

**DOCKET NO. D-1992-001 CP-4**

**DELAWARE RIVER BASIN COMMISSION**

**Borough of Richland  
Groundwater Withdrawal  
Millcreek Township, Lebanon County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on February 10, 2022 for renewal of an allocation of groundwater and review of a groundwater withdrawal project (Application). 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 April 1, 2011 (PADEP Permit No. 3810506 MA). An application was submitted to the PADEP for Well 9 on February 10, 2022 and is currently under review.

The Application was reviewed for continuation in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Lebanon 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 10, 2022.

**A. DESCRIPTION**

- 1. Purpose.** The purpose of this docket is to renew the approval of an existing withdrawal of groundwater for public water supply from existing Wells 2, 3, 6, an existing spring and new Well 9. The total allocation of groundwater will remain 5.4 million gallons per month (mgm).
- 2. Location.** The project wells are completed in Crystalline Rock (Wells 2 and 3), the Hardyston Formation (Well 6) and the Buffalo Springs Formation (Well 9) and are located in the Mill Creek Watershed in Millcreek Township, Lebanon County, Pennsylvania. Mill Creek near the project site is 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 distribution system serves the Borough of Richland as indicated on the map entitled “Exhibit 4” submitted as part of this 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’s water distribution system supplies potable water to an estimated population of 1,500 via 586 domestic and 46 commercial connections. The average and maximum groundwater demand for this project are 0.085 million gallons per day (mgd) and 0.240 mgd, respectively. The docket holder projects an average and maximum water demand of 0.089 mgd and 0.242 mgd, respectively, by the year 2032. The docket holder is not requesting an increase in groundwater withdrawal allocation. The allocation of 5.4 mgm should be sufficient to meet the future demands of the docket holder’s public water supply distribution system.

The spring water flows by gravity from the spring structure into a covered reservoir through an 8-inch pipe. During seasonal periods of high spring flow not all the water produced by the spring is used by the Richland system. Excess water in the reservoir overflows through a 10-inch pipe into an inlet which then discharges on the Richland property. The water is absorbed into the ground prior to running off the property.

5. **Facilities.** The existing project well has the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
2	546	376’/ 6”	80	1942
3	668	152’/ 6”	60	1958
6	649	303’/ 9”	80	1999
9	590	145’/ 8”	150	2017

SPRING ID.	YIELD CAPACITY	YEAR DEVELOPED
Spring	0.173 mgd	Pre-1960

All wells and water service connections are metered, except for the spring. The Borough of Richland measures spring water usage by subtracting the amount of water produced and metered by the wells from the total amount of water sold to their customers.

Prior to entering the distribution system, all wells are treated by chlorination and corrosion control.

The project wellheads are located above the 100-year flood elevation.

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

The Borough of Richland storage facilities total 0.516 mg, which is approximately 3 days of supply.

6. **Other.** Wastewater is conveyed to the Borough of Myerstown sewage treatment facility most recently approved by DRBC Docket No. D-1974-176 CP-4 on March 15, 2017. The wastewater treatment facility is approved by PADEP NPDES No. PA0021075. The treatment facility has adequate capacity to continue to receive wastewater from this project.

7. **Relationship to the Comprehensive Plan.** The Borough of Richland Wells 2, 3 and the existing spring were included in the Comprehensive Plan via DRBC Docket No. D-1968-079 CP, issued on May 22, 1968. Docket No. D-1992-001 CP continued the approval of these sources and was issued on February 23, 1994. The Borough of Richland Well 6 was included in the Comprehensive Plan via DRBC Docket No. D-1992-001 CP-2, issued on July 19, 2006. The approval of this water supply project was continued in DRBC Docket No. D-1992-001 CP-3, issued on June 15, 2016. Issuance of this docket will add Well 9 to the approval and continue the groundwater withdrawal project in the Comprehensive Plan.

## **B. FINDINGS**

### **1. Water Audits for Public Water Supply Systems Serving Greater than 100,000 gpd**

Section 2.1.8 of the *Water Code (WC)* 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 April 27, 2022.

### **2. Well 9 Hydrogeologic Evaluation**

On October 5 through October 8, 2020, a 72-hour pumping test was conducted to assess withdrawal capabilities of Well 9 and the underlying aquifer characteristics and potential impacts to the local hydrologic system. The average pumping rate of the pumping test on Well 9 was 151.3 gallons per minute (gpm). Discharge from the pumping well was conveyed 1,450 feet along Woods Lane and then down Round Barn Road into a roadside drainage swale downslope of the test well. Well 9 was pumped for a total period of 4,320 minutes.

Groundwater response monitoring was conducted in the pumping well (Well 9) and eight (8) observation wells (monitored electronically and manually). The observation wells ranged in distance of approximately 27 feet (Well 7) to 2,190 feet (Richland Tract Well 13) from the pumping well.

Prior to the start of the pumping test, the water level in Well 9 was 73.5 feet below top of casing (btoc). Maximum drawdown observed at the pumping well, after approximately 72 hours of pumping was 17.5 feet (water level of 91 feet btoc). Drawdown as a result of pumping was observed in six (6) of the observation wells ranging from 0.21 feet (Sweigart Well) to 1.02 feet in Well 8.

The observed drawdown data was used to calculate aquifer parameters to characterize the underlying aquifer. The average transmissivity value for the Well 9 test data was 74,584 gpd/ft from the data of seven (7) wells using the Cooper-Jacob method, at the average test rate of 151.3 gpm. An average Storativity was calculated to be  $1.79 \times 10^{-3}$  from the drawdown in four (4) of the observation wells, which is consistent with confined aquifers.

The Commission has reviewed the Hydrogeologic Report for the Well 9 pumping test. No adverse impacts are expected to occur to the local hydrologic system due to the pumping from Well 9.

### **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* and *Water Quality Regulations (WQR)* of the DRBC.

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**

Effective on the approval date for Docket No. D-1992-001 CP-4 below, the project described in Docket No. D-1992-001 CP-3 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1992-001 CP-4; Docket No. D-1992-001 CP-3 is terminated and replaced by Docket No. D-1992-001 CP-4; 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 implement to the satisfaction of the PADEP, a 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.

6. 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**

7. During any month, the combined withdrawal from all well sources and spring shall not exceed 5.4 million gallons. No source shall be pumped above the maximum rate and monthly allocation as indicated below:

<b>WELL NO.</b>	<b>MAXIMUM RATE (GPM)*</b>	<b>MONTHLY ALLOCATION (MGM)</b>
2	80	3,456

WELL NO.	MAXIMUM RATE (GPM)*	MONTHLY ALLOCATION (MGM)
3	60	1.300
6	80	3.456
9	150	5.400
Spring	120	5.200

\*Based on a 24-Hour Average

8. Section 2.3.10 of the Commission's *Rules of Practice and Procedure* (18 C.F.R. 401.41), limiting the Commission's approval to three years in the absence of an expenditure of substantial funds by the project sponsor in reliance on the approval, is hereby waived for good cause shown in accordance with Section 2.9.3 (18 C.F.R. 401.123) of the same regulations. This approval shall expire on the expiration date set forth below unless prior thereto the docket holder has applied to the Commission to renew or extend this approval.

9. 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.

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

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

12. 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.

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

14. 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).

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

16. 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.

17. 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.

18. 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*.

19. 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).

20. 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).

21. 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).

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

23. 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.

**24.** 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.

**25.** 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:**

**EXPIRATION DATE: September 8, 2032**