

DOCKET NO. D-2000-053 CP-2

DELAWARE RIVER BASIN COMMISSION

Special Protection Waters

**Hellertown Borough Authority
Groundwater Withdrawal
Borough of Hellertown and Lower Saucon Township,
Northampton County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted by Hellertown Borough Authority (HBA or docket holder) to the Delaware River Basin Commission (DRBC or Commission) on January 22, 2013 for the renewal of an allocation of groundwater and review of a groundwater withdrawal project (Application). The most recent operations of facilities permits (PWS ID No. 3480052) for the project spring sources, Well No. W-1 and Well No. W-2 were issued by the Pennsylvania Department of Environmental Protection (PADEP) on November 30, 2012, August 14, 2012 and March 16, 2011, respectively. The groundwater withdrawal project was most recently approved by the Commission (DRBC Docket No. D-2000-53 CP) on April 19, 2001.

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 Lehigh Valley Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on June 10, 2014.

A. DESCRIPTION

1. Purpose. The purpose of this project is to renew the approval of an existing groundwater withdrawal project to supply up to 22.7 million gallons per month of water to the docket holder's public water supply system from a collection of fourteen (14) existing spring sources and existing wells Nos. W-1 and W-2. The docket holder has disconnected previously approved well No. 3 from the distribution system and this well is no longer included in this docket. The total allocation approved by this docket is not an increase in the total allocation contained in its prior approval.

2. **Location.** The project wells are completed in the Allentown and Leithsville Formations in the drainage area to Silver Creek in the Saucon Creek Watershed in Hellertown Borough, Northampton County, Pennsylvania. HBA's spring sources are located in the outcrop area of the Hardyston Formation and felsic to mafic gneiss in the drainage area to Polk Valley Creek in the Saucon Creek Watershed in Lower Saucon Township, Northampton County, Pennsylvania. The project withdrawals are located within the drainage area of the Lower Delaware which is classified as Special Protection Waters. Saucon Creek near the project site is designated by the Pennsylvania Department of Environmental Protection (PADEP) as supporting Cold Water Fishes (CWF) and Migratory Fishes (MF).

Specific location information has been withheld for security reasons.

3. **Area Served.** The HBA serves water to Hellertown Borough and adjacent areas in Lower Saucon Township, both in Northampton County, Pennsylvania. The service area is outlined on a map entitled "Borough of Hellertown Water 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.** The HBA system currently serves water to approximately 5,600 persons on 2,313 domestic service connections, 198 commercial service connections, 3 industrial service connections and 14 institutional service connections (2,528 total connections). In recent years the HBA system average and maximum daily demands were 0.47 million gallons per day (mgd) and 0.68 mgd, respectively. HBA expects increases in connections to serve a condominium development, but only minor, miscellaneous, other new connections to the water system within the next 10 years. Based on those projections, HBA indicates that the continued allocation of 22.7 mgm (0.732 mgd) should be sufficient to meet the future system demands.

For much of the year, HBA obtains approximately 80 percent of their water demand from its 14 protected spring sources with the remainder of the demand being met by Wells Nos. W-1 and W-2. Well No. 3, approved in Docket D-2000-53 CP was intended as a backup source but was never used due to high dissolved iron content and has been physically disconnected from the distribution system. During periods where groundwater levels are high (typically late winter and spring) the entire system demand can be met by only the spring sources. During dry months, the spring sources provide only 10 to 30 percent of the demand and Wells Nos. W-1 and W-2 provide the rest.

HBA's protected springs are located in predominately forested areas in Lower Saucon Township, and while the physical location of the main trunk line is generally known there are no detailed as-built plans of the connection points and/or branch lines which were constructed before the forest was mature. All springs and supply piping are on lands owned by the HBA.

Water from the springs is conveyed via gravity to a slow sand filter and is pH adjusted before entering a 1.0 million gallon (mg) capacity ground level, water storage reservoir; Reservoir R-1 is a covered, concrete reservoir. Water is discharged via gravity from the

reservoir (normal max is approximately 300 gpm, but fire flows are higher), then disinfected and delivered to the water distribution system. The distribution system also contains an additional 0.77 mg capacity steel, storage tank located at the other end of town and at approximately the same elevation as Reservoir R-1. During periods of high spring flows and low water demand (typically during overnight periods in the spring season), excess spring waters conveyed to Reservoir R-1 overflow into a small tributary to Polk Valley Run which drains into Saucon Creek. In February 2014, a flow meter and associated recording equipment was installed to measure and record the volume of water delivered to the HBA system from Reservoir R-1. Prior to the installation of the meter, spring water usage was estimated by subtracting the individually metered well withdrawals from the metered sewage flows conveyed to the City of Bethlehem. With the addition of the new meter at Reservoir R-1, HBA will now measure and record more accurately the total amount of water entering the HBA system and total system demands.

b. Facilities. The existing project well and spring sources have the following characteristics:

WELL NO.	DEPTH	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY	YEAR DRILLED
W-1	347'	80' / 16"	750 gpm	1964
W-2	355'	51' / 16"	750 gpm	1966

SPRING ID.	YIELD CAPACITY	YEAR DEVELOPED
Koller #1	0.03 mgd	Pre 1960
Koller #2	0.03 mgd	Pre 1960
Fluck	0.15 mgd	Pre 1960
Getter	0.02 mgd	Pre 1960
Petran	0.02 mgd	Pre 1960
Kozics	0.015 mgd	Pre 1960
Zumpfer	0.015 mgd	Pre 1960
Mensch	0.02 mgd	Pre 1960
Michelsen	0.015 mgd	Pre 1960
Gray	0.015 mgd	Pre 1960
Emery	0.005 mgd	Pre 1960
Slayer	0.02 mgd	Pre 1960
McFadden	0.10 mgd	Pre 1960
Wharton	0.028 mgd	Pre 1960

All water service connections are metered.

Wells W-1 and W-2 are metered separately. Water is diverted from HBA's 14 spring sources into Reservoir R-1 and the withdrawals from Reservoir R-1 are metered prior to entering the distribution system.

Prior to entering the distribution system, all water is chlorinated. Lime is also added to the spring water to raise the pH and reduce acidity.

The project wells and spring sources are outside the 100-year floodplain.

The water system is interconnected with the City of Bethlehem and Lower Saucon Authority (LSA) through which HBA can take or deliver water for emergency purposes only. LSA obtains all of its water from City of Bethlehem.

c. **Other.** Wastewater is conveyed to the City of Bethlehem sewage treatment facility most recently approved by DRBC Docket No. D-1971-078 CP-3 on December 5, 2012. The PADEP issued its most recent NPDES Permit No. PA0026042 on November 10, 2008 for this treatment facility. The treatment facility has adequate capacity to continue to receive wastewater from the proposed project.

d. **Cost.** The overall cost of this renewal including the physical disconnection of Well No. 3 is estimated to be \$885.00.

e. **Relationship to the Comprehensive Plan.** HBA Wells Nos. W-1 and W-2 were previously included in the Comprehensive Plan on January 26, 1966 by the Commission in Docket No. D-66-4 CP. The project was revised by DRBC Docket No. D-2000-53 CP on April 19, 2001 and the revisions including new Well No. W-3 and the existing 14 spring sources were included in the Comprehensive Plan. The project described in this docket will continue to be included in the Comprehensive Plan upon approval of this docket.

B. FINDINGS

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 and springs providing water supply to HBA 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 (i.e., 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.w. has been included in the Decision section of this docket.

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

This project consists of an existing withdrawal of groundwater from 14 spring sources and Wells Nos. W-1 and W-2. The docket holder has requested to retain its existing total allocation of 22 mg/30 days (22.7 mgm). The instantaneous and monthly allocations for the individual wells and combined spring sources are based on the PADEP maximum permitted rates contained in the Operations permits. These allocations are provided in Condition C.II.e. in the Decision Section of this docket. As the existing water withdrawals have already been realized by the local hydrologic system, there should be no significant impacts from continued withdrawals from the existing system wells and spring sources.

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. HBA submitted their most recent Water Audit on March 8, 2013.

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 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-2000-053 CP-2 below:

a. The projects described in Docket Nos. D-66-4 CP and D-2000-53 CP are removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-2000-053 CP-2; and

b. Docket Nos. D-66-4 CP and D-2000-53 CP are terminated and replaced by Docket No. D-2000-053 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 in its Water Supply Permits, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

b. The docket holder shall register with and 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).

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

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

e. During any month, the combined withdrawal from all well and spring sources shall not exceed 22.7 million gallons. No well or spring shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL / SPRING NO.	MAXIMUM INSTANTANEOUS RATE	MONTHLY ALLOCATION
Well No. W-1	750 gpm	22.7 mg
Well No. W-2	750 gpm	22.7 mg
Reservoir R-1 (14 Springs Combined)	300 gpm*	13.392 mg*

*Allocation applies only to the water withdrawn from Reservoir R-1 and distributed. It does not include natural overflow from Reservoir R-1.

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

g. 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.

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

i. 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.

j. 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.

k. 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.

l. 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).

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

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

o. 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.

p. 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.

q. 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*.

r. 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.

s. 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.

t. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

u. 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.

v. 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.

w. 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.

x. 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.

y. The docket holder owes a remaining balance of \$2,000 for this docket renewal. The balance shall be paid within sixty (60) days of issuance of this docket (by August 10, 2014) or fees may be assessed in accordance with the Commission's Penalty Matrix.

BY THE COMMISSION

APPROVAL DATE: June 11, 2014

EXPIRATION DATE: June 11, 2024