

DOCKET NO. D-1991-086 CP-3

DELAWARE RIVER BASIN COMMISSION

**Southeastern Pennsylvania
Ground Water Protected Area**

**Aqua Pennsylvania, Inc. – Great Valley Division
Groundwater Withdrawal
East Goshen, West Goshen, Westtown, Birmingham,
West Whiteland and East Bradford Townships, Chester County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted by East Latitude, LLC on behalf of the Aqua Pennsylvania, Inc. (Aqua PA) to the Delaware River Basin Commission (DRBC or Commission) on May 19, 2014 (Application), for a 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 May 18, 2005. 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
Grand Oak 4	765W29 T1	11/29/1965
Pomona Park 7	768W011 T1	12/20/1985
Highland Glen 9	768W009 T1	12/20/1985
Pottstown Pike 16	1573506 T1	4/24/1974
Hunt Country 21A, 21B, 21C and 21D	1584502	10/26/1984

The Application was reviewed for continuation 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 Chester County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on March 10, 2015.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to approve the renewal of an existing supply of groundwater to the docket holder's public water supply system from existing Wells Grand Oak 4,

Pomona Park 7, Highland Glen 9, Pottstown Pike 16, Hunt Country 21A, 21B, 21C and 21D. This renewal project represents a decrease in allocation from 50.0 mgm to 43.264 mgm.

2. **Location.** Well Grand Oak 4 is located in the Chester Creek Watershed, Well Pomona Park 7 is located in the Plum Run Watershed, Wells Highland Glen 9 and Pottstown Pike 16 are located in the Broad Run Watershed and the Hunt Country Wells are located in the Ridley Creek Watershed. The project wells are located in East Goshen, West Goshen and West Whiteland Townships, all in Chester County, Pennsylvania.

The creeks near the project site are designated by the PADEP as supporting the following:

CREEK	PADEP DESIGNATION
Chester Creek	Warm Water Fishes, Migratory Fishes (WWF, MF)
Plum Run	Warm Water Fishes, Migratory Fishes (WWF, MF)
Broad Run	Exceptional Value, Migratory Fishes (EV, MF)
Ridley Creek	Trout Stocking Fishes, Migratory Fishes (TSF, MF)

Specific location information has been withheld for security reasons.

3. **Area Served.** The docket holder’s water distribution system serves portions of West Whiteland , Uwchlan, East Bradford, East Goshen, West Goshen, Westtown and Birmingham Townships as shown on a map entitled “Source and Service Area Plan Great Valley Division”, submitted with the Application.

4. **Physical features.**

a. **Design criteria.** The Aqua PA – Great Valley Division system currently serves an estimated population of 83,143 through 18,858 service connections, 1,963 commercial, 46 industrial, 4,136 institutional and other service connections with an average and maximum water demand of 0.422 million gallons per day (mgd) and 0.628 mgd, respectively. The docket holder projects an average and maximum water demand of 0.9 mgd and 1.613 mgd, respectively, by the year 2024. The allocation of 43.264 mgm should be sufficient to meet the future demands of the Aqua PA – Great Valley Division system.

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

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED	GEOLOGIC FORMATION
Grand Oak 4	134	43’/ 8”	215	1965	Gneiss
Pomona Park 7	190	32’/ 8”	66	1965	Gneiss

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED	GEOLOGIC FORMATION
Highland Glen 9	237	60' / 8"	200	1972	Serpentine Schist
Pottstown Pike 16	360	52' / 6"	174	1966	Wissahickon Schist
Hunt Country 21A	400	70' / 6"	68	1980	Baltimore Gneiss
Hunt Country 21B	360	44' / 6"	31	1980	Baltimore Gneiss
Hunt Country 21C	230	44' / 6"	94	1980	Baltimore Gneiss
Hunt Country 21D	179	46' / 8"	121	1980	Baltimore Gneiss

The wells and all water service connections are metered.

Prior to entering the distribution system, the groundwater is treated by chlorination.

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

The Aqua PA – Great Valley Division water distribution system is presently interconnected with the Aqua PA Main Division system and West Chester Division and the Chester Water Authority. All interconnections are used on a regular basis.

c. **Other.** Wastewater is conveyed to the West Chester Area Municipal Authority (Taylor Run, Radley Run Country Club and Radley Run Mews) and Birmingham Township sewage treatment facilities most recently approved by DRBC Docket Nos. D-1990-072 CP on October 24, 1990 and D-1991-028 CP on September 25, 1991, respectively. The PADEP received an application for NPDES Permit No. PA0026018 on April 1, 2013 and is still under review (West Chester Area Municipal Authority). NPDES Permit No. PA0053449 was most recently issued on November 30, 2011 (Birmingham Township).

d. **Relationship to the Comprehensive Plan.** The docket holder's wells were previously included in the Comprehensive Plan by Dockets Nos. D-1965-041 CP, D-1965-078 CP, D-1965-166 CP, D-1968-131 CP, D-1973-214 CP, D-1978-095 CP, D-1980-088 CP, D-1981-074 CP, D-1983-028 CP, D-1984-030 CP, D-1985-019 CP and D-1991-086 CP which were approved on April 28, 1965, July 28, 1965, December 29, 1965, September 25, 1968, July 31, 1974, May 28, 1980, September 22, 1982, April 27, 1982, August 15, 1984, January 22, 1986, February 26, 1986 and August 12, 1992, respectively. The total system's approval was continued in Docket No. D-1991-086 CP-2, which was approved on May 18, 2005. Issuance of this docket will continue the public water supply distribution system in the Comprehensive Plan.

B. FINDINGS

The project is located within the Southeastern Pennsylvania Ground Water Protected Area delineated by the DRBC pursuant to *Compact* Section 10.2. The project is designed to conform to the requirements of the *Water Code*, *Water Quality Regulations* and *Ground Water Protected Area Regulations (GWPARG)* of the DRBC.

Review and analysis of the application pursuant to Section 6.D. of the *GWPARG* 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 *GWPARG*.
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 *GWPARG*.

Aqua PA Hunt Country wells (21A, 21B, 21C and 21D) are located in the Upper Reach Ridley Creek subbasin, where the total net annual groundwater withdrawal of 47.0 million gallons per year (mgy) is less than the withdrawal limit set in Section 6.I of the *GWPARG* of 2,275 mgy. The docket holder is requesting a monthly allocation of 14.017 mgy from these wells, which equates to 168.204 mgy, a fraction of which will be returned to groundwater. However, even if no water from this project was returned to groundwater, the total net annual groundwater withdrawal from this subbasin would remain below the withdrawal limits set in Section 6.I of the *GWPARG*. Therefore, the withdrawals from the Aqua PA wells in conjunction with other withdrawals in the subbasins are in accordance with the requirements of Section 6.I of the *GWPARG*.

Aqua PA Well Grand Oak 4 is located in the Upper Reach East Branch Chester Creek subbasin, where total net annual ground water withdrawal of 33.5 mgy is below the withdrawal limit set in Section 6.I of the *GWPAR* of 2,487 mgy. The docket holder is requesting a monthly allocation of 9.598 mgm from this well, which equates to 115.176 mgy, a fraction of which will be returned to groundwater. The proposed withdrawal from the existing well, in conjunction with other withdrawals in the subbasin, is in accordance with the requirements of Section 6.I of the *GWPAR*.

Aqua PA Well Pomona 7 is located in the Upper Reach Brandywine Creek subbasin, where total net annual ground water withdrawal of 7.2 mgy is below the withdrawal limit set in Section 6.I of the *GWPAR* of 2,152 mgy. The docket holder is requesting a monthly allocation of 2.955 mgm from this well, which equates to 35.46 mgy, a fraction of which will be returned to groundwater. The proposed withdrawal from the existing well, in conjunction with other withdrawals in the subbasin, is in accordance with the requirements of Section 6.I of the *GWPAR*.

Aqua PA Wells Highland Glen 9 and Pottstown Pike 16 are located in the West Valley Creek subbasin, where total net annual ground water withdrawal of 568.4 mgy is below the withdrawal limit set in Section 6.I of the *GWPAR* of 2,231 mgy. The docket holder is requesting a monthly allocation of 16.694 mgm from these wells, which equates to 200.328 mgy, a fraction of which will be returned to groundwater. The proposed withdrawal from the existing wells, in conjunction with other withdrawals in the subbasin, is 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. 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 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.

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*.

C. DECISION

- I. Effective on the approval date for Docket No. D-1991-086 CP-3 below:

a. The project described in Docket No. D-1991-086 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1991-086 CP-3 ; and

b. Docket No. D-1991-086 CP-2 is rescinded and replaced by Docket No. D-1991-086 CP-3 ; and

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

II. The project as described in the Section A “Physical features” is approved pursuant to Section 3.8 of the *Compact* and is granted this withdrawal permit pursuant to Section 10.3 of the *Compact* and *GWPAR*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s. The wells and operational records shall be available at all times for inspection by the DRBC.

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

c. During any month, the combined withdrawal from all well sources shall not exceed 43.264 mgm or 519.168 mgy. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	INSTANTANEOUS RATE (GPM)	MONTHLY ALLOCATION (MILLION GALLONS)
Grand Oak 4	215	9.598
Pomona 7	66	2.955
Highland Glen 9	200	8.928
Pottstown Pike 16	174	7.766
Hunt Country 21A	68	3.036
Hunt Country 21B	31	1.384
Hunt Country 21C	94	4.196
Hunt Country 21D	121	5.401

d. The wells shall be equipped with readily accessible capped ports and 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 drop pipes as repairs or modifications are made at each existing well.

e. 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 annually by March 31, to the PADEP. Withdrawal records shall be available at any time to the Commission if requested by the Executive Director.

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

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

h. 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).

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

j. 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.

k. 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.

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 April 5, 2005. This program will include the following:

1. **Ground Water Level Monitoring** – Aqua PA shall monitor nine (9) 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 the Aqua PA production wells.

2. **Reports** - All monitoring data, including records required in Conditions “e.” and “1.” 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. 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.
 - n. 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.
 - 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 area served by this project is limited to the service area as described above. Any expansion beyond this area is subject to review in accordance with Section 3.8 of the *Compact* and the *GWPAR*.
 - q. 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.

r. 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 right 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.

s. 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 wells or surface water supplies, or if the docket holder receives a complaint by any user of wells or surface water supplies within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by users of wells or surface water supplies within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. Any well or surface water supply which is substantially adversely affected, or rendered dry or otherwise unusable as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder in accordance with Section 10B of the *GWPAR*. 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. The Executive Director may modify or suspend this docket approval, or require mitigating measures, pending additional review.

t. 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.

u. 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.

v. 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 11, 2015

EXPIRATION DATE: March 11, 2025