

**DOCKET NO. D-2017-002 CP-1**

**DELAWARE RIVER BASIN COMMISSION**

**Drainage Area to Special Protection Waters**

**Gan Eden Estates  
Groundwater Withdrawal  
Town of Fallsburg and Town of Thompson,  
Sullivan County, New York**

**PROCEEDINGS**

This docket is issued in response to an Application submitted by Gan Eden Estates (Gan Eden or Docket Holder) to the Delaware River Basin Commission (DRBC or Commission) on April 4, 2017 for approval of an allocation of groundwater and review of a groundwater water withdrawal project (Application). The water supply facilities require approval by the New York State Department of Health (NYSDOH).

The Application was reviewed for inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Sullivan County Planning Department 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 project is to approve a total combined withdrawal of up to 4.60 million gallons per month (mgm) of groundwater from wells TW-5, TW-6 and TW-8 for public water supply of a proposed residential subdivision.
- 2. Location.** The project wells are completed in the Upper Walton Formation and are located in the East Mongaup River Watershed upstream from the Mongaup System Reservoirs in the Town of Fallsburg and the Town of Thompson, Sullivan County, New York. The wells and service area are located within the drainage area to the section of the non-tidal Delaware River known as the Upper Delaware that the Commission has designated as Special Protection Waters (SPW). The East Mongaup River near the project site is classified by the NYSDEC as a Class B(TS) and Class B(T) streams.

Specific location information has been withheld for security reasons.

**3. Area Served.** The docket holder's Public Water system will serve only the Gan Eden Estates development as outlined on a map entitled "Service Area 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 four Gan Eden Estates wells will serve a proposed residential subdivision currently consisting of 147 three-bedroom townhomes, 124 three-bedroom apartments and 264 two-bedroom apartments with an average and maximum daily water demand of 0.148 million gallons per day (mgd) and 0.295 mgd, respectively. The average daily demand is based on the NYSDOH guideline of 110 gallons per day per bedroom. The peak daily demand is based on the NYSDOH well testing requirement that the sources can provide twice the daily demand of the subdivision. The monthly allocation approved by this docket is equal to the average daily demand of the subdivision and is less than the total requested allocation. The reduction in monthly allocation is designed to minimize potential adverse impacts in the area.

**b. Facilities.** The proposed project wells have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
TW-5	380	40' / 6"	140	1989
TW-6	460	40' / 8"	205	1988
TW-8	700	60' / 6"	16	2015

All water service connections will be metered.

All wells will be metered.

Prior to entering the distribution system, the water will be treated by chlorination.

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

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

**c. Other.** Wastewater will be conveyed to an on-site wastewater treatment facility to be designed and constructed as part of the Gan Eden Estates development. Based on preliminary designs, the on-site WWTP will discharge treated effluent to the East Mongaup River approximately 1,800 feet north of the Gan Eden property or to an unnamed tributary to East Mongaup River approximately 7,800 feet southeast of the site. Approval of the Wastewater Treatment Plant and its discharge is required by NYSDEC under the Administrative Agreement between the NYSDEC and DRBC.

- d. **Cost.** The overall cost of this project is estimated to be \$1,850,000.00.
- e. **Relationship to the Comprehensive Plan.** The new groundwater supply project will be included in the Comprehensive Plan by the Commission upon the approval date 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 docket holder's proposed groundwater wells and service area is located within the drainage area of the East Mongaup River above the Swinging Bridge, Mongaup Falls and Rio Reservoirs. These reservoirs are part of the Mongaup System which is listed as one of the major surface water impoundments in Section 3.10.3A.2.g.5) and the docket holder's water supply project is exempt from the NPSPCP requirements, as outlined in Article 3.10.3A.2. of the Commission's WQR.

### **Pumping Tests**

Pumping tests were completed on four wells located on the proposed Gan Eden Estates property. Wells TW-5 and TW-6 are located proximal to one another in the northern and topographically lower portion of the site. Wells TW-3 and TW-8 are lower yielding wells installed in topographically higher areas on the southeastern portion and northwestern portion of the site, respectively.

### **TW-5, TW-3 and TW-8 Simultaneous Pumping Test**

Beginning on October 17, 2016, wells TW-5, TW-3 and TW-8 were pumped simultaneously at a combined rate of 201 gallons per minute. After 72 hours of pumping, total drawdown observed in TW-5, TW-3, and TW-8 was 113.0 feet, 276.9 feet and 131.1 feet, respectively. Long-term projections based on 180-days of continuous pumping of well TW-5 at 171 gpm, TW-3 at 14 gpm and Well TW-8 at 16 gpm, with no aquifer recharge, resulted in projected total drawdown of 229 feet, 341 feet and 165 feet respectively. Although the pumping water levels in wells TW-5 and TW-8 did not achieve stabilization during the last 6 hours of the pumping test, the extrapolated drawdown did not fall below the 5 percent margin for available drawdown above the pump intakes. Following the end of the pumping test, water levels in TW-5, TW-3 and TW-8 achieved 90 percent recovery within 80 hours, 2 hours and 14 hours, respectively.

The pumping rates in all of the tested wells were not maintained at near constant rates during the pumping tests. However, the variations in discharge rates do not appear to have invalidated the pumping test results. Well TW-5 was maintained at near constant flow rate during the testing period. The flow rates at TW-3 were relatively steady during the final 48-hours of the test at a rate of 14 gpm. The adjustments made to well TW-8 were made within the final 24 hours of the pumping test.

During the pumping test, water levels were measured in one shallow monitoring well installed in the wetlands adjacent to TW-5 and TW-6, four shallow piezometers and 10 off site wells. Water levels were also measured at Test Well TW-6. Limited surface water monitoring was also conducted at three staff gages (2 on-site and 1 off site).

Onsite drawdown as a result of the TW-5, TW-3 and TW-8 simultaneous pumping test was observed in adjacent wells TW-6 (100.5 feet) and shallow monitoring well MW-1 (6.2 feet). Drawdown also occurred in wetland piezometers P-1 (1.2 feet) and P-2. The water levels in P-2 were affected by a break in the discharge line so the total amount of drawdown could not be accurately determined. Off-site, the pumping test caused approximately 7.6 feet of drawdown in the Cole Well and greater than 5.9 feet of drawdown in the Parrandeh Well. The total amount of drawdown could not be determined due to a blockage in the domestic well at an approximate depth of 92 feet below top of casing. These domestic wells are located approximately ¼ mile southeast of TW-5 and TW-6. Although not discussed in the pumping test report, Commission staff note that based on the hydrographs, the Mackney and Nestor Wells located southeast and south of the site also appear to have been influenced by the pumping test withdrawals. However, drawdown in these wells was minimal (less than 2 feet) and may have been additionally influenced by pumping in the wells themselves. No discernable drawdown was observed in the other off-site wells monitored during the pumping test.

A well owner reported impacts to his water quality (discoloration) during the first pumping test. The impacted well (Hobby Well) is located approximately 1-mile northwest of Well TW-5 and approximately 0.9 miles northwest of Well TW-8. This well was added to the off-site well network and monitored during the second pumping test and is further described below.

Extrapolations of the water level data measured at the Cole well results in a total drawdown of approximately 26 feet after 180-days of continuous pumping of Well TW-5 at 171 gpm. This drawdown equates to a water level of 103 feet below top of casing. Although the total well depth is not known for this well, the well is at least 145 feet deep as this is the depth that the pressure transducer/data logger was installed for monitoring purposes during the Gan Eden pumping tests. Therefore, the available water column in the Cole Well is at least 42 feet. Drawdown also occurred in the Parrandeh Well (greater than 5.9 feet), but due to an obstruction in the well, water levels could not be measured below a depth of 92 feet below top of casing. The 180-day extrapolations of the water level data measured from early time data recorded prior to dropping below the obstruction in the well resulted in approximately 26 feet of drawdown during the pumping test (water level depth of 111 feet). The Parrandeh Well is located near the Cole Well and the extrapolated values from the early time data appear reasonable. However, the amount of available water column that would remain in this well is unknown because the well depth or pump setting information is not available for the well.

### **TW-6 and TW-8 Simultaneous Pumping Test**

Beginning on November 2, 2016 wells TW-6 and TW-8 were pumped simultaneously at rates of 205 gpm and 22 gpm, respectively (combined rate of 227 gpm). After 72 hours of pumping (73 hours at TW-8), total drawdown observed in TW-6 and TW-8 was 131.1 feet and 258.6 feet, respectively. Long term projections based on 180-days of continuous pumping of well TW-6 at 205 gpm and TW-8 at 22 gpm, with no aquifer recharge, resulted in projected total drawdowns of 187 feet and 446 feet, respectively. The final 6 hours of water level data from Well TW-6 show stabilized water levels were achieved in accordance with NYSDEC criteria. Stabilization of TW-8 water levels did not occur during the final 6 hours of the pumping test, but 180-day extrapolated drawdown did not fall below the 5 percent margin for available drawdown above the pump intake. The extrapolated drawdown did however fall below the water bearing zones listed on the TW-8 drilling log. Following the end of the pumping test, water levels in TW-6 and TW-8 achieved 90 percent recovery within 39 hours and 11 hours, respectively.

The pumping rates were not maintained in all wells at near constant rates during the pumping tests. However, the variations in discharge rates do not appear to have invalidated the pumping test results. The largest rate adjustments made to well TW-6 occurred at the beginning of the pumping test. During the final 48 hours of the test, flow rates ranged from 220 to 205 gpm. Data from previous tests conducted on Well TW-6 in 1989 and 2008 are also available and show similar results. The adjustments made to well TW-8 during the pumping test were made within the final 24 hours of the pumping test.

During the TW-6 and TW-8 simultaneous pumping test, water levels were measured in one shallow monitoring well installed in the wetlands adjacent to TW-5 and TW-6, three shallow piezometers and 12 off site wells. Water levels were also measured at wells TW-5 and TW-3. Limited surface water monitoring was also conducted at three staff gages (2 on-site and 1 off site). The two-additional off-site domestic wells were added to the well network prior to the start of the second test per the homeowner's request.

The TW-6 and TW-8 simultaneous pumping test resulted in drawdown of 124.3 feet in well TW-5, which is located approximately 25 feet from TW-6. Drawdown also occurred in monitoring well MW-1 (5.6 feet) and wetland piezometer P-1 (0.7 feet), which is less than measured during the previous TW-5 pumping test. Water levels were not measured in piezometer P-2 during the second pumping test because the pressure transducer was used to measure the Hobby well. Offsite, drawdown occurred again in the Cole well (7.8 feet) and greater than 5.6 feet occurred in the Parrandeh well. As previously stated, an obstruction in this well hindered water level measurements below a depth of approximately 92 feet. The Hobby well, where water quality impacts occurred during the first pumping test, experienced approximately 19.1 feet of drawdown during the TW-6 and TW-8 pumping test. Water samples collected from the Hobby well during the pumping test showed elevated concentrations of iron (4.56 mg/l) and manganese (0.036 mg/l). A follow up sample collected several weeks after the pumping test showed lower concentrations of iron (0.0535 mg/l) and manganese (not detected).

Extrapolations of the measured water levels were used to assess the total amount of expected drawdown that would occur under the conditions of the pumping test. After 180-days of continuous pumping of TW-6 at 205 gpm and TW-8 at 22 gpm, the drawdown in the Hobby well is projected to decline a total of 60.6 feet, which is equal to a water level of approximately 73 feet below the top of the well casing. At this drawdown, approximately 57 feet of water would remain in the well, based on the reported well depth of 130 feet. Extrapolations of the water level data measured at the Cole well results in a total drawdown of approximately 26 feet after 180-days of continuous pumping of TW-6 at 205 gpm. This drawdown equates to a water level of 100 feet below top of casing for the TW-6 pumping test. Although the well depth is not known for this well, the well is at least 145 feet deep as this is the depth that the pressure transducer/data logger was installed for monitoring purposes during the Gan Eden pumping tests. Therefore, the available water column in the Cole Well is at least 45 feet. Drawdown also occurred in the Parrandeh Well (greater than 5.6 feet), but due to an obstruction in the well, water levels could not be measured below a depth of 92 feet below top of casing. The 180-day extrapolations of the water level data measured from early time data recorded prior to dropping below the obstruction in the well resulted in approximately 31 feet of drawdown (water level depth 117 feet below top of casing). The Parrandeh Well is located near the Cole Well and the extrapolated values from the early time data appear reasonable. However, the amount of available water column that would remain in this well is unknown because the well depth or pump setting information is not available for the well.

### **Long-term Sustainable Yield Analysis**

The pumping test results showed that well TW-6 can sustain a long-term yield of 205 gpm and well TW-5 can sustain a long-term yield of 171 gpm. Information contained in the October 1989 Groundwater Supply Well Pumping Test Report prepared by Leggette, Brashears & Graham, Inc. indicate that the primary water bearing zones were encountered at depths between 320 feet and 420 feet in well TW-6 and between depths of 300 and 340 feet in well TW-5. Extrapolated drawdown data indicate that the pumping levels at the tested rates will remain above the primary water bearing zones encountered in the wells. Test results show that well TW-8 can sustain a long-term yield of 16 gpm and maintain a pumping water level at a depth above the two deeper water bearing zones encountered in the well. The extrapolated water level would exceed the depth of the shallowest water bearing zone noted on the drilling log at 220 feet, but based on the listed yield this water bearing zone appears to contribute only approximately 20 percent of the total blown

well yield (43 gpm). The second pumping test conducted on TW-8 at a final discharge rate of 22 gpm shows that the 180-day extrapolated water level would exceed the depths of the two deeper water bearing zones and could eventually lead to dewatering of these zones. Based on the pumping test, well TW-3 appears to have a long-term sustainable yield of 14 gpm. However, information related to the depth of the water bearing zones are not listed on the logs and are not available. Therefore, it is not possible to confirm the long-term sustainable yield of well TW-3.

### **Approved Pumping Rates**

Although the pumping test demonstrated that Wells TW-6, TW-5 and TW-8 can sustain long-term rates of 205 gpm, 171 gpm and 16 gpm, respectively, the withdrawals caused drawdown in wetlands proximal to wells TW-5 and TW-6 and resulted in water quality issues in a domestic well located approximately 1 mile from the site.

Because of the concern for wetland impacts staff recommend approval of a lower instantaneous pumping rate for well TW-5. The pumping of TW-5 resulted in approximately 70 percent more drawdown in wetland piezometer P-1 than the drawdown that occurred during the TW-6 pumping test (1.2 feet versus 0.7 feet). Staff evaluated a 72-hour pumping test performed on well TW-5 in 1989 where the well was pumped at a rate of 100 gpm for 1,305 minutes and increased to 140 gpm for the remainder of the test (3,015 minutes). At the end of the test, drawdown in TW-5 had stabilized and the final pumping water level was 82 feet, resulting in a total drawdown of 75.8 feet. Staff determined from the pumping test data that the 180-day extrapolated drawdown at the tested rate of 140 gpm would be 129 feet (water level of 135 feet below top of casing). The extrapolated drawdown at 140 gpm is approximately 100 feet less than the extrapolated drawdown resulting from pumping the well at 171 gpm. The reduction in drawdown combined with the available recharge from areas located upgradient of the wetlands should minimize the potential impacts to the wetlands at Wells TW-5 and TW-6.

The consultant indicated that at the average rate (102.4 gpm), drawdown in the offsite wells and onsite wells located in in wetland areas will be proportionally less or non-existent, therefore Commission staff recommend approval of a monthly allocation of 4.60 mgm.

### **Long-term Monitoring and Mitigation**

Because of water quality impacts that occurred in the Hobby Well during the first pumping test and elevated concentrations of iron and manganese in a water sample collected from the resident's water supply, mitigation is required. Prior to placing any well into operation, the docket holder must install and/or maintain any necessary water treatment equipment to provide potable water to the affected resident. The treatment equipment must at a minimum provide for the removal of iron and manganese to the concentrations recommended by the NYSDOH. Information regarding the treatment equipment and confirmation of installation must be submitted to the Commission prior to the start of the system.

Staff recommend that long-term water level monitoring be conducted in the wells affected by the pumping tests as recommended by the docket holder's consultant. These include the Cole, Parrandeh and Hobby wells. Additionally, Staff recommend monitoring of water levels in monitoring well MW-1 and piezometers P-1 and P-2 to confirm that the withdrawals are not

adversely impacting the wetlands. Water level monitoring must begin at least 6 months prior to the start of any withdrawals. Additionally, all production wells must be fitted with a water level recorder and contain drop pipes so that manual water levels may be measured under all conditions.

The docket holder must submit an annual report to the Commission that contains a monthly tabulation of withdrawals from each production well, charts and tables of water levels measured in production wells TW-5, TW-6 and TW-8, the Hobby, Cole and Parrandeh wells and onsite monitoring well MW-1 and piezometers P-1 and P-2 (Condition C.II.f.).

### **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 DRBC estimates that the project withdrawals, used for the purpose of public water supply, result in a consumptive use of 10 percent of the total water use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

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

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

### **C. DECISION**

I. Effective on the approval date for Docket No. D-2017-002 below, 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 NYSDEC and NYSDOH. The docket holder shall also satisfy annual withdrawal,

capacity and conservation reporting requirements in the form and manner prescribed by NYSDEC's Division of Water in accordance with NYCRR Part 601.5(a).

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 4.60 million gallons. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM INSTANTANEOUS RATE	MONTHLY ALLOCATION
TW-5	140 gpm	4.60 mgm
TW-6	205 gpm	4.60 mgm
TW-8	16 gpm	0.72 mgm

Additionally, Wells TW-5 and TW-6 shall not be pumped simultaneously.

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. A groundwater monitoring program is required to obtain data on groundwater conditions in the project area. At least 6 months prior to the operation of TW-5, TW-6 or TW-8, the docket holder shall implement a groundwater monitoring program approved by the DRBC Executive Director. At a minimum the monitoring program shall include the following:

1. **Ground Water Level Monitoring** – Water levels in monitoring well MW-1, piezometers P-1 and P-2 and the Hobby, Cole and Parrandeh Wells shall be measured to estimate annual groundwater fluctuations caused by seasonal changes and/or production well pumping, and detect water level declines that may adversely affect groundwater levels in the project area. Pumping and static water levels shall also be measured in the production wells.

2. **Reports** - All monitoring data, including records required in Condition j. herein shall be submitted to the Commission in an annual report beginning one month after the first year of operation. 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 the local hydrogeologic system. 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 or extend 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.

g. Prior to placing any well into operation, the docket holder must install and/or maintain any necessary water treatment equipment to provide potable water to the affected resident. The treatment equipment must at a minimum provide for the removal of iron and manganese to the concentrations recommended by the NYSDOH. Information concerning the treatment equipment and confirmation of installation must be submitted to the Commission prior to the start of the system.

h. Within 30 days of completion of construction of the approved project, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement (“Statement”) signed by the docket holder’s professional engineer for the project. The Statement must (a) either confirm that construction has been completed in a manner consistent with any and all DRBC-approved plans or explain how the as-built project deviates from such plans; (b) report the project’s final construction cost as such cost is defined by the project review fee schedule in effect at the time application was made; and (c) indicate the date on which the project was (or is to be) placed in operation. In the event that the final project cost exceeds the estimated cost used by the applicant to calculate the DRBC project review fee, the statement must also include (d) the amount of any outstanding balance owed for DRBC review. Such outstanding balance will equal the difference between the fee paid to the Commission and the fee calculated on the basis of the project’s final cost, using the formula and definition of “project cost” set forth in the DRBC’s project review fee schedule in effect at the time application was made.

i. This approval of the construction related to the facilities described in this docket shall expire three years from the approval date below unless prior thereto the docket holder has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

j. 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 NYSDEC annually and shall be available at any time to the Commission if requested by the Executive Director.

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

l. 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 NYSDEC, 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

m. 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.

n. 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).

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

p. 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.

q. 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.

r. 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*.

s. 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.

t. 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).

u. This approval is transferable by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.35).

v. The docket holder shall request a name change of the entity to which this approval is issued if the name of the entity to which this approval is issued changes its name. The request for name change shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.35).

w. 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.

x. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the docket holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the permit holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via email (using addresses posted on the DRBC website); or (b) written notice to the Executive Director and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

y. 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.

z. For the duration of any drought emergency declared by either New York 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 New York to the

extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

aa. 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