

DOCKET NO. D-1993-071-2

DELAWARE RIVER BASIN COMMISSION

Drainage Area to Special Protection Waters

**Gilbert Power, LLC
Gilbert Generating Station
Surface Water Withdrawal and Electric Generating Facility Consumptive Use
Holland Township, Hunterdon County, New Jersey**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on April 1, 2019 for renewal of an allocation of surface water used for cooling and industrial processes (Application). The docket holder's surface water withdrawal was most recently approved by the Commission on March 23, 1994 (Docket No. D-93-71). The surface water and groundwater withdrawals were most recently approved by New Jersey Department of Environmental Protection (NJDEP) Water Allocation Permit No. 2326P issued on December 20, 2019. This docket has been updated to reflect the current operations at the Gilbert Generating Station.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Hunterdon County Planning Board has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on November 12, 2020.

A. DESCRIPTION

1. **Purpose.** The purpose of this docket is to approve a surface water withdrawal of up to 94 million gallons per month (mgm) from the Delaware River and a groundwater withdrawal of up to 3.348 mgm from the Stag Well for cooling and industrial processes at the existing 450-megawatt Gilbert Generating Station. The surface water allocation approved by this docket is a reduction of the previously approved total allocation of 2,700 million gallons per 30 days because of the closure of three steam units and the associated once-through, non-contact cooling requirements.

2. **Location.** The Gilbert Generation Station is located on the east bank of the Delaware River in Holland Township, Hunterdon County, New Jersey. The surface water intake is located on the Delaware River at River Mile 171.3 in Water Quality Zone 1E. Groundwater is withdrawn from the Passaic Aquifer Formation.

Specific location information has been withheld for security reasons.

3. **Area Served.** The water withdrawals are used for cooling and condensing purposes at the Gilbert Generating Station. Water is also used for nitrogen oxides (NO_x) emission reduction,

make-up water to the boilers, the wastewater treatment plant, auxiliary feedwater pump, bearing cooling and fire suppression system. The location of the Gilbert Generating Station is shown on a figure entitled “Site Location Map” submitted with the Application. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in Section C. DECISION.

4. Design Criteria. The Gilbert Generating Station is operated as a peaking facility to provide power and frequency regulation to the regional electric system. The Station consists of six in service generating units and three retired but remaining steam units. In 2015 four simple cycle combustion turbines (C1, C2, C3 and C4) were retired and removed from service. The station utilizes four combined cycle combustion turbines (Units 4, 5, 6 and 7) which are rated at a combined capacity of 200 MW. Unit 8 (100 MW) is a stream turbine utilizing stream from the exhaust gases of the four combined cycle units. Utilizing the exhaust gases to generate steam for Unit 8 greatly increases the thermal efficiency of Units 4, 5, 6 and 7. Unit 9 is a sequential simple cycle combustion turbine capable of efficient operation.

The Gilbert Station uses surface water from the Delaware River for its cooling and condensing needs. The majority of water is used for the cooling and condensing of steam in Unit 8. Water is also required for the NO_x reduction system on Unit 9, makeup water to the boilers, the wastewater treatment plant, auxiliary feedwater pumps and bearing cooling. Fire suppression water is also withdrawn from the cooling tower basin. Groundwater withdrawn from the Stag Well is mainly used for domestic and sanitary water supply and on an emergency basis only for service water. Gilbert Units 4, 5, 6, and 7 utilize air cooling and do not require any water for their operation. Unit 9 uses stored demineralized water injected into the burners to reduce NO_x emissions. Treated and stored demineralized water is injected into the Unit 9 combustion turbine at a rate of approximately 300 gallons per minute (gpm).

Current water demands are significantly lower than the facility’s previous demands. The average and maximum daily water demands for industrial cooling and process are 0.307 million gallons per day and 0.917 mgd, respectively. The docket holder estimates the 10-year projected demand will increase to a maximum of 2.32 mgd. Because of the potential for increased operations of facilities or future development the docket holder requested to retain the currently approved diversion rates in the NJDEP Water Allocation Permit.

5. Facilities. The Project facilities include power generating units, Delaware River intake and discharge structures, various office, maintenance and storage buildings, substation and transformer yards, a mechanical wet draft cooling tower and an IWTP.

The existing Delaware River Intake structures consist of two intake channels, each protected with steel bars mounted at three-inch intervals to keep large debris out of the intakes. Behind the trash racks at each intake are two conventional vertical traveling screens that filter smaller debris and organisms. The screen assemblies are approximately 10 feet wide and between 39 and 44 feet high. Each screen assembly has screen panels containing 14-gauge wire grid with ¼-inch by ½-inch openings. The traveling screens are manually operated as needed with backwash to remove debris and organisms which are diverted into throughs that return to the river.

Water used for emissions control is demineralized through a cation/anion demineralization trailer. The demineralized water is held in a 2.8 million-gallon storage tank until needed for injection for emissions control. All water withdrawn and demineralized for use in Unit 9 is consumptively used. However, the consumptive use for intermittent operations does not typically occur on the same day that the surface water is withdrawn from the Delaware River and placed into storage for NOx emissions control.

The existing project water sources have the following characteristics:

INTAKE ID	WITHDRAWAL WATER BODY	PUMP CAPACITY (GPM)	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Intake	Delaware River	131,536	1675	1930's

* Current service water pumps have a pump capacity of 3,000 gpm. Original circulating water pumps are retired.

WELL ID	DEPTH (FEET)	CASING DEPTH (FEET)	PUMP CAPACITY (GPM)	YEAR DRILLED
Stag Well	223	26	75	1976

Withdrawal and return flows are metered at various points within the plant.

With the exception of the intake and outfall structures, the Project facilities are not located in the flood hazard area.

6. Other. The Gilbert Station's discharges are approved in DRBC dockets D-71-167 (amended), D-73-200 and D-78-93 approved on September 30, 1976, June 26, 1974 and July 25, 1979, respectively. The discharges were most recently approved by NJDEP (NJPDES Permit No. NJ0005517) issued on August 16, 2016 and will continue to be regulated in accordance with the AA entered into on December 18, 2009, amended March 2015 by the Commission and the State of New Jersey (DRBC OP-1978-093). The treatment facility has adequate capacity to continue to receive wastewater from the project.

B. FINDINGS

1. 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 Gilbert Generating Station is located within in the drainage area to the Special Protection Waters. Since this project does not entail additional construction and expansion of facilities or service areas there are not any new or increased non-point source loads associated with this approval. The non-point source pollution control plan requirement is not applicable at this time. Accordingly, Condition C.21. has been included in Section C. DECISION.

2. Consumptive Use.

Water used for industrial processes and cooling results in a consumptive use of 13 percent of the total water use.

3. Consumptive Use Replacement Provision.

Resolution No. 2018-5 requires that certain electric generating or cogenerating facilities develop or acquire sources of replacement water for use during critical hydrologic conditions as a condition of approval. The Project is subject to the consumptive use requirement as it a generating facility designed to consumptively use in excess of 100,000 gallons per day of water during any 30-day period and the primary source of water is surface water located upstream of River Mile 38. The following provision from Resolution No. 2018-5 is included as Condition C.5. in Section C. DECISION:

“For the duration of a critical hydrologic condition as announced by the Commission, on a daily basis the docket holder shall cause to be released from a replacement water source approved by the Commission an amount of water equal to the amount consumptively used by the docketed facility, multiplied by the applicable relative effect factor, if assigned. For the duration of such critical hydrologic condition, the docket holder shall operate its facility only at a level commensurate with the amount of replacement water it is capable of causing to be released.”

The docket holder’s approved replacement source is the Merrill Creek Reservoir. As approved by the DRBC, the Merrill Creek Reservoir, located on Merrill Creek in Harmony Township, Warren County, New Jersey, provides supplemental storage from which releases are made during drought conditions to compensate for freshwater equivalent consumptive use of designated steam electric and combined-cycle generating units owned by members of the Delaware River Basin Electric Utilities Group. Gilbert Unit No. 8 and Unit No. 9 are included in Attachment 2, Exhibit III, as “Designated Units” in DRBC Docket No. D-1977-110 CP-19, approved on September 13, 2018.

4. Surface Water Charges.

The docket holder shall pay for surface water use in accordance with the provisions of Basin Regulations – Water Supply Charges 18 CFR Part 420, as described in Condition C.6. in Section C. DECISION.

5. Other Findings.

The annual allocation specified by this docket is based on the annual allocation approved by NJDEP.

The project is designed to conform to the requirements of the *Water Code 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

Effective on the approval date for Docket No. D-1993-071-2 below, Docket No. D-93-71 is terminated and replaced by Docket No. D-1993-071-2. The project and appurtenant facilities as described in in Section A.4. (Design Criteria) and A.5. (Facilities) are approved subject to the following conditions, pursuant to Section 3.8 of the *Compact*:

Monitoring and Reporting.

1. The project withdrawals shall be metered by means of an automatic continuous recording device, flow meter, or other method, and shall be measured to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted for surface water withdrawals by the designated agency (NJDEP) if maintenance of the 5 percent performance is not technically feasible or economically practicable. Meters or other methods of measurement shall be subject to approval and inspection by the NJDEP as to the type, method, installation, maintenance, calibration, reading and accuracy. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the NJDEP quarterly and shall be available at any time to the Commission if requested by the Executive Director.

Other Conditions.

2. During any month, the combined withdrawal from all sources shall not exceed 94 million gallons. No source shall be pumped above the maximum rates and monthly allocations as indicated below:

SOURCE ID	MAXIMUM RATE (GPM)	MONTHLY ALLOCATION (MGM)
Intake 1, Delaware River	131,536 GPM	94 MGM
STAG WELL	75 GPM	3.348 MGM

Additionally, the annual total withdrawal shall not exceed 850 million gallons.

3. The docket holder shall pay for surface water use in accordance with *Basin Regulations – Water Supply Charges (18 CFR Part 420)*.

4. 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*.

5. For the duration of a critical hydrologic condition as announced by the Commission, on a daily basis the docket holder shall cause to be released from a replacement water source approved by the Commission an amount of water equal to the amount consumptively used by the docketed facility, multiplied by the applicable relative effect factor, if assigned. For the duration of such critical hydrologic condition, the docket holder shall operate its facility only at a level commensurate with the amount of replacement water it is capable of causing to be released.

6. 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.

7. 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).

8. 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).

9. Prior to any change to the approved replacement source described in Section B.3, the docket holder shall submit a Consumptive Use Replacement Plan in accordance with Resolution No. 2018-5 to the Commission and receive written approval from the DRBC Executive Director.

10. The facilities and operational records shall be available at all times for inspection by the DRBC.

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

12. 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).

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

14. 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.

15. 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.

16. 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).

17. 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.

18. 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.

19. 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.

20. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or withdrawal 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.

21. Prior to allowing connections from any new service areas or any new developments, the docket holder shall either submit and have approved by the Executive Director of the DRBC a Non-Point Source Pollution Control Plan (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.

22. 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: December 09, 2020

EXPIRATION DATE: December 09, 2030