

**DOCKET NO. D-1996-042-4**

**DELAWARE RIVER BASIN COMMISSION**

**Southeastern Pennsylvania  
Ground Water Protected Area**

**Lookaway Partners, L.P. – Lookaway Golf Club  
Groundwater and Surface Water Withdrawal  
Buckingham Township, Bucks County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on July 3, 2024 for renewal of an allocation of groundwater and surface water and review of a groundwater and surface water withdrawal project (Application).

The Application was reviewed for approval under Section 3.8 and for a withdrawal permit under Section 10.3 *Delaware River Basin Compact*. The Bucks 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 6, 2024.

**A. DESCRIPTION**

1. **Purpose.** The purpose of this docket is to renew the approval of an existing groundwater and surface water withdrawal with an increase in system allocation from 6.2 mgm to 8.0 mgm to irrigate the applicant's Lookaway golf course from existing Well PW-2 and PW-3, an existing, off-stream constructed pond and new Well PW-4.

2. **Location.** The project wells are completed in the Brunswick Formation and are located in the Mill Creek Watershed, in Buckingham Township, Bucks County, Pennsylvania.

Specific location information has been withheld for security reasons.

3. **Area Served.** The project withdrawals will only be used to supply water to the docket holder's golf course irrigation system. 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.** The docket holder's Lookaway golf course is an 18-hole golf course located on 226.4 acres and consists of approximately 32 acres of fairways and tees, 4 acres of greens and 56 acres of additional property which is irrigated. The allocation of groundwater and surface water herein will only serve golf course irrigation. The potable water at the golf course's clubhouse is provided by an existing on-site well (PW-1) which only serves the clubhouse. The withdrawals from this well are below the Commission's withdrawal threshold when the golf course is in operation.

The irrigation system is sourced from an off-stream constructed pond supplemented by two existing Wells PW-2, PW-3 and new Well PW-4. The 11.0-million-gallon (mg) capacity pond is also designed to capture surface water runoff, which minimizes groundwater use. The off-stream pond provides up to 55 days of water storage.

The average and maximum demand is 0.1 million gallons per day (mgd) and 0.258 mgd, respectively. The docket holder does not estimate an increase in the 10-year average or maximum daily demand. The allocation of 8.0 million gallons per month (mgm) should be sufficient to meet the future demands of the Lookaway system.

5. **Facilities.** The docket holder's existing project wells and pond have the following characteristics:

| WELL NO. | DEPTH<br>(FEET) | CASED DEPTH/<br>CASING<br>DIAMETER | PUMP CAPACITY<br>(GPM) | YEAR DRILLED |
|----------|-----------------|------------------------------------|------------------------|--------------|
| PW-2     | 350             | 63' / 8"                           | 80                     | 1996         |
| PW-3     | 530             | 42' / 8"                           | 80                     | 1996         |
| PW-4     | 502             | 60' / 8"                           | 150                    | 2024         |

| POND ID. | PUMP<br>CAPACITY<br>(GPM) | STORAGE<br>CAPACITY<br>(MG) | YEAR CONSTRUCTED |
|----------|---------------------------|-----------------------------|------------------|
| Pond     | 1,400                     | 11                          | 1997             |

The wells and pond are metered.

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

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

6. **Other.** Wastewater from the site is conveyed to an on-site septic system.

## B. **FINDINGS**

### 1. **Ground Water Protected Area**

The project is located within the Southeastern Pennsylvania Ground Water Protected Area delineated by the DRBC pursuant to *Compact* Section 10.2. Historical use by the docket holder indicates the operation of this project will not create a local water shortage.

Review and analysis of the application pursuant to Section 6.D. of the *GWP*AR result in the following:

1. The withdrawal is consistent with the Commission's Comprehensive Plan and the policies and purposes of these regulations.

2. Opportunities to satisfy water requirements on a timely basis from existing available supplies and facilities have been explored and are being utilized.

3. The withdrawal, in conjunction with other withdrawals in the applicable ground water basin, should not exceed withdrawal limits of the ground water basin, aquifer or aquifer system.

4. The withdrawal should not significantly impair or reduce the flow of perennial streams in the area.

5. Existing ground and surface water withdrawals should not be adversely impacted, or will be otherwise assured of adequate supplies in accordance with the requirements of Section 10 of the *GWP*. There have been several well interference complaints since the original approval of this docket. Most of the interference complaints occurred in 1997-1998 following the initial startup of the golf course irrigation operations and coincided with a period of below average precipitation conditions. As a result, several neighboring wells were redrilled or deepened and the Commission has not received any additional interference complaints from these residences in the area. A more recent well interference complaint was received in 2017. Commission staff investigated this complaint and measured water levels in the well. This data in combination with monthly water level data and usage reported by the docket holder did not indicate that the docket holder's withdrawals caused the interference. The groundwater level monitoring program required by this docket will continue to provide water level that can be used to identify any future impacts from the project withdrawals.

6. No adverse impact is anticipated due to continued operation of this project.

7. The withdrawal should not cause substantial, permanent adverse impact to the overlying environment.

8. The docket holder adopted and will implement conservation and management programs as required by Section 7 of the *GWP*.

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

The docket holder's wells are located in the Mill Creek subbasin (Subbasin No. 16), where total net annual groundwater withdrawals (210 mgy) are less than the withdrawal limits set in Section 6.I of the *GWP*AR (1,565 mgy). The docket holder is requesting an annual allocation of 48.0 mgy (8.0 mgm x 6 months), a fraction of which will be returned to groundwater. However, even if no water from this project were returned to groundwater, the total net annual groundwater withdrawal from this subbasin would remain below the withdrawal limits set in Section 6.I of the *GWP*AR. Therefore, the withdrawals from the docket holder's wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWP*AR.

## 2. Surface Water Charges

The docket holder shall pay for surface water use if the irrigation water withdrawal exceeds the amount of the total combined well withdrawals, in accordance with *Basin Regulations-Water Supply Charges* 18 C.F.R. Part 420. See Section C. DECISION Condition C.4.

## 3. Well PW-4 Hydrogeologic Evaluation

On May 6, 2024 through May 9, 2024, a constant rate pumping test was conducted to assess groundwater withdrawal capabilities of Well PW-4 and the underlying aquifer characteristics and potential impacts to the local hydrologic system. The average pumping rate of the test on Well PW-4 was 195.3 gallons per minute (gpm). Prior to the end of the pumping test (between approximately 1:06 am and 6:01 am on May 9), the generator shut down for a total of 188 minutes. The generator was re-started, and the pumping test was extended until 12:30 pm. As such, the pump was run for a total of 4,272 minutes, which was 48 minutes short of 72 hours (71.2 hours). Discharge from the pumping well was conveyed through a 6-inch diameter hose approximately 50 feet northeast to a dry swale adjacent to the down-gradient wetland.

Groundwater response monitoring was conducted in the pumping well (Well PW-4) and Monitoring Wells PW-1, PW-3, MW-1, MW-3, MW-4, MW-11, Yerkes well and Qualli well. All wells were monitored manually, in addition to the manual monitoring Wells PW-4, PW-3, PW-1, MW-1, MW-3 and MW-4 had dataloggers installed in them. The datalogger in Well MW-1 failed during the pumping test and only manual water level data was obtained for this well. The monitoring well distance ranged from 710 feet from the pumping well (PW-1) to 2,000 feet (Yerkes).

Prior to the start of the pumping test, the water level in Well PW-4 was 16.62 feet below the top of casing (btoc). The maximum drawdown observed at the pumping well, after approximately 71.2 hours of pumping at an average rate of 195.3 gpm, was 164.6 feet (water level of 181.22 feet btoc). The predicted 180-day drawdown at a pumping rate of 195.3 gpm is 237 feet (water level of 253.62 feet).

During the 72-hour aquifer test at the rate of 195.3 gpm, interference from PW-4 pumping occurred at three wells (PW-3, MW-3 and the Qualli well). Well PW-3 was estimated to experience approximately 6.7 feet of drawdown from PW-4 pumping at 195.3 gpm. Well MW-3 was estimated to experience approximately 8.4 feet of drawdown. The Qualli well was estimated to experience approximately 9.2 feet of drawdown. No discernable drawdown was observed in any of the other monitoring wells due to the pumping of Well PW-4. To lower the impact of pumping at Well PW-4, the docket holder will only pump up to 150 gpm.

The observed drawdown data was used to calculate aquifer parameters to characterize the underlying aquifer. The median Transmissivity value for the Well PW-4 test data was 756.9 ft<sup>2</sup>/day from Well PW-4 and monitoring well data using the Cooper-Jacob drawdown and Theis Recovery methods at an average test rate of 195.3 gpm. A median Storativity value of  $3.8 \times 10^{-4}$  was calculated from the drawdowns observed in Monitoring Wells PW-3, MW-3 and the Qualli well. The Storativity value is consistent with a confined aquifer value.

Commission staff have reviewed the Hydrogeologic Report for the Well PW-4 pumping test. No adverse impacts are expected to occur to the local hydrologic system due to the pumping from Well PW-4. Even though no adverse impacts are expected, the docket holder will add the Qualli well to their existing monitoring network.

#### **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 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)*, *Water Quality Regulations (WQR)* and *Ground Water Protected Area Regulations (GWPAR)* 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-1996-042-4 below, Docket No. D-1996-042-3 is terminated and replaced by Docket No. D-1996-042-4. 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. Within 60 days (February 2, 2025), the docket holder shall provide written confirmation to the Commission that it has registered and reported with PADEP new well PW-4 in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning). The docket holder shall continue to report to the PADEP all surface and groundwater sources described in this docket in accordance with the Pennsylvania Regulations.

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. 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. A long-term monitoring program is required to obtain data on ground water and surface water hydrologic conditions in the project area. The docket holder shall continue to implement the long-term monitoring program as submitted by the docket holder in a report dated January 10, 1997, plus the Yerkes well and pond and the Qualli well from the PW-4 pumping test. This program will include the following:

**A. Groundwater Level Monitoring** – The docket holder shall monitor fourteen (14) wells and a pond identified in the above referenced letter to estimate annual ground water fluctuations caused by seasonal changes and/or production well pumping, and detect water level declines that may affect the performance of public and private wells in the area of the docket holder's irrigation wells.

**B. Reports** - All monitoring data, including records required in Condition 3. herein shall be submitted to the Commission annually, due by April 1. The docket holder is encouraged to submit the annual report electronically. The report shall be prepared by a hydrogeologist and shall assess the effects of well withdrawals on the local hydrogeologic system. This report shall include an evaluation of the monitoring data required by this docket approval and such information as deemed appropriate by the hydrogeologist or required by the Executive Director.

**C.** The Executive Director may modify or extend the monitoring program or temporarily suspend or modify this docket at any time if review of the hydrologic data and/or any other information indicates such action is necessary or appropriate.

4. The docket holder shall pay for surface water use, if the irrigation water withdrawal exceeds the amount of the total combined well withdrawals, in accordance with *Basin Regulations – Water Supply Charges 18 C.F.R. Part 420*.

5. 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.

### **Other Conditions**

6. During any month, the combined withdrawal from all well sources shall not exceed 8.0 million gallons or 48.0 mgd (8.0 mgd x 6 months). During any month the withdrawal from the Pond shall not exceed 8.0 million gallons. No source shall be pumped above the maximum rate and monthly allocation as indicated below:

| <b>WELL OR<br/>POND NO.</b> | <b>MAXIMUM RATE<br/>(GPM)*</b> | <b>MONTHLY<br/>ALLOCATION<br/>(MGD)</b> |
|-----------------------------|--------------------------------|-----------------------------------------|
| PW-2                        | 80                             | 3.1                                     |
| PW-3                        | 80                             | 3.1                                     |
| PW-4                        | 150                            | 6.7                                     |
| Pond                        | 1,400                          | 8.0                                     |

\* Based on a 24-Hour Average

7. 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.

8. 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 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.

10. The wells, pond and facility and operational records shall be available at all times for inspection by the DRBC.

11. The wells, pond and facility shall be operated at all times to comply with the requirements of the WC and WQR of the DRBC.

**12.** The wells shall be equipped, where possible, with readily accessible capped ports and minimum ½ inch inner diameter (ID) drop pipes as repairs or modifications are made at each existing well so that water levels may be measured under all conditions.

**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.** 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.

**17.** 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.

**18.** 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*.

**19.** 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).

**20.** 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).

**21.** 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).

**22.** 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.



23. 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.

24. 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.

25. 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 5, 2024**

**EXPIRATION DATE: December 5, 2034**