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DOCKET NO. D-2012-020 CP-1

DELAWARE RIVER BASIN COMMISSION

**Birdsboro Municipal Authority
Surface Water Withdrawal**

Birdsboro Borough, Robeson and Union Townships, Berks County, Pennsylvania

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on June 8, 2012 and supplemented on September 4, 2025 for approval of an allocation of surface water and review of a surface water withdrawal project (Application). The surface water withdrawal project was approved by the Pennsylvania Department of Environmental Protection (PADEP) June 30, 2025 (Water Allocation Permit No. WA 06-121D).

The Application was reviewed for inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Berks County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on November 5, 2025.

A. DESCRIPTION

1. **Purpose.** The purpose of this project is to approve an existing surface water withdrawal project to supply up to a combined 22.5 million gallons per month (mgm) of water from existing intakes located on Indian Run and Hay Creek and up to 3.1 mgm of water from an existing intake in Dyer Quarry for the purpose of public water supply. The existing sources were not previously approved by the Commission.

2. **Location.** The project surface water withdrawals are located in the Hay Creek watershed in Robeson Township and Union Township, Berks County, Pennsylvania. The existing water filtration plant is located in Birdsboro Borough, Berks County, Pennsylvania. Hay Creek is classified by the PADEP as Exceptional Value (EV) supporting Migratory Fishes (MF).

Specific location information has been withheld for security reasons.

3. **Area Served.** BMA currently serves water to the Borough of Birdsboro and a portion of Union Township just east of the Borough. The area served is outlined on a map entitled “Birdsboro

Municipal Authority, Water Distribution System”, dated October 18, 2022 submitted to the Commission. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in Section C. DECISION of this docket.

4. Design Criteria. Based on information contained in the PADEP Report on the Application for Water Allocation Permit No. WA 06-121D, dated June 30, 2025, the docket holder currently serves water to a population of approximately 4,560 on 1,900 domestic service connections, 80 commercial connections, 14 industrial connections and 32 other connections (public connections and 4 unbilled connections). In 2023, the average and peak daily water demands were 0.355 million gallons per day (mgd) and 0.496 mgd, respectively. Over the last 10 years, the mean average and peak water demands were 0.429 mgd and 0.585 mgd, respectively. Information in the PADEP report indicated that the Birdsboro Borough and Union Township were mostly built out and there are no expected future developments. PADEP estimated that the projected water use will increase to an average and peak daily demands of 0.516 mgd and 0.707 by the year 2050.

The original 2013 application requested a total allocation of 1.35 mgd. This was based on the then current PADEP allocation contained in its former water allocation permit. The current PADEP water allocation permit approves an allocation of 1.0 mgd (based on a yearly average) from Indian Run and Hay Creek combined. The Commission normally bases its allocation on the 10-year projected peak daily demand. Based on information in the PADEP report on the allocation application, the projected peak demand by the year 2040 is expected to be 0.663 mgd or 20.55 million gallons per month.

DRBC staff also evaluated the monthly usage data submitted by the docket holder to the PADEP. In May 2020, a maximum monthly withdrawal of 22.47 million gallons from Hay Creek and Indian Run combined was reported. DRBC Staff recommend that the monthly allocation be based on this recent peak monthly demand of 22.5 million gallons. As this allocation is greater than the projected peak demands listed in the PADEP Report on the Application for Water Allocation Permit No. WA 06-121D, it should be sufficient to meet the 10-year future demands of the docket holder during this 10-year docket cycle.

5. Facilities. The project intakes have the following characteristics:

Surface Water Intake – Run of Stream

INTAKE NO.	WITHDRAWAL WATER BODY	PUMP CAPACITY	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Hay Creek Race	Hay Creek	1,400 gpm	2.14 cfs	unknown

Surface Water Intake/Reservoir

INTAKE NO.	WITHDRAWAL WATER BODY	WITHDRAWAL CAPACITY	RESERVOIR CAPACITY	YEAR CONSTRUCTED
Indian Run Dam	Indian Run – tributary to Hay Creek	gravity fed 1,898 gpm	23 mg	1892 Rehabilitated in 2019
Dyer Quarry	Quarry	1,400 gpm	17 mg*	1950

Indian Run Reservoir

The primary source of water supply is obtained from the Indian Run Reservoir, which is also known as the Birdsboro Reservoir. The Indian Run Reservoir is a 23-million gallon (mg) capacity surface water impoundment located on Indian Run, a tributary to Hay Creek in Robeson and Union Townships, Berks County, PA. The reservoir captures runoff from several springs in the area and drainage from approximately 0.84 square miles of the Hay Creek Watershed. Withdrawals from the reservoir occur via gravity through a 10-inch diameter pipe that increases in diameter to 12-inches and then to 16 inches. The pipe terminates just outside of the Birdsboro Borough limits. A second 10-inch diameter water supply line runs parallel to the 16-inch diameter pipe from the upper end of Indian Run Reservoir to the docket holder's Water Treatment Plant. A crossover at the end of the 16-inch diameter main allows water to enter the 10-inch diameter main.

The reservoir contains release works that allow water to be drained from the reservoir through the intake structure to Indian Run. The confluence of Indian Run with Hay Creek is located approximately 1,000 feet downstream of the Hay Creek Race intake described below.

Hay Creek Withdrawal

Hay Creek Race intake is located in a manmade waterway (race) that was constructed along the eastern bank of Hay Creek to supply water to a historic mill in Robeson Township, Berks County, Pennsylvania. Hay Creek race connects to Hay Creek through a concrete inlet box. The docket holder's Trap Rock Pump Station containing two 350-gpm pumps and one 700 gpm pump transfers water from Hay Creek Race directly to Indian Run Reservoir. The drainage area above the point of taking is approximately 19 square miles. Withdrawals from Hay Creek Race are made when the water levels in Indian Run Reservoir decrease. Water withdrawals from Hay Creek Race are metered.

Dyer Quarry

The John T. Dyer Quarry is a 17 mg capacity abandoned trap rock quarry located in Robeson Township, Berks County, Pennsylvania. Withdrawals from the quarry are pumped directly into the Indian Run Reservoir. The quarry captures practically no surface water drainage as the quarry is surrounded on three sides by near vertical cliffs and on the fourth side the land slopes sharply away from the quarry towards Hay Creek. Pumping tests completed in 1964 indicated that the quarry could be pumped at 600 gpm with the water level stabilizing at about 10

to 12 feet below normal level and the previous PADEP allocation was based on this amount (0.864 mgd). The existing pump configuration (lack of suction lift) reduces the usable storage capacity of the quarry to approximately 3 mg. Currently, the quarry is pumped at approximately 350 gpm until the water elevation reaches a point where the pumps are no longer efficient, which occurs in about 5 consecutive days of pumping. Following the removal of usable water from the quarry, BMA reports that the source cannot be used for 2 weeks to 1 month to allow water in the quarry to recover. Withdrawals from the quarry normally occur only several days out of the year. The docket holder estimates the safe yield of Dyer Quarry to be 0.100 mgd.

Water Filtration Plant

The docket holder's 1.0 mgd capacity membrane water filtration plant was constructed in 2012-2013 adjacent to the former water treatment plant facilities. PADEP issued Public Water Supply Permit No. 0610541 on December 7, 2011 approving the construction of the treatment plant. The treatment plant includes a 1.0 mgd low pressure ultra/microfiltration unit with a backwash system, maintenance wash system and a clean-in-place system. Backwash is discharged to the sanitary sewer. Filtered water is transferred to clear wells/chlorine contact tanks where it is chlorinated prior to entering the distribution system.

Total finished water storage is 1.4 mg or approximately 1 day of supply.

All water service connections are metered.

All withdrawals are metered.

The water filtration plant is located outside the 100-year flood plain.

6. Other. Wastewater from the area served is conveyed to the Birdsboro Municipal Authority wastewater treatment plant most recently approved by DRBC Docket No. D-1974-126 CP-4 on September 10, 2020. The PADEP issued NPDES Permit No. PA0021709 for this treatment facility. The treatment facility has adequate capacity to continue to receive wastewater from the BMA service area.

7. Relationship to the Comprehensive Plan. The project was not previously included in the Comprehensive Plan. Issuance of this docket will add the withdrawal project to the Commission's Comprehensive Plan.

B. FINDINGS

The purpose of this docket is to approve the existing surface water withdrawals from Hay Creek, Indian Run and Dyer Quarry for public water supply for use within the Borough of Birdsboro and a portion of Union Township, Berks County, Pennsylvania. BMA purchased the water system from the Birdsboro Water Company on January 1, 1963. The surface water withdrawals are regulated by the Pennsylvania Department of Environmental Protection (PADEP) under Water Allocation Permits No. WA 06-121D issued on June 30, 2025.

1. Existing Withdrawals

This project consists of water withdrawals from three surface water sources. In the 2013 DRBC application, the docket holder requested to retain the allocations provided in its previously approved PADEP water allocation permits. These permits approved a combined allocation of 1.35 mgd from the intakes located on Indian Run, Stinson Run and Hay Creek and 0.864 mgd from the intake in the Dyer Quarry. The approval for withdrawals from Stinson Run has been revoked by PADEP. The allocation of 22.5 mgm for Hay Creek and Indian Run combined as approved in this docket is less than the allocation requested by BMA in its 2013 DRBC application. As the Commission bases water allocations on ten-year projected maximum use estimates, with some minor flexibility for municipal public water purveyors, the allocation of 22.5 mgm granted herein satisfies the docket holder's ten year projected maximum use.

2. Passby Flow

PADEP Water Allocation Permit No. WA 06-121D requires that a continuous instream flow of at least 5.11 cfs (3.30 mgd) be maintained at all times just downstream of the Hay Creek intake. When the natural streamflow at the approved monitoring location is equal to or less than 5.1 cfs, withdrawals must cease and the entire natural streamflow be allowed to pass the intake. The permit also conditions a greater passby flow of 7.21 cfs effective 20 years from the issuance date of the permit unless a biological monitoring study demonstrates to PADEP that the current passby is sufficiently protective of aquatic ecosystems downstream of the intake. Based on information from the PADEP, the docket holder has elected to conduct a biological monitoring study.

PADEP Water Allocation Permit No. WA 06-121D requires that a continuous instream flow of at least 0.31 cfs (0.20 mgd) shall be maintained at all times just downstream of the Indian Run stream intake twenty years from the issued date of the PADEP water allocation permit unless a biological monitoring study demonstrates to the PADEP that a lesser passby is equally as protective to the stream. Based on information from the PADEP, the docket holder has elected to conduct a biological monitoring study.

3. 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 (see Section C. DECISION Condition C.5).

4. Surface Water Charges / Entitlement

DRBC Certificate of Entitlement No. 277, issued July 15, 1976, entitles the docket holder to withdrawal 26.266 million gallons per month (21.013 mgm non-consumptive use and 5.253 mgm consumptive use) from the Dyer Quarry without surface water charges. The Commission did not issue Certificates of Entitlement to BMA for its other surface water sources.

BMA's sources have not previously been subject to DRBC surface water charges, although a portion should be. Article 5.1.3.A, of the DRBC Basin Regulations – Water Supply Charges provides:

“There shall be no charge for water withdrawn or diverted in quantities exceeding the legal entitlement of the user, determined as of October 27, 1961.”

Based on information in the Commonwealth of Pennsylvania Department of Forests and Waters, Water and Power Resources Board Report Upon the Application for Water Allocation Permit No. WA -121-B, the docket holder purchased the all lands and facilities from the Birdsboro Water Company on January 1, 1963. Since the docket holder purchased the facilities from Birdsboro Water Company on January 1, 1963, the Certificate of Entitlement for the Dyer Quarry withdrawal should not have been issued by the Commission because the docket holder did not own the water supply facilities on October 27, 1961. However, since the Commission issued the Certificate of Entitlement and withdrawals from the quarry could be used to offset the water withdrawals from Hay Creek, Commission staff recommend that the docket holder be permitted to retain its existing Entitlement for the Dyer Quarry.

Article 5.1.3.D, of the DRBC Basin Regulations – Water Supply Charges provides:

“Notwithstanding the provisions of A., B. and C., there shall be no charge for water made available from storage where: (1) The cost of the storage facility has or will be otherwise paid for by the user; (2) such storage controls a drainage area; and (3) the use does not exceed the yield of such storage without augmentation from other surface water of the basin.”

The Indian Run Reservoir is augmented with other surface water sources (Hay Creek and Dyer Quarry) and therefore does not meet all conditions of Article 5.1.3.D. Surface water withdrawals from Indian Run and Hay Creek are subject to Commission water supply charges.

The docket holder shall pay for surface water use in accordance with Basin Regulations-Water Supply Charges 18 C.F.R. Part 420. See Section C. DECISION condition C.3.

5. Other Findings

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 Basin Regulations-Water Supply Charges 18 C.F.R. 420.1(d).

The project is designed to conform to the requirements of the *Water Code (WC)* and *Water Quality Regulations (WQR)* 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-2012-020 CP-1 below, the project and the appurtenant facilities as described in Section A.4. (Design Criteria) and A.5. (Facilities) shall be added to the Comprehensive Plan. The project and appurtenant facilities as described 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 docket holder shall continue to report to the PADEP all surface water sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).
2. 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 (PADEP) 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 PADEP 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 PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.
3. The docket holder shall pay for surface water use in accordance with *Basin Regulations – Water Supply Charges 18 C.F.R. Part 420*.
4. 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.

5. In accordance with DRBC Resolution No. 2009-1 and Section 2.1.8 of the *Water Code (WC)*, 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.

6. The docket holder shall implement to the satisfaction of the PADEP, a continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the PADEP, on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

Other Conditions

7. During any month, the combined withdrawal from Indian Run Reservoir Intake and Hay Creek Intake shall not exceed 22.5 million gallons. No source shall be pumped/diverted above the maximum rate and monthly allocation as indicated below:

SOURCE ID.	MAXIMUM RATE (MGD)*	MONTHLY ALLOCATION (MGM)	COMBINED MONTHLY ALLOCATION
Indian Run Reservoir	1.0 MGD	22.5 mgm	22.5
Hay Creek Intake	1.0 MGD	22.5 mgm	
Dyer Quarry Intake	0.5 MGD	3.1 mgm	

* Based on a 24-Hour Average

8. In accordance with 18 C.F.R. 401.8. of the Commission's *Rules of Practice and Procedure (RPP)*, if at any future time the Project is changed materially from the Project as described in this docket, it will be deemed to constitute a new and different project for the purposes of Article 11 of the Delaware River Basin Compact and will require Commission amendment of the Comprehensive Plan. In accordance with the same section of the RPP, whenever a change to the Project is made, the sponsor must advise the Executive Director, who will determine whether the change is deemed materially for purposes of this provision.

9. This approval shall expire on the expiration date set forth below unless prior thereto the docket holder has applied to the Commission to renew or extend this approval.

- 10.** 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 C.F.R. 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 DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. If the docket holder has not applied to renew the docket or the DRBC is unable to reissue the docket before the expiration date below, the terms and conditions of the current docket will remain fully effective and enforceable pending the renewal of the docket.
- 11.** The surface water intakes and operational records shall be available at all times for inspection by the DRBC.
- 12.** The surface water intakes shall be operated at all times to comply with the requirements of the *WC* and *WQR* of the DRBC.
- 13.** Each new water service connection shall include a water meter in accordance with the DRBC's Resolution No. 87-7 (Revised).
- 14.** 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).
- 15.** The docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.
- 16.** 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.
- 17.** 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.
- 18.** 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.
- 19.** 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*.
- 20.** 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).

21. 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 401.43).

22. 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 C.F.R. 401.43).

23. 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 to ensure the proper control, use and management of the water resources of the Basin.

24. 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.

25. 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.

26. 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.

27. 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: December 10, 2035