

DOCKET NO. D-1997-016 CP-4

DELAWARE RIVER BASIN COMMISSION

**Southeastern Pennsylvania
Ground Water Protected Area**

**Horsham Water and Sewer Authority
Groundwater Withdrawal
Horsham Township, Montgomery County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted by Gilmore and Associates, Inc. on behalf of Horsham Water and Sewer Authority (HWSA) to the Delaware River Basin Commission (DRBC or Commission) on August 16, 2017 (Application), for renewal and approval of an allocation of groundwater and review of a groundwater withdrawal project in the Ground Water Protected Area of Southeastern Pennsylvania. The prior docket was approved by the Commission on December 10, 2008. 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) as follows:

WELL NO.	PADEP PERMIT NO.	PADEP APPROVAL DATE
1	4610550	March 3, 2011
3, 6, 7 and 9	4610549	December 15, 2010
6	4607510	May 15, 2008
2, 4, 19, 20 and 22	4616524	November 1, 2016
10	4617502	March 23, 2017
17 and 21	4616517	January 5, 2017
26	4617505	March 23, 2017
40	4616512	February 16, 2017

The Application was reviewed for inclusion of the project in the Comprehensive Plan and approval under Section 3.8 and for a withdrawal permit under Section 10.3 of the *Delaware River Basin Compact*. The Montgomery County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on May 16, 2018.

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, 4, 6, 7, 9, 10, 17, 19, 20, 21, 22, 26 and 40. The total allocation of groundwater will remain 86.139 million gallons per month (mgm).

2. **Location.** HWSA Wells 1, 2, 6, 9, 20, 22 and 26 are located in the Pennypack Creek Watershed, Wells 3, 4, 7, 17, 19, 21 and 40 are located in the Park Creek Watershed and Well 10 is located in the Little Neshaminy Creek Watershed all in Horsham Township, Montgomery County, Pennsylvania. The HWSA wells are all completed in the Stockton Formation. Pennypack Creek near the project site is designated by the PADEP as Trout Stocking Fishes (TSF) and Migratory Fishes (MF). Park Creek near the project site is designated by the PADEP as Warm Water Fishes (WWF) and Migratory Fishes (MF). Little Neshaminy 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 Horsham Township, Montgomery County, Pennsylvania. The service area is outlined on a map entitled "Horsham Water and Sewer Authority Water Service Map" 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 HWSA system supplies potable water to an estimated population of 22,826 via 7,411 domestic, 296 commercial, 51 industrial and 179 institution/other connections. The average and maximum groundwater demand for this project are 1.468 million gallons per day (mgd) and 1.86 mgd, respectively. The docket holder projects an average and maximum water demand of 1.853 mgd and 2.44 mgd, respectively, by the year 2028. The HWSA purchases water on a regular basis from North Wales Water Authority (NWWA) with an average and maximum use of 0.423 mgd and 0.748 mgd, respectively. The HWSA also purchases water from Aqua PA on a regular basis with an average and maximum use of 0.306 mgd and 0.396 mgd, respectively. HWSA is not requesting an increase in groundwater withdrawal allocation from that contained in its prior approval. The allocation of 86.139 mgm should be sufficient to meet the future demands of the HWSA system.

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

WELL NO.	DEPTH (FEET)	CASED DEPTH (FEET)	PUMP CAPACITY (GPM)	YEAR DRILLED
1	354	40	70	1955
2	340	46	200	1955
3	446	60	100	1958
4	468	61	240	1960
6	600	57	75	1965
7	450	50	300	1968
9	625	70	100	1969
10	271	50	120	1968
17	400	35	200	1971
19	400	44	500	1980
20	340	38	300	1972
21	400	40	300	1989
22	340	40	375	1973
26	400	42	500	1978
40	360	102	260	1996

All wells and all water service connections are metered.

Groundwater from all the wells is treated by chlorination prior to entering the distribution system. Wells 2, 3, 20, 22 and 26 are also treated by air stripping. Wells 2, 4, 10, 17, 19, 20, 21, 22, 26 and 40 are treated with granular activated carbon. Well 40 is treated for iron and manganese sequestration.

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

The water system is presently interconnected with the NWWA and Aqua PA distribution systems and are used on a regular basis.

c. **Other.** Wastewater from the southern service area is conveyed to the Upper Moreland-Hatboro Joint Sewer Authority sewage treatment facility which received approval most recently under Section 3.8 of the *Compact* by DRBC Docket No. D-1998-048 CP-3 on December 14, 2016. The PADEP issued its most recent NPDES Permit No. PA0025976 on December 9, 2011 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the project.

Wastewater from the central service area is conveyed to the Horsham Water and Sewer Authority Park Creek sewage treatment facility which received approval most recently

under Section 3.8 of the *Compact* by DRBC Docket No. D-1988-017 CP-3 on December 14, 2016. The PADEP issued its most recent NPDES Permit No. PA0051985A-2 on February 13, 2012 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the project.

d. **Cost.** There is no cost associated with this project.

e. **Relationship to the Comprehensive Plan.** The project was previously included in the Comprehensive Plan by the Commission in Docket Nos. D-1965-170 CP, D-1968-091 CP, D-1968-144 CP, D-1969-018 CP, D-1972-133 CP, D-1973-011 CP, D-1975-055 CP, D-1979-030 CP, D-1979-030 CP Renewal, D-1981-001 CP, D-1989-014 CP, D-1990-044 CP, D-1997-016 CP and D-1997-016 CP-3, approved on January 26, 1966, June 26, 1968, October 22, 1968, February 26, 1969, September 27, 1972, December 12, 1973, July 23, 1975, December 19, 1979, December 12, 1984, December 22, 1982, September 27, 1989, December 12, 1990, December 17, 1997 and December 10, 2008, respectively. Issuance of this docket will continue the withdrawal project in the Comprehensive Plan.

B. **FINDINGS**

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

Review and analysis of the application pursuant to Section 6.D. of the *GWPAP* 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 found infeasible.
3. The withdrawal, in conjunction with other withdrawals in the applicable ground water basin, should not exceed withdrawal limits of the ground water 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 *GWPAP*. There have been no reported complaints of well interference since

the last approval of this renewal 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*.

HWSA Wells 1, 2, 6, 9, 20, 22 and 26 are located in the Upper Reach Pennypack Creek subbasin (Subbasin No. 25), where total net annual ground water withdrawal (846.1 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 43.75 mgm, 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 these HWSA wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

HWSA Wells 3, 4, 7, 17, 19, 21 and 40 located in the Park Creek subbasin (Subbasin No. 9), where total net annual ground water withdrawal (387.9 mgy) is significantly less than the withdrawal limit set in Section 6.I of the *GWPAR* (777.5 mgy). The docket holder is requesting a monthly allocation of up to 86.139 mgm, 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 these HWSA wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

The HWSA Well 10 is located in the Warminster Little Neshaminy Creek subbasin (Subbasin No. 8), where total net annual ground water withdrawal (1,244 mgy) is less than the withdrawal limit set in Section 6.I of the *GWPAR* (1,350 mgy). The docket holder is requesting a monthly allocation of up to 5.357 mgm, 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 Well 10, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

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 HWSA submitted their most recent Water Audit on March 31, 2018.

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 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

- I. Effective on the approval date for Docket No. D-1997-016 CP-4 below:
 - a. The projects described in Docket No. D-1997-016 CP-3 is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-1997-016 CP-4; and
 - b. Docket No. D-1997-016 CP-3 is terminated and replaced by Docket No. D-1997-016 CP-4.
 - 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.
 - 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 86.139 million gallons. 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)
1	70	3.125
2	200	8.928
3	100	4.464
4	240	10.714
6	75	3.348
7	300	13.392
9	100	4.464
10	120	5.357
17	200	8.928
19	700	31.248
20	300	13.392
21	300	13.392
22	375	16.740
26	500	22.320
40	500	22.320

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. 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).

l. A long-term monitoring program is required to obtain data on ground water and surface water hydrologic conditions in the project area. The docket holder shall continue to implement the long-term monitoring program as submitted by the docket holder in a letter dated September 5, 1997. This program will include the following:

1. **Ground Water Level Monitoring** HWSA shall monitor the wells identified in the above referenced letter to estimate annual ground water fluctuations caused by seasonal changes and/or production well pumping, and detect water level declines that may affect the performance of public and private wells in the area of HWSA Well 40.

2. **Reports** - All monitoring data, including records required in Conditions "f." and "l." herein shall be submitted to the Commission annually, due by April 1. The docket holder is encouraged to submit the annual report electronically. The report shall be prepared by a hydrogeologist and shall assess the effects of well withdrawals on hydrologic conditions in the area. This report shall include an evaluation of the monitoring data required by this docket approval and such information as deemed appropriate by the hydrogeologist or required by the Executive Director.

3. The Executive Director may modify the monitoring program or temporarily suspend or modify this docket at any time

if review of the hydrologic data and/or any other information indicates such action is necessary or appropriate.

m. 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.

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

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. 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.

s. 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).

t. The ownership of 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).

u. 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).

v. 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.

w. 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.

x. 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.

y. 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: June 13, 2028

DRAFT