North Wales Water Authority (NWWA). Within the next 10 years, the docket holder plans to reduce their bulk purchases to approximately 0.149 mgd from these interconnections. The allocation of 125 mgm should be sufficient to meet the future demands of the docket holder's water distribution system.

As a result of regional Per- and Polyfluoroalkyl substances (PFAS) groundwater contamination, Wells 1, 3, 5, 6, 7, 9, 14, 15, 24, 26, 36, 37, 43, 44 and 45 have been taken out of service. Wells 2, 10 and 13 have been placed back into operation with Anion Exchange Treatment systems. This has caused an increase reliance on the docket holder's interconnections with NWWA. The WMA plans to install the treatment systems in more of their wells to return them to regular service. The timeframe for completing the installation of the additional treatment systems on the remaining impacted wells is not known at this time.

5. **Facilities.** The docket holder's existing wells have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED	PADEP PERMIT NO.
1	285	64' / 10"	270	1954	8387-W
2	324	49' / 10"	65	1955	8547-W
3	329	41' / 10"	120	1955	8547-W
5	398	71' / 10"	280	1962	762W5
6	516	88' / 10"	125	1963	763W13
7	466	80' / 10"	150	1962	762W11
9	460	62' / 10"	355	1964	764W14
10	528	45' / 10"	360	1965	Unknown
13	601	50' / 10"	108	1966	766W016
14	469	62' / 10"	207	1967	767W005

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED	PADEP PERMIT NO.
15	530	60' / 10"	265	1967	Unknown
24	226	16' / Unknown	270	1955	8884-W-T1
26	250	70' / 10"	260	1972	0973504
37	350	60' / 10	370	1985	0987506
43	460	58' / 12"	200	1992	0995504
44	580	61' / 12"	200	1992	0995504
45	300	59' / 12"	200	1992	0995504

All wells and water service connections are metered.

All wells are treated by chlorination prior to entering the distribution system. The water from Wells 3, 10, 13 and 26 is also treated by Anion Exchange Treatment to remove PFAS before entering the distribution system. The docket holder plans to add Anion Exchange Treatment to more of their wells in the future.

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

System storage facilities have the following capacities:

LOCATION	CAPACITY (MG)
Booster Station #10	(2) 1.0
Independence Road	1.0
Newtown Elevated	0.5
Newtown Standpipe	0.8
Louis Drive	1.0
York Road (K-mart)	0.75
TOTAL:	6.05

The storage facilities of 6.05 mg are approximately 1.95 days of supply for the docket holder's system.

The water system is presently interconnected with the following:

WATER COMPANY	INTERCONNECTION CAPACITY (MGD)	STATUS
North Wales Water Authority	3.0	Regular
North Wales Water Authority - County Line Road	3.0	Regular
Upper Southampton Municipal Authority	1.152	Emergency

6. **Other.** Wastewater is conveyed to the docket holder's Log College Drive sewage treatment facility which received approval most recently under Section 3.8 of the *Compact* by DRBC Docket No. D-1988-067 CP on January 12, 1990. The treatment facility has adequate capacity to receive wastewater from the project. The PADEP issued NPDES Permit No. PA0026166 for this facility. The treatment facility has adequate capacity to receive wastewater from this project.

Wastewater is also conveyed to the docket holder's secondary sewage treatment facility located at the former Naval Air Warfare Center (NAWC). This facility received approval most recently under Section 3.8 of the *Compact* by DRBC Docket No. D-2004-021 CP-3 on December 11, 2019. The treatment facility has adequate capacity to receive wastewater from the project. The PADEP issued NPDES Permit No. PA0058742 for this facility. The treatment facility has adequate capacity to receive wastewater from this project.

7. **Relationship to the Comprehensive Plan.** The docket holder's existing wells were previously included in the Comprehensive Plan as follows:

Docket No.	Date Approved	Approved Wells
D-1964-064 CP	October 20, 1964	9
D-1965-114 CP	September 13, 1965	10
D-1965-149 CP	November 24, 1965	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12
D-1966-204 CP	October 26, 1966	13
D-1967-048 CP	April 26, 1967	14
D-1967-093 CP	July 26, 1967	15
D-1973-100 CP	June 28, 1973	24 and 26
D-1980-051 CP	October 8, 1980	36
D-1980-051 CP REN	November 26, 1985	36
D-1980-051 CP REN2	February 20, 1991	1, 2, 3, 4, 5, 6, 7, 9, 10, 12, 13, 14, 15, 24, 26, 36, 37 and 39
D-1987-019 CP	March 23, 1987	39
D-1987-049 CP	August 5, 1987	37
D-1994-040 CP	February 28, 1996	1, 2, 3, 4, 5, 6, 7, 9, 10, 12, 13, 14, 15, 24, 26, 36, 37, 39, 43, 44 and 45
D-2000-019 CP	October 31, 2001	1, 2, 3, 4, 5, 6, 7, 9, 10, 13, 14, 15, 24, 26, 36, 37, 39, 43, 44, 45 and NATC-10
D-2000-019 CP-2	March 7, 2012	1, 2, 3, 4, 5, 6, 7, 9, 10, 13, 14, 15, 24, 26, 36, 37, 39, 43, 44, 45 and NATC-10

Issuance of this docket will continue the withdrawal project in the Comprehensive Plan.

B. FINDINGS

Beginning in 2014, the docket holder discontinued withdrawals from selected wells due to regional PFAS contamination in the groundwater. By 2016, Wells 1, 3, 5, 6, 7, 9, 14, 15, 24, 26, 37, 43, 44 and 45 had been taken out of service. PFAS treatment systems (Anion Exchange Treatment) were installed on Wells 2, 10 and 13 and these wells have been placed back into operation. WMA plans to return more of their wells to regular service following the installation of additional PFAS treatment systems. Wells 4, 36, 39 and NATC-10 are no longer part of the docket holder's water distribution system and have been removed from the docket in this approval.

1. Ground Water Protected Area

The project is located within the Southeastern Pennsylvania Ground Water Protected Area delineated by the DRBC pursuant to *Compact* Section 10.2. Tests conducted by the docket holder indicate the operation of this project will not create a local water shortage.

Review and analysis of the application pursuant to Section 6.D. of the *GWPAR* result in the following:

1. The withdrawal is consistent with the Commission's Comprehensive Plan and the policies and purposes of these regulations.
2. Opportunities to satisfy water requirements on a timely basis from existing available supplies and facilities have been explored and are being utilized.
3. The withdrawal, in conjunction with other withdrawals in the applicable groundwater basin, should not exceed withdrawal limits of the groundwater basin, aquifer or aquifer system.
4. The withdrawal should not significantly impair or reduce the flow of perennial streams in the area.
5. Existing ground and surface water withdrawals should not be adversely impacted or will be otherwise assured of adequate supplies in accordance with the requirements of Section 10 of the *GWPAR*. There have been no reported complaints of well interference since the water distribution system's original 1964 approval of this project. No adverse impact is anticipated due to continued operation of this project.
6. The withdrawal should not cause substantial, permanent adverse impact to the overlying environment.
7. The docket holder adopted and will implement conservation and management programs as required by Section 7 of the *GWPAR*.

The docket holder's Wells 5, 6, 9, 10, 13, 14, 15, 24, 26, 37, 39, 43, 44 and 45 are located in the Warminster Little Neshaminy Creek subbasin (Subbasin No. 8), where total net annual ground water withdrawal (154.2 million gallons per year (mgy)) is significantly less than the withdrawal limit set in Section 6.I of the *GWPAR* (1,355 mgy). The docket holder is requesting a monthly allocation of up to 104.5 mgm (1,254 mgy), a fraction of which will be returned to groundwater. Historically, the docket holder has withdrawn significantly less than the total amount requested in this basin. However, even if no water from this project were returned to groundwater, the total net annual groundwater withdrawal from this subbasin would remain well below the withdrawal limits set in Section 6.I of the *GWPAR*. Therefore, the withdrawals from the docket holder's wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

The docket holder's Wells 1, 2, 3, and 7 are located in the Upper Reach Pennypack Creek (Subbasin No. 25), where total net annual ground water withdrawal (602.4 mgy) is significantly less than the withdrawal limit set in Section 6.I of the *GWPAR* (1,811 mgy). The docket holder is requesting a monthly allocation of up to 20.5 mgm (246 mgy), a fraction of which will be returned to groundwater. However, even if no water from this project were returned to groundwater, the total net annual groundwater withdrawal from this subbasin would remain well below the withdrawal limits set in Section 6.I of the *GWPAR*. Therefore, the withdrawals from the docket holder's wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

2. 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. The docket holder submitted their most recent Water Audit on October 22, 2021.

3. Other Findings

The DRBC 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 is designed to conform to the requirements of the *Water Code (WC)*, *Water Quality Regulations (WQR)* and *Ground Water Protected Area Regulations (GWPAR)* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact to the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

Effective on the approval date for Docket No. D-2000-019 CP-3 below, the project described in Docket No. D-2000-019 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-2000-019 CP-3; Docket No. D-2000-019 CP-2 is terminated and replaced by Docket No. D-2000-019 CP-3; and the project and the appurtenant facilities described in in Section A.4. (Design Criteria) and A.5. (Facilities) shall be continued in the Comprehensive Plan. The project and appurtenant facilities as described in in Section A.4. (Design Criteria) and A.5. (Facilities) are approved subject to the following conditions, pursuant to Section 3.8 of the *Compact*:

Monitoring and Reporting

1. The docket holder shall continue to report to the PADEP all surface and groundwater sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

2. The project withdrawals shall be metered by means of an automatic continuous recording device, flow meter, or other method, and shall be measured to within 5 percent of actual flow. Meters or other methods of measurement shall be subject to approval and inspection by the PADEP as to the type, method, installation, maintenance, calibration, reading and accuracy. 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.

3. 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.

4. 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.

5. The docket holder shall continue to 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.

Other Conditions

6. During any month, the combined withdrawal from all well sources shall not exceed 125 million gallons (1,500 mgd). No well shall be pumped above the maximum rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM RATE (GPM)*	MONTHLY ALLOCATION (MGD)
1	270	8.0
2	65	2.5
3	120	4.5
5	280	10.5
6	125	3.5
7	150	5.5
9	355	13.5
10	360	11.5
13	108	2.5
14	207	5.5
15	265	8.0
24	270	2.5
26	260	8.5
37	370	13.0
43	200	6.0
44	200	6.0
45	200	8.9

*Based on a 24-Hour Average

7. 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.

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

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

10. 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.

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

12. No water 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).

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

14. 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.

15. 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.

16. 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*.

17. 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).

18. 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 401.35).

19. 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 401.35).

20. 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 ensure the proper control, use and management of the water resources of the Basin.

21. 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 docket 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 docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket 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 docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

22. 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.

23. 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: March 9, 2022

EXPIRATION DATE: March 9, 2032