

DOCKET NO. D-1995-009 CP-3

DELAWARE RIVER BASIN COMMISSION

**Southeastern Pennsylvania
Ground Water Protected Area**

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

PROCEEDINGS

This docket is issued in response to an Application submitted by SC Engineers, Inc. on behalf of Doylestown Township Municipal Authority (DTMA) to the Delaware River Basin Commission (DRBC or Commission) on February 23, 2015 (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 December 7, 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) on April 19, 1994 (PADEP Permit No. 0987522 T1).

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 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 September 15, 2015.

A. DESCRIPTION

1. Purpose. The purpose of this project is to approve an increase in withdrawal allocation from 52.7 million gallons per month (mgm) to 55.22 mgm of groundwater to the docket holder's public water supply distribution system from existing Wells Nos. NW-1, NW-2, NW-3, NW-4, NW-5, NW-6, CW-1, CW-3, CW-5, CW-7, SW-1, SW-2, SW-6 and SW-7. The increased allocation is requested in order to meet projected increases in demand within their service area.

2. Location. The project wells are located in the Pine Run Watershed and Neshaminy Creek Watersheds, in Doylestown Township, Bucks County, Pennsylvania. Pine Run near the project site is designated by the PADEP as supporting Warm Water Fishes (WWF) and Migratory Fishes (MF). The Neshaminy Creek near the project site is designated by the PADEP as supporting Warm Water Fishes (WWF) and Migratory Fishes (MF). The wells are completed in the Stockton Formation.

Specific location information has been withheld for security reasons.

3. Area Served. The docket holder’s distribution system supplies water to Doylestown Township, Bucks County, Pennsylvania, as shown on the map entitled “Doylestown Township Municipal Authority Capital Improvements Master Plan” submitted with the Application. DTMA also provides potable water via an interconnection and a bulk water purchase agreement to portions of Plumstead Township and Bucks County Neshaminy Manor. 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 DTMA system currently serves an estimated population of 8,700 through 2,181 domestic service connections and an additional 340 commercial, 49 institutional and 19 bulk sale connections with an average and maximum water demand of 1.028 million gallons per day (mgd) and 1.285 mgd, respectively. The docket holder projects an average and maximum water demand of 1.417 mgd and 1.78 mgd, respectively, by the year 2024. The allocation of 55.22 mgm should be sufficient to supply the docket holder’s public water supply system.

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

Northern Water District

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
NW-1	300	40’/ Unknown	25	1985
NW-2	240	40’/ Unknown	25	1985
NW-3	320	83’/ 8”	225	1986
NW-4	310	105’/ 8”	225	1986
NW-5	400	50’/ 10”	175	1988
NW-6	230	75’/ 6”	65	1985

Central Water District

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
CW-1	320	50' / 6"	70	1980
CW-3	525	68' / 10"	120	1988
CW-5	480	58' / 10"	250	1989
CW-7	450	64' / 10"	250	1989

Southern Water District

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
SW-1	300	62' / Unknown	100	1973
SW-2	550	41' / 10"	100	1985
SW-6	530	50' / 10"	100	1985
SW-7	500	60' / 10"	140	1986

The wells and all water service connections are metered.

Prior to entering the distribution system, the groundwater is treated by chlorination. In addition, Wells Nos. NW-3, NW-4 and CW-3 are treated for pH adjustment and manganese sequestration. Well No. NW-5 is treated for manganese sequestration.

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

The water system is presently interconnected with the following:

WATER COMPANY	INTERCONNECTION CAPACITY (MGD)	STATUS
Doylestown Borough	0.200	Regular
North Wales Water Authority	0.025	Regular
North Penn Water Authority	0.100	Auxiliary
Plumstead Township	0.180	Regular
Bucks County Neshaminy Manor	0.100	Regular
Warrington Township	0.010	Regular

The DTMA storage facilities total 1.580 mg, which is approximately 1.5 days of supply.

c. **Other.** Approximately 50% of the wastewater is conveyed to on-lot systems; the remaining 50% is conveyed to the following wastewater treatment facilities:

WASTEWATER TREATMENT PLANT	DRBC DOCKET	DRBC APPROVAL DATE	PADEP NPDES PERMIT	PADEP NPDES APPROVAL DATE
Chalfont- New Britain Township Joint Sewer Authority	D-1999-063 CP-2	July 11, 2012	PA0025917 A2	February 1, 2012
BCWSA Green Street	D-2000-022 CP	November 15, 2000	PA0021181	June 18, 2014
BCWSA Harvey Avenue	D-1999-013 CP-3	March 11, 2015	PA0021172	December 22, 2014
BCWSA Kings Plaza	D-1983-029 CP	January 25, 1984	PA0051250	April 15, 2013

BCWSA - Bucks County Water and Sewer Authority

d. **Relationship to the Comprehensive Plan.** The docket holder's wells were previously included in the Comprehensive Plan by Dockets Nos. D-1986-013 CP and D-1988-018 CP, which were approved on September 17, 1986 and May 25, 1986, respectively. Well No. CW-3 was included into the Comprehensive Plan in Docket No. D-1989-067 CP, which was approved on September 26, 1990. Wells Nos. CW-5, CW-7 and NW-5 were included into the Comprehensive Plan in Docket No. D-1991-040 CP, which was approved on November 4, 1992. Well No. NW-6 was included into the Comprehensive Plan in Docket No. D-1995-009 CP, which was approved on June 28, 1995. The approval of the docket holder's public water supply distribution system was continued in Docket No. D-1995-009 CP-2, which was approved on December 7, 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*.

DTMA Wells Nos. NW-1, NW-2, NW-3, NW-4, NW-5 and NW-6 are located in the Pine Run subbasin, where total net annual groundwater withdrawal (581.18 mgd) is less than the withdrawal limit set in Section 6.I of the *GWPARG* (791 mgd). The total annual groundwater withdrawal from these six wells is approximately 172.15 mgd, 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 below the withdrawal limits set in Section 6.I of the *GWPARG*. Therefore, the withdrawals from the DTMA wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPARG*.

DTMA Wells Nos. CW-1, CW-3, CW-5 and CW-7 are located in the Doylestown Neshaminy Creek subbasin, where total net annual groundwater withdrawal (491.34 mgd) is less than the withdrawal limit set in Section 6.I of the *GWPARG* (948 mgd). The total annual

groundwater withdrawal from these four wells is approximately 136.96 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 below the withdrawal limits set in Section 6.I of the *GWPAR*. Therefore, the withdrawals from the DTMA wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

DTMA Wells Nos. SW-1, SW-2, SW-6 and SW-7 are located in the Warwick Neshaminy Creek subbasin, where total net annual groundwater withdrawal (240.58 mgy) is less than the withdrawal limit set in Section 6.I of the *GWPAR* (1,181 mgy). The total annual groundwater withdrawal from these four wells is approximately 37.87 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 below the withdrawal limits set in Section 6.I of the *GWPAR*. Therefore, the withdrawals from the DTMA wells, 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. 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. DTMA submitted their most recent Water Audit on March 5, 2015.

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 docket holder estimates that the project withdrawals, used for the purpose of public water supply, result in a consumptive use of 15 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-1995-009 CP-3 below:

a. The project described in Docket No. D-1995-009 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1995-009 CP-3; and

b. Docket No. D-1995-009 CP-2 is rescinded and replaced by Docket No. D-1995-009 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 55.22 mgm or 662.64 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)
NW-1 & NW-2*	50	0.31
NW-3 & NW-4*	450	12.71
NW-5	175	15.5
NW-6	65	1.488
CW-1	70	3.125
CW-3	120	5.357
CW-5	250	9.765
CW-7	250	10.075
SW-1	100	3.1
SW-2	100	2.325
SW-6	100	2.325
SW-7	140	3.1

*- Groundwater from wells gets conveyed to the same well house

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 November 3, 2005. This program will include the following:

1. **Ground Water Level Monitoring** – DTMA shall monitor fourteen (14) 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 DTMA production wells.

2. **Reports** - All monitoring data, including records required in Conditions “e.” 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. 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 *GWP*.

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 *GWP*. 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: September 16, 2015

EXPIRATION DATE: September 16, 2025