

**DOCKET NO. D-1991-001 CP-4**

**DELAWARE RIVER BASIN COMMISSION**

**Drainage Area to Special Protection Waters**

**Brodhead Creek Regional Authority  
Groundwater and Surface Water Withdrawal  
Stroud Township, Monroe County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted by RKR Hess on behalf of the Brodhead Creek Regional Authority (BCRA or docket holder) to the Delaware River Basin Commission (DRBC or Commission) on May 16, 2017, for renewal of an existing allocation of surface water and groundwater, and approval of a water supply project involving the modification of service area (Application) and an increase in the bulk water purchase from the Borough of East Stroudsburg. BCRA has submitted applications to the PADEP for the renewal and modification of its Water Allocation Permit No. WA45-134D for the expansion of its existing service area and the amendment of its Subsidiary Water Allocation for Bulk Water Purchase Permit No. WA45-1000. Issuance of the PADEP permits is expected shortly.

The Application was reviewed for continued inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Monroe County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on August 16, 2017.

**A. DESCRIPTION**

**1. Purpose.** The purpose of this docket is to renew the total allocation of 217.97 million gallons per month (mgm) of groundwater and surface water approved in DRBC Docket No. D-1991-001 CP-3 for public water supply, and to approve a service area expansion that will extend the distribution system into a limited area of Paradise Township. The docket is also modified to update the docket holder's increase in its bulk water purchase from East Stroudsburg Borough from a monthly maximum average of 0.250 million gallons per day (mgd) to 0.400 mgd in accordance with the amended water service agreement between East Stroudsburg Borough and the docket holder.

**2. Location.** Wells PW1 and PW2 are completed in unconsolidated glacial deposits in the Brodhead Creek Watershed and Well No. 3 is completed in the Buttermilk Falls Formation within the McMichael Creek Watershed, all in Stroud Township, Monroe County, Pennsylvania. The

project surface water intakes are located in the Brodhead Creek and Stokes Mill Spring within the Brodhead Watershed in Stroud Township, Monroe County, Pennsylvania.

Specific location information has been withheld for security reasons.

**3. Area Served.** The docket holder's public water distribution system currently serves and over the next 10 years is intended to serve portions of Stroud Township, the Borough of Stroudsburg, Smithfield Township, Pocono Township, Hamilton Township, Jackson Township, Tobyhanna Township and Paradise Township all in Monroe County, Pennsylvania as shown on the map entitled "Brodhead Creek Regional Authority – Water Service Area Map", dated May 3, 2013, last revised April 27, 2017 (the "Water Service Area Map"), submitted as part of the Application. The "Area Served" comprises those areas depicted on the Water Service Area Map as the (1) the Present Service Area, (2) the Additional Ten Year Projected Water Service Area (areas reasonably anticipated to be served within at least the next 10 years); (3) the Proposed Pocono-Jackson Joint Water Service Area (PJJWSA), subject to Executive Director approval pursuant to Condition C.II.w. included in the DECISION section of this docket; and (4) the Proposed Paradise Township Water Service Area. The specific modifications of BCRA's service area included in this docket is the expansion of the service area into a limited area of Paradise Township.

The Pocono Jackson Joint Water Authority (PJJWA) is a small water system serving approximately 150 customers. It was originally created to provide public water to an area impacted by water contamination associated with the Butz Landfill Superfund Site. The system currently relies on several wells, with a limited pumping capacity of 79,000 gallons per day and inadequate storage. With encouragement from the Pennsylvania Department of Environmental Protection, BCRA has been engaged in discussions with PJJWA with respect to taking over that system and bringing it within the BCRA regional system, thereby providing much more reliable and efficient water services. PJJWA and BCRA have tentatively agreed to enter into a bulk water service agreement to provide potable water, (including water for fire protection) in the PJJWA service area while negotiating the acquisition of the PJJWA assets. The BCRA is in the process of constructing an approximately 3,000 foot transmission line from Route 611 and along Route 715 to interconnect the PJJWSA to the BCRA system. The BCRA anticipates it will acquire the assets of the PJJWA water system in the near future

Upon written notice to the Executive Director by BCRA and PJJWA that BCRA has executed a definitive agreement to acquire the PJJWSA water facilities, the DRBC Executive Director is authorized to approve, effective upon closing, the addition of the PJJWSA as part of the "Area Served" of this docket. Promptly following acquisition of the PJJWSA system, BCRA shall submit information to DRBC concerning its plans for future use of the existing PJJWSA wells (with a current allocation of up to 2.5 mgm), and shall either request that the PJJWSA wells that BCRA plans to continue to utilize be added to BCRA's water allocation under this docket and/or notify the Executive Director of the decommissioning of one or more of the existing PJJWSA wells by BCRA. The Executive Director is authorized to approve the addition of the PJJWSA wells and the water allocation attributed to these existing wells to BCRA's groundwater allocation under this docket (pursuant to Condition C.II.w.).

For the purpose of defining Area Served, the Application and Water Service Area Map is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

**4. Physical features.**

**a. Design criteria.** The system currently serves water to approximately 23,880 customers on 4,627 domestic, 1004 commercial and 21 industrial service connections and records an existing average and maximum daily water demand of 2.653 million gallons per day (mgd) and 3.316 mgd, respectively. BCRA projects the 10-year average and maximum daily water demand to increase to 4.454 mgd and 5.483 mgd, respectively. The projected demands include growth within the BCRA's present and additional 10-year projected water service area including the proposed extension of BCRA's system into Paradise Township and the PJJWSA service area, but do not include the 1.2 mgd emergency agreement between BCRA and East Stroudsburg Borough. A portion of the system demands are met with bulk water purchased from the Borough of East Stroudsburg. The bulk water purchase currently averages 0.164 mgd and is expected to increase to 0.383 mgd within the next 10 years.

The total approved allocation of BCRA's surface water and groundwater sources (7.03 mgd) combined with the 0.4 bulk water from the Borough of East Stroudsburg can meet the present and projected ten (10) year peak daily demands of BCRA and also supply water under the 1.2 mgd emergency interconnection agreement with the Borough of East Stroudsburg. The interconnection with the Borough of East Stroudsburg is for emergency purposes and under their agreement is contingent upon the BCRA having the available water. However, the BCRA is currently limited by its existing treatment capacity and is unable to fully utilize all of its water sources. Specifically, the treatment capacity limitations are associated with BCRA's water treatment plant filter system design limitation of 2.5 mgd and findings that the groundwater at Well No. 3 is under the influence of surface water. In order to utilize the approved Well No. 3 allocation of 0.96 mgd, a filtration system must be constructed at Well No. 3. As such, BCRA's current treatment capacity (2.5 mgd surface water) and 2.867 mgd of groundwater from Wells Nos. 1 and 2 totals approximately 5.37 mgd. The currently available water does not meet the docket holder's 10-year projected maximum demand (5.48 mgd) nor the 1.2 mgd emergency interconnection agreement with the Borough of East Stroudsburg. The docket holder provided information regarding water supply alternatives, which are discussed in the FINDINGS Section of this docket.

**b. Facilities.** The existing project wells and surface water intakes have the following characteristics:

WELL NO.	DEPTH	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY	YEAR DRILLED
1	59'	39' / 12"	1,000 gpm	1990
2	62'	40' / 12"	1,000 gpm	1990
3	360'	135' / 10"	670 gpm	2004

INTAKE ID.	WITHDRAWAL WATER BODY	PUMP CAPACITY	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Brodhead Creek	Brodhead Creek	3.0 MGD (limited by screen structures; current treatment capacity = 2.5 MGD)	14.3	1958

All water service connections are metered.

All wells are metered. The Brodhead Creek intake is metered at the water treatment plant.

The Stokes Mill Spring source was previously approved as an emergency back-up source. The docket holder indicated that it is no longer considered a viable surface water source. The Stokes Mill Spring source has been removed from this docket.

The docket holder operates a water filtration plant with a filtration design capacity of 2.5 million gallons per day (mgd). Water withdrawn from the Brodhead Creek intake is conveyed to the plant for treatment including coagulation, flocculation, sedimentation, filtration, and disinfection. Water withdrawn from Wells PW1 and PW2 is not filtered, but is subject to disinfection treatment and pumped into the distribution system. Treatment includes liquid sodium hypochlorite for disinfection and liquid blended phosphate as a corrosion inhibitor. The water treatment plant has an overall capacity of 5.38 mgd (2.5 mgd filtration capacity for the surface water sources and 2.88 mgd storage capacity for well water).

Well No. 3 has been constructed, but is not in service due to findings that groundwater was under the influence of surface water. To bring Well No. 3 into operation, a minimum of filtration and disinfection treatment will need to be designed and constructed in accordance with PADEP standards.

Wells PW1 and PW2 are located within the 100-year floodplain of Brodhead Creek; however, the well casings are sealed and water tight and vented 3 feet above the 100-year flood

elevation. Well No. 3 is located within the 100-year floodplain of McMichael Creek; however, the pump house floor is located approximately 2.5 feet above the 100-year flood elevation.

The water system is presently interconnected with the Borough of East Stroudsburg's distribution system. The BCRA has an Intermunicipal Bulk Water Service Agreement, which was recently amended to provide for the purchase of up to an average of 0.400 mgd from East Stroudsburg Borough. BCRA and the Borough of East Stroudsburg also have an agreement to take or supply up to 1.2 mgd to East Stroudsburg Borough in the event of an emergency. This docket approves the increase of a subsidiary allocation from 0.25 mgd to 0.400 mgd of water from the Borough of East Stroudsburg and the 1.2 mgd emergency interconnection with the Borough of East Stroudsburg.

**c. Other.** Wastewater from the docket holder's water service area is conveyed to the BCRA WWTP, Smithfield Sewer Authority WWTP and the East Stroudsburg Borough WWTP most recently approved by DRBC Docket Nos. D-1986-011 CP-4 on December 10, 2014, No. D-92-17 CP on June 24, 1992 and D-1987-015 CP-3 on March 16, 2016, respectively. The PADEP issued its most recent NPDES Permit Nos. PA0029289 A2 on January 23, 2012, PA0061361 on September 29, 2011 and PA0020168 A-1 on August 20, 2012, respectively, for the above treatment facilities. Wastewater is also discharged at the Sanofi Pasteur IWTP most recently approved by DRBC docket D-1999-071-4 on September 12, 2013. The PADEP issued its most recent NPDES Permit No. PA0060071 on August 24, 2009 for this treatment facility. Wastewater is also discharged at WWTP's that serve the DCNR-Swiftwater Office and the Monroe Career and Technical Institute. Wastewater from the proposed service area expansion in Paradise Township will be discharged at the Pocono Mountain School District WWTP, which was approved by DRBC Docket No. D-98-3 CP on March 25, 1998. The PADEP issued its most recent NPDES Permit No. PA004044 on September 12, 2016 for this treatment facility. The approved treatment facilities have adequate capacity to continue to receive wastewater from the existing project. Wastewater generated by future projects is expected to be treated at either the existing wastewater treatment plants above, on-site treatment facilities or on-site septic systems.

**d. Relationship to the Comprehensive Plan.** The project was previously included in the Comprehensive Plan by the Commission in Docket Nos. D-67-127 CP, D-91-1 CP, D-91-1 CP-2, and D-91-1 CP-3.

## **B. FINDINGS**

### **Special Protection Waters**

In 1992, the DRBC adopted Special Protection Waters requirements, as part of the DRBC *Water Quality Regulations* (WQR), designed to protect existing high water quality in applicable areas of the Delaware River Basin. One hundred twenty miles of the Delaware River from Hancock, New York downstream to the Delaware Water Gap were classified by the DRBC as SPW. This stretch includes the sections of the river federally designated as "Wild and Scenic" in

1978 -- the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area -- as well as an eight-mile reach between Milrift and Milford, Pennsylvania which is not federally designated. The SPW regulations apply to this 120-mile stretch of the river and its drainage area.

On July 16, 2008, the DRBC approved amendments to its *Water Quality Regulations* that provide increased protection for waters that the Commission classifies as Special Protection Waters. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan Area was approved for Special Protection Waters designation and clarity on definitions and terms were updated for the entire program.

Article 3.10.3A.2.e.1). and 2). of the *Water Quality Regulations, Administrative Manual - Part III*, states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of Special Protection Waters must submit for approval a Non-Point Source Pollution Control Plan that controls the new or increased non-point source loads generated within the portion of the docket holder's service area which is also located within the drainage area of Special Protection Waters. The wells and surface water intakes providing water supply to the BCRA public water distribution system are located within in the drainage area to the Special Protection Waters. Each of the municipalities within the docket holder's service area as described above in A.3 "Area Served" (including the Borough of Stroudsburg, Pocono Township, Smithfield Township, Stroud Township, Hamilton Township, Tobyhanna Township, Paradise Township and Jackson Township) has adopted and implemented the Brodhead and McMichael Creeks Stormwater Management Ordinance. In addition, BCRA is required to comply with the Brodhead and McMichael Creeks Stormwater Management Ordinance. Compliance with the Brodhead and McMichael Creeks Stormwater Management Ordinance satisfies the Non-Point Source Pollution Control Plan requirements. Accordingly, Condition C.II.ff. has been included in the DECISION section of this docket.

### **BCRA System Demands**

Currently, BCRA is supplying an average of 2.65 mgd with a maximum day of 3.32 million gallons to customers within BCRA's service area. BCRA's surface water treatment plant has a current operating capacity of 2.5 MGD. The BCRA's two existing operating wells (PW1 and PW2) plus the water treatment capacity to utilize surface water withdrawals from BCRA's surface sources, results in a current total daily production capacity of 5.38 MGD.

BCRA's regional service area is located within a "high growth" area of the Commonwealth. Within the next ten years (by 2027), water demand within BCRA's current and reasonably projected service area is anticipated to increase to approximately 5.48 MGD.

BCRA's current and projected average daily and peak daily demands are estimated as follows:

Year	Average Daily Demand (MGD)	Peak Daily Demand (MGD)
Current	2.65	3.32
2027 (projected)*	4.45	5.48
2042 (projected)*	5.51	7.03

*\*Does not include the inter-municipal agreements for emergencies. Future demand assumes addition of PJJWA.*

BCRA’s Drought Contingency Plan (adopted by Resolution 2007-6), which is incorporated herein by reference, is implemented during periods of drought watch, drought warning, and drought emergency as declared by the Commonwealth or the Delaware River Basin Commission. Under the Drought Contingency Plan, the actions described in the plan are anticipated to result in the following reductions in levels of water demand from those that would otherwise be expected to prevail:

Action	Expected Water Demand Reduction	Drought Condition
Voluntary water use restrictions	5%	Drought watch
Voluntary water use restrictions, more intense in preparation for water emergency stage	10-15%	Drought warning
Mandatory nonessential water use restrictions	15% minimum	Drought emergency
Water rationing	15-25%	Local rationing plan triggers

The conservation measures outlined in the Drought Contingency Plan apply to all customers of the BCRA system, including those receiving water pursuant to bulk purchase agreements.

### Stream Gage Monitoring

The United States Geologic Survey maintains a surface water flow gage on the Brodhead Creek at Analomink (USGS Gage 01440400), approximately 5.6 miles upstream of BCRA’s Brodhead Creek intake. Flow information from the Analomink gage is available on a real time basis through the USGS internet website: <http://waterdata.usgs.gov/nwis/uv?01440400>.

The watershed area at the USGS Analomink gage is 65.9 square miles, in comparison to the approximately 129.3 square mile watershed area of Brodhead Creek at BCRA’s intake point. Below the Analomink gage, Brodhead Creek receives additional significant tributary contributions from Paradise Creek.

The low flow statistics for Brodhead Creek at the USGS Analomink Gage are as follows:

Q<sub>7-10</sub>: 7.3 cfs (equivalent to 0.1108 cfs per sq. mile)

95<sup>th</sup> Percentile: 12.3 cfs

90<sup>th</sup> Percentile: 18 cfs

For Operating Plan purposes, BCRA will utilize measurements at the USGS Analomink gage as a reference for determining the existence of Low Flow Conditions in the Brodhead Creek. Prior to November 30, 2021, Low Flow Conditions on Brodhead Creek will be defined as conditions when flows in Brodhead Creek at the Analomink Gage are at or below 12.3 cfs. For the period commencing November 30, 2021, Low Flow Conditions on the Brodhead Creek will be defined at conditions when flows in Brodhead Creek at the Analomink Gage are at or below 18 cfs unless the studies conducted under Paragraph 2 below indicate that use of the P90 flow to define Low Flow Conditions for the purposes of the Updated Operating Plan described in Paragraph 3 is not feasible or has unacceptable adverse impacts on system operations and reliability. BCRA will review information from the Analomink Gage on a daily basis when flows are nearing Low Flow Conditions and will commence adjustment of its operations in accordance with the conjunctive use operating criteria set forth below. In general, it requires approximately ½ day to complete the adjustment of such source operations.

### ***Conjunctive Use Operations Plan (Operating Plan/ Water Supply Studies/Implementation)***

#### ***1. Operating Plan Prior to November, 30, 2021***

During periods when the flow in Brodhead Creek as monitored at the USGS Analomink gage reflects Low Flow Conditions (12.3 cfs), BCRA will withdraw water as necessary to meet BCRA System Demands in the following order (subject to exigencies discussed below):

- a. **Tier 1:** The first 576,000 gpd to meet BCRA System Demand will be drawn from the Brodhead Creek intake in order to maintain minimum surface water treatment plant operations.
- b. **Tier 2:** The next increment of BCRA System Demand will be met by operating Wells PW1 and PW2 up to their maximum available capacity, their maximum permitted rates under the PADEP public water supply permit, or their maximum combined rate of 88.88 mgm (whichever is less), and, after the Well No. 3 treatment facility is completed, by operating Well No. 3 up to its maximum available capacity or permitted withdrawal rates (whichever is less).
- c. **Tier 3:** Any remaining amount required to meet BCRA System Demand would be met by withdrawals from the Brodhead Creek intake (up to the withdrawal limits set forth in the applicable DRBC Docket Decision and PADEP Safe Drinking Water Permit), treated at the BCRA surface water treatment plant.

The general operating criteria described above are subject to exigencies, such as the need to suspend or adjust withdrawal rates in order to address required preventative or corrective maintenance, emergencies or special conditions affecting water quality or treatment processes, and similar events. During periods of Low Flow Conditions, BCRA will provide a monthly report to PADEP of such exigencies, and at the request of PADEP, BCRA shall confer with PADEP concerning measures to mitigate the impact and duration of such exigencies. In the event of constraints in the operations of Wells PW1 or PW2 (such as constraints associated with required maintenance), BCRA will endeavor to minimize the duration and impact of such constraints to the extent reasonably practicable, in order to return Wells PW1 and PW2 to full production as expeditious as practicable.

## ***2. Water Supply Studies/Implementation***

During the time period from September 13, 2017 to November 30, 2020, BCRA agrees to complete the following activities:

- a. Complete the Crypto monitoring on Well No. 3; complete the design, obtain the Safe Drinking Water permit for construction of treatment facilities and place treatment facilities in operation for Well No. 3.
- b. Evaluate the feasibility and impact of defining Low Flow Conditions for purposes of triggering the Conjunctive Use Operating Plan on the basis of the P90 value of 18 cfs at the Analomink gage.
- c. Continue to evaluate and to pursue additional potential groundwater sources to meet future demands and for use in either or both Tier 1 and Tier 2 operations.

BCRA shall submit to DRBC and PADEP annual reports on the above mentioned activities on or before November 30 of each year, and a final report and Updated Operating Plan in accordance with Paragraph 3 below by November 30, 2020.

## ***3. Proposed Operating Plan After November 30, 2021***

Based upon the studies conducted under Paragraph 2 above, on or before November 30, 2020, BCRA shall prepare and submit to DRBC and PADEP a proposed Updated Operating Plan for implementation after November 30, 2021. The Updated Operating Plan shall consider the feasibility, impact and benefits of defining Low Flow Conditions as periods when flows in Brodhead Creek at the Analomink Gage are at or below 18 cfs, and shall provide for the incorporation of any other sources that have been or are planned to be developed by BCRA. If the studies conducted pursuant to Paragraph 2 above conclude that development and use of any other

sources that have been or are planned to be developed by BCRA during Low Flow Conditions is feasible and cost-effective, the Updated Operating Plan will provide for the design, permitting and operation of necessary facilities to use an alternative source as appropriate in Tier 1 and/or Tier 2. Where changes to the Updated Operating Plan are agreed to by BCRA, PADEP and DRBC, the Executive Director with the concurrence of the Commonwealth of Pennsylvania representative to the Commission may approve the Updated Operating Plan, and upon such approval, the Updated Operating Plan shall be incorporated in this Docket by reference.

#### **4. Recordkeeping**

BCRA maintains records of daily withdrawals from all sources through automatic recording meters that measure withdrawals from the Brodhead Creek intake and each well. BCRA will also print out and maintain as part of its operating record, the daily flow statistics during low flow periods as reported by the USGS for the Analomink gage. (Note that the information available from the USGS upon which operations will be based is “provisional data” subject to subsequent correction and adjustment by the USGS. Because such adjustment occurs substantially after the fact, operating conditions will be based solely on “provisional data.”) All such records are available to DRBC and PADEP for review upon request.

#### **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 BCRA submitted their most recent Water Audit on March 27, 2017.

#### **Surface Water Charges**

The docket holder shall continue to pay for surface water use in accordance with the provisions of Resolution No. 74-6, as amended as described in Condition C.II.g. in the DECISION section.

#### **Other Findings**

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

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

**C. DECISION**

- I. Effective on the approval date for Docket No. D-1991-001 CP-4 below:
  - a. The project described in Docket No. D-1991-001 CP-3 is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-1991-001 CP-4; and
  - b. Docket No. D-1991-001 CP-3 is terminated and replaced by Docket No. D-1991-001 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 allocation permit. The docket holder shall register with and report to the PADEP all surface and ground water sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).
  - 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 118.77 million gallons, the combined withdrawal from all surface water sources shall not exceed 99.2 million gallons and the combined withdrawal from all groundwater and surface water sources shall not exceed 217.97 million gallons. No well or intake shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL / INTAKE NO.	MAXIMUM INSTANTANEOUS RATE	MONTHLY ALLOCATION
Well PW1	1,000 gpm	44.44 mgm
Well PW2	1,000 gpm	44.44 mgm
Well No. 3	670 gpm	29.9 mgm
Brodhead Creek Intake	3.2 mgd	99.2 mgm

In addition to the foregoing surface and groundwater sources and approved water allocations, this Docket authorizes (1) an additional subsidiary allocation of up to 0.400 MGD of water to be obtained via interconnection from the Borough of East Stroudsburg; and (2) in the event of an emergency, the docket holder may either take or supply up to 1.2 MGD from or to the Borough of East Stroudsburg.

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 sponsor shall continue to implement the short-term monitoring program described in the Well No. 3 Monitoring Plan prepared by Meiser & Earl, Inc., dated July 24, 2006, as approved by the DRBC Executive Director to obtain data on surface water hydrologic conditions in the McMichael Creek and to capture any impacts from periods of low flow in McMichael Creek and high pumping rates at Well No. 3. The monitoring program shall be implemented for a period of at least one full year of operation of Well No. 3. At the conclusion of monitoring of McMichael Creek for at least one full year of operation of Well No. 3, the docket holder may request the Executive Director to modify or discontinue the monitoring requirement for McMichael's Creek. Following consultation with the Pennsylvania Department of Environmental Protection, the Executive Director may approve the modification or discontinue the monitoring requirement set forth in this condition. The monitoring program shall include the following:

1. **Surface Water Monitoring** – 1 staff gauge on McMichael Creek shall be monitored to determine possible effects of the groundwater withdrawal and/or changes in runoff characteristics.

2. **Reports** - All monitoring data, including records required in Conditions "f." and "i." herein shall be submitted to the Commission within thirty days of the conclusion of one year of monitoring. 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 any additional information deemed appropriate by the hydrogeologist or the Executive Director.

3. The Executive Director may modify or extend the monitoring program or temporarily suspend or modify this docket with respect to withdrawals from Well No. 3 at any time if review of the hydrologic data and/or any other information indicates such action is necessary or appropriate.

g. The docket holder shall pay for surface water use in accordance with the provisions of Resolution No. 74-6, as amended.

h. The docket holder shall implement the Operating Plan described in Paragraph No. 1 in the Conjunctive Use Operations Plan (Operating Plan/ Water Supply Studies/Implementation) requirements in the Findings section of this docket. Based upon the studies conducted under Paragraph No. 2 of the Conjunctive Use Operations Plan, on or before November 30, 2020, BCRA shall prepare and submit to DRBC and PADEP a final report and a proposed Updated Operating Plan for implementation after November 30, 2021 as described in Paragraph No. 3 in the Conjunctive Use Operations Plan requirements in the Findings section of this docket. Where changes to the updated Operating Plan are agreed to by BCRA, PADEP and DRBC, the DRBC Executive Director, with the concurrence of the Commonwealth of Pennsylvania representative to the Commission, may approve the Updated Operating Plan, and upon such approval, the Updated Operating Plan shall be incorporated in this Docket by reference.

i. The docket holder shall comply with the requirements of Paragraph 2 - Water Supply Studies/Implementation in the Conjunctive Use Operations Plan (Operating Plan/ Water Supply Studies/Implementation) requirements in the Findings section of this docket.

j. The docket holder shall comply with the requirements in Paragraph 4 – Record Keeping in the Conjunctive Use Operations Plan (Operating Plan/ Water Supply Studies/Implementation) requirements in the Findings section of this docket.

k. 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.

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

m. 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.

n. 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.

o. 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.

p. 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).

q. The docket holder shall continue to 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.

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

s. 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.

t. No new water service connections shall be made to premises connected to systems that are in the sewerage service area of the BCRA Wastewater Treatment Plant if the treatment plant is not in compliance with applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission unless and until PADEP or the Commission, as applicable, advise the docket holder that such non-compliance has been resolved to the agency's reasonable satisfaction.

u. 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.

v. 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*.

w. Upon written notice to the Executive Director by BCRA and PJJWA that BCRA has executed a definitive agreement to acquire the PJJWSA water facilities, the DRBC Executive Director is authorized to approve, effective upon closing, the addition of the PJJWSA as part of the “Area Served.” of this docket. Promptly following acquisition of the PJJWSA system and interconnection of the PJJWSA system with the BCRA system, BCRA shall submit information to DRBC concerning its plans for future use of the existing PJJWSA wells, and shall either request that the PJJWSA wells that BCRA plans to continue to utilize be added to BCRA’s water allocation (up to 2.5 mgm) under this docket and/or notify the Executive Director of the decommissioning of one or more of the existing PJJWSA wells by BCRA. The Executive Director is authorized to approve the addition of the PJJWSA wells and the water allocation attributed to these existing wells to BCRA’s groundwater allocation under this docket. The docket holder shall apply to the Commission at least twelve months in advance of the anticipated start of construction of any expansion of the surface water treatment facilities or withdrawals from any new surface water or groundwater sources.

x. 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.

y. 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).

z. 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).

aa. 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).

bb. 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.

cc. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

dd. 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.

ee. 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. The BCRA's Drought Contingency Plan (adopted by Resolution 2007-6) which is incorporated by reference.

ff. Compliance with the Brodhead and McMichael Creeks Stormwater Management Ordinance satisfies the Non-Point Source Pollution Control Plan requirements and meets the general requirements of Article 3.10.3.A.2.e.1 of the Commission's Water Quality Regulations for the Area Served as described in A.3 above within the Borough of Stroudsburg, Pocono Township, Smithfield Township, Stroud Township, Hamilton Township, Tobyhanna Township Paradise Township and Jackson Township. Prior to allowing connections from any new service areas or any new developments outside the Area Served as described in A.3 above, the docket holder shall either submit and have approved by the Executive Director of the DRBC a NPSPCP in accordance with Section 3.10.3.A.2.e, or receive written confirmation from the Executive Director of the DRBC that the new service area is in compliance with a DRBC approved NPSPCP.

gg. 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 13, 2017**

**EXPIRATION DATE: September 13, 2027**