

DOCKET NO. D-2021-005-1

DELAWARE RIVER BASIN COMMISSION

**Cobbs Creek Restoration and Community Foundation – Cobbs Creek Golf Club
Ground and Surface Water Withdrawal
City of Philadelphia, Philadelphia County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on December 8, 2021 (Application) for approval of an allocation of groundwater and surface water and review of a groundwater and surface water withdrawal project.

The Application was reviewed for approval in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Philadelphia City Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on August 10, 2022.

A. DESCRIPTION

1. **Purpose.** The purpose of this project is to approve a groundwater and surface water withdrawal of up to 12.0 million gallons per month (mgm) for irrigation of the docket holder's golf course from a proposed wet well intake pond at the confluence of Cobbs Creek and Indian Creek and Well IW-1. The docket holder intends to augment the surface water supply with new Well IW-1 to satisfy the irrigation water demand for the docket holder's golf course. The docket also approves a temporary withdrawal of up to 20 mgm during the first year of irrigation to establish turf from seed.

2. **Location.** The project well is completed in Wissahickon Schist and is located in the Cobbs Creek Watershed in the City of Philadelphia, Philadelphia County, Pennsylvania. Cobbs Creek and Indian Creek at the project site are designated by the Pennsylvania Department of Environmental Protection (PADEP) as Warm Water Fishes (WWF) and Migratory Fishes (MF).

Specific location information has been withheld for security reasons.

3. **Area Served.** The project withdrawals will only provide irrigation water to the docket holder's golf course. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. Design Criteria. The docket holder’s golf course will include approximately 150 acres of tees, greens, and fairways. The golf course currently is not in operation and is not irrigated. After renovation, the docket holder projects an average and maximum water demand of 0.300 mgd and 0.600 mgd, respectively. These estimates are only for the months when the golf course is in operation (approximately six months a year). The docket holder anticipates irrigation of the golf course to begin in the second or third quarter of 2023. Following the initial turf grow in period, the allocation of 12.0 mgm should be sufficient to meet the future irrigation demands.

Irrigation water will be sourced from a surface water diversion and supplemented with an irrigation well. The surface water intake is a proposed wet well intake pond located near the confluence of Indian Creek and Cobbs Creek. Surface water will be diverted via gravity from the creeks into a proposed wet well intake pond. The total requested instantaneous surface water diversion rate is 650 gpm, which is based on 410 gpm (0.92 cfs) from Cobbs Creek and 240 gpm (0.53 cfs) from Indian Creek. Water from the wet well intake pond will be pumped approximately 2,600 feet north via 12-inch PVC pipe to the proposed irrigation water reservoir.

Irrigation water will be supplemented from irrigation Well IW-1. The requested instantaneous water diversion rate for groundwater is 100 gpm. Groundwater will be transferred approximately 890 feet north from the well pump house via a 12-inch PVC pipe to the proposed reservoir. The bottom of the irrigation reservoir will be lined. Irrigation water source metering will occur, at a minimum, at the wet well intake pond, at the irrigation well IW-1 pump house, and at the proposed irrigation water reservoir. The Cobbs Creek Golf Club irrigation system will also have an emergency interconnection to the Philadelphia Water Department (PWD) water distribution system for use under drought conditions.

5. Facilities. The docket holder’s proposed well and surface water intake have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
IW-1	700	40”/ 8”	100	2020

INTAKE	WITHDRAWAL WATER BODY	PUMP CAPACITY (GPM)	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Wet Well Intake Pond	Cobb Creek	650	3.9	2023*

* estimated

The well, wet well intake pond and irrigation reservoir will be metered.

The project well is above the 100-year flood elevation.

The irrigation system is interconnected with the PWD water distribution system for emergency use only.

6. Other. Domestic wastewater is conveyed to the City of Philadelphia Southwest sewage treatment facility which received approval most recently under Section 3.8 of the *Compact* by DRBC Docket No. D-1970-053 CP on December 12, 1972. The treatment facility is approved by PADEP NPDES Permit No. PA0026671. The treatment facility has adequate capacity to receive wastewater from the proposed project.

B. FINDINGS

The Cobbs Creek Golf Club opened to the public in 1916 and is currently closed. The docket holder is seeking to make improvements to restore the golf course to its original design. The docket holder is proposing to construct a surface water diversion at the confluence of Cobbs Creek and Indian Creek which will pump water to a new irrigation reservoir. The docket holder will also use a new groundwater source (Well IW-1) to supplement water to the irrigation reservoir. The docket holder anticipates irrigation of the golf course to begin in the second or third quarter of 2023. The Cobbs Creek Golf Club will consist of an 18-hole course, a 9-hole course and a practice course located on 420 acres of land. Prior to the golf course shutting down, the irrigation water was supplied by PWD.

1. Well IW-1 Hydrogeologic Evaluation

On October 12 through October 14, 2021, a 48-hour pumping test was conducted to assess withdrawal capabilities of Well IW-1 and the underlying aquifer characteristics and potential impacts to the local hydrologic system. The average pumping rate of the test on Well IW-1 was approximately 114 gallons per minute (gpm). Discharge from the pumping well was routed through a 4-inch diameter, 200-foot-long discharge line directed south of the well, far enough downgradient so that recirculation would not occur. Hay bales were placed at the end of the discharge line to avoid erosion of the soil. A Temporary Discharge Approval was obtained from the PADEP Clean Water Program on August 17, 2021 for this discharge method and receiving stream (UNT of Indian Creek). Well IW-1 was pumped for a total period of 2,880 minutes.

Groundwater response monitoring was conducted in the pumping well (Well IW-1) and Observation Wells COB1-1, COB2-4, COB2-5 and overburden well MW-1. All wells were monitored electronically and manually except for MW-1 which remained dry during all phases of the test and was just monitored manually. Observation Wells COB1-1, COB2-4, COB2-5 and MW-1 are located approximately 3,800 feet, 1,710 feet, 1,310 feet and 200 feet from the pumping well, respectively.

Prior to the start of the pumping test, the water level in Well IW-1 was 2.38 feet below top of casing (btoc). Maximum drawdown observed at the pumping well, after approximately 48 hours of pumping at a rate of 114 gpm, was 489 feet (water level of 491.38 feet btoc).

Observation well drawdown data indicate that there may have been drawdown as a result of pumping in Observation Well COB2-5 in the hundredths of a foot. No discernable drawdown was observed in any of the other observation wells due to the pumping of Well IW-1.

The observed drawdown data was used to calculate aquifer parameters to characterize the underlying aquifer. The average transmissivity value for the Well IW-1 test data was 28.25 ft²/day using the Cooper-Jacob method and an estimate from specific capacity, at an average test rate of 114 gpm. Storativity could not be estimated because pumping at Well IW-1 did not appear to influence the water levels in the observation wells.

Commission staff have reviewed the Hydrogeologic Report for the Well IW-1 pumping test. No adverse impacts are expected to occur to the local hydrologic system due to the pumping from Well IW-1.

2. Passby Flow

Surface water will be diverted at the confluence of Cobbs Creek and Indian Creek via gravity into wet well intake pond. At the project site the estimated seven-day low flow with a recurrence interval of 10 years (Q₇₋₁₀) at the point of withdrawal (the confluence of Cobbs Creek and Indian Creek) is 3.9 cubic feet per second (cfs) or 2.52 mgd. The diversion from Cobbs Creek and Indian Creek to the wet well intake pond must not cause streamflow to be less than 3.9 cfs below the diversion. The diversion shall be constructed to allow at least the Q₇₋₁₀ at the point of diversion to pass the diversion at all times. When stream flow is less than 3.9 cfs at the diversion, no diversions shall be made to the wet well intake pond and the entire natural streamflow must be allowed to pass. Within six months of the approval date of this Docket, the docket holder shall submit an Operations Plan, subject to approval by the DRBC Executive Director, which shall include a means to comply with the passby flow as described in Section C. DECISION Condition C.2.

3. Surface Water Charges

The docket holder shall pay for surface water use in accordance with the provisions of Resolution No. 74-6, as amended as described in Section C. DECISION Condition C.3.

4. Other Findings

The DRBC estimates that the project withdrawals, used for the purpose of golf course irrigation, result in a consumptive use of 90 percent of the total water use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

The project is designed to conform to the requirements of the *Water Code (WC) and Water Quality Regulations (WQR)*.

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-2021-005-1 below, 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. Within 60 days (November 8, 2022), the docket holder shall provide written confirmation to the Commission that it has registered and reported with PADEP all surface and groundwater 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 diversion from Cobbs Creek and Indian Creek to the wet well intake pond must not cause streamflow to be less than 3.9 cfs below the diversion. The diversion shall be constructed to allow at least the Q_{7-10} at the point of diversion to pass the diversion at all times. When stream flow is less than 3.9 cfs at the diversion, no diversions shall be made to the wet well intake pond and the entire natural streamflow must be allowed to pass. Within six months of the approval date of this Docket, the docket holder shall submit an Operations Plan, subject to approval by the DRBC Executive Director, which shall include a means to comply with the passby flow.

3. 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. 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 biweekly 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.

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

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

6. The docket holder shall pay for surface water use in excess of the amount of groundwater withdrawn from Well IW-3 in accordance with Administrative Manual – Part III Basin Regulations – Water Supply Charges 18 CFR Part 420.

Other Conditions

7. During the first year of irrigation to establish turf from seed, the combined withdrawal from all sources shall not exceed 20.0 million gallons (80.0 mgy). No source shall be pumped above the maximum rate and monthly allocation as indicated below:

SOURCE ID	MAXIMUM RATE (GPM)*	MONTHLY ALLOCATION (MGM)
IW-1	100	1.6
Wet Well Intake Pond	750	20.0

*Based on a 24-Hour Average

The total withdrawal from the irrigation water reservoir shall not exceed 20.0 mgm.

After the first year of irrigation (the end of the temporary grow in period), the combined withdrawal from all sources shall not exceed 12.0 million gallons (60.0 mgy). No source shall be pumped above the maximum rate and monthly allocations as indicated below:

SOURCE ID	MAXIMUM RATE (GPM)*	MONTHLY ALLOCATION (MGM)
IW-1	100	1.6
Wet Well Intake Pond	750	12.0

*Based on a 24-Hour Average

The total withdrawal from the irrigation water reservoir shall not exceed 12.0 mgm.

8. Section 2.3.10 of the Commission’s *Rules of Practice and Procedure* (18 C.F.R. 401.41), limiting the Commission’s approval to three years in the absence of an expenditure of substantial funds by the project sponsor in reliance on the approval, is hereby waived for good cause shown in accordance with Section 2.9.3 (18 C.F.R. 401.123) of the same regulations. 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.

9. 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.

10. The well, surface water intake and operational records shall be available at all times for inspection by the DRBC.

12. The well and surface water intake shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

13. The well 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.

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

15. 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).

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

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

21. 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).

22. 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).

23. 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).

24. 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.

25. 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.

26. 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.

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: September 8, 2022

EXPIRATION DATE: September 8, 2032