

**DOCKET NO. D-2004-026-2**

**DELAWARE RIVER BASIN COMMISSION**

**Ledgerock Golf Club  
Groundwater Withdrawal  
Cumru Township, Berks County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted by ARM Group, Inc. on behalf of Ledgerock Golf Club (Ledgerock or docket holder) to the Delaware River Basin Commission (DRBC or Commission) on September 3, 2013 for renewal of an allocation of groundwater and review of a groundwater water withdrawal project (Application).

The Application was reviewed 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 September 9, 2014.

**A. DESCRIPTION**

- 1. Purpose.** The purpose of this project is to renew the approval of up to 8.525 million gallons per month (mgm) of groundwater for irrigation of the docket holder's golf course from existing Wells Nos. IW-1 and IW-2 with no increase in allocation.
- 2. Location.** The project wells are completed in the Hammer Creek Formation and are located in the Angelica Creek-Schuylkill River Watershed in Cumru Township, Berks County, Pennsylvania. Angelica Creek near the project site is designated by the Pennsylvania Department of Environmental Protection (PADEP) as supporting Cold Water Fishes (CWF) and Migratory Fishes (MF).

Specific location information has been withheld for security reasons.

- 3. Area Served.** The project withdrawals will continue to be used only to supply water to the docket holder's golf course irrigation system.
- 4. Physical features.**
  - a. Design criteria.** Ledgerock consists of an 18-hole golf course, practice range and club house facility situated on approximately 212 acres. Approximately 83 acres, including 35

acres of fairways, 8 acres of tees and greens and 40 acres of roughs, lawns and natural fescue grass areas require irrigation. Water used for irrigation is pumped from a 5.0 mg capacity (4.0 mg usable), lined storage pond, which was constructed as part of the golf course. The storage pond is supplied by groundwater pumped from Wells Nos. IW-1 and IW-2; however, Well No. IW-2 is a back-up supply well that has been used on only a limited basis.

The average and maximum daily demands are 0.092 million gallons per day (mgd) and 0.650 mgd, respectively. The golf course turf is grown-in and no additional water demand is expected in the future. The allocation of 8.525 mgm of groundwater should be sufficient to continue to meet the irrigation demands of the golf course.

**b. Facilities.** The existing project wells have the following characteristics:

WELL NO.	DEPTH	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY	YEAR DRILLED
IW-1	460	50' / 8"	540 gpm	2003
IW-2	525	35' / 8"	70 gpm	2003

All wells are metered.

The groundwater is not treated prior to irrigation.

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

The project wells are not located in a FEMA mapped 100-year floodplain.

**c. Other.** Potable water is supplied by 4 domestic wells on the property at rates below the Commission's regulatory threshold for review. Domestic wastewater is disposed via two onsite septic systems.

**d. Cost.** There are no construction costs associated with this renewal project.

## **B. FINDINGS**

Docket D-2004-26-1 issued on September 1, 2004, permitted up to 16.5 mg/30 of groundwater for a two year period in which the turf grasses were being initially established. Once the turf grasses were established, the permitted allocation was decreased to 8.25 mg/30 days. Because of delays in the completion of the golf course, the docket holder requested and the DRBC Executive Director approved an extension to the two year grow-in period allowing the docket holder to withdrawal up to 12 mg/30 days (the estimated demand) for the remainder of the 2007 irrigation season. Beginning with the 2008 irrigation season, the docket holder's total groundwater allocation was limited to 8.25 mg/30 days.

Docket D-2004-26-1 required that the docket holder implement a long-term monitoring program, which consisted of monthly water level measurements at the two golf course irrigation wells and two nearby domestic wells that were affected during the IW-1 48-hour pumping test. In August and September 2005, additional monitoring was also completed in response to three alleged interference reports involving reduced flows and water levels in two nearby springs and reduced flows in an unnamed tributary that flows past Well No. IW-1 and feeds a neighboring pond. Data from the interference investigation indicated that the springs were primarily controlled by precipitation events and were significantly influenced by the lack of precipitation experienced in the area during the period. The apparent reduction in stream flows were not found to be a result of the golf course withdrawals, but rather fluctuations due to the flowing artesian well conditions present at Well No. IW-1. When Well No. IW-1 is not in use, groundwater flows from the well and into the unnamed tributary resulting in higher flows in the tributary and neighboring pond. During pumping of Well No. IW-1, the artesian flow ceases and the water flow in the tributary returns to normal flow conditions. After pumping, artesian flow conditions return in approximately 12 to 18 hours. An attempt to cap the artesian flow caused water to be forced through the system piping and electrical conduits. Monthly water level data submitted as part of the long-term monitoring program continues to show no adverse impacts to well water levels as a result of the withdrawals from Well No. IW-1.

The docket holder submitted a 10-year summary report, dated February 17, 2014 that provided a historical summary of the golf course withdrawals, precipitation data and groundwater level monitoring data. Also included was a formal request to discontinue the long-term monitoring program citing that after 10 years of monitoring, the data shows that the use of Well IW-1 does not have any notable negative effects on the regional aquifer or groundwater users. DRBC staff reviewed the data presented in the summary report and concur that the withdrawals do not appear to adversely impact nearby domestic wells. Accordingly, long-term monitoring and reporting is no longer required by this docket. The docket holder indicated that it would maintain an open dialogue with the adjacent property owners and address any concerns in the future on an as-needed basis as any potential issues may arise. The docket holder is still responsible for notifying the DRBC of any alleged interference complaints and investigating such complaints (see Condition C.II.s.). Additionally, the docket holder must continue metering all groundwater withdrawals and begin reporting the monthly usage data to the PADEP annually (see Conditions C.II.a. and g.).

This project consists of an existing withdrawal of groundwater from Well No. IW-1. Well IW-2 has been pump tested and approved but the source has been used on only a limited basis. The docket holder has requested to maintain the current individual and total allocations for existing Well Nos. IW-1 and IW-2. These rates are provided in Decision Condition II.d. in the Decision Section of this docket. As the existing water withdrawals have already been realized by the local hydrologic system and there is no increase to the individual or total groundwater allocations, there should be no significant impacts from continued withdrawals at the site.

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* and *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**

a. Effective on the approval date for Docket No. D-2004-026-2 below, Docket No. D-2004-026-1 is terminated and replaced by Docket No. D-2004-026-2.

II. The project and appurtenant facilities as described in the Section A “Physical features” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s. The docket holder shall register with and report to the PADEP all surface water 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).

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

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

d. During any month, the combined withdrawal from all well sources shall not exceed 8.525 million gallons. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

<b>WELL NO.</b>	<b>MAXIMUM INSTANTANEOUS RATE</b>	<b>MONTHLY ALLOCATION</b>
IW-1	540 gpm	8.525 mg
IW-2	70 gpm	1.829 mg

In addition, the daily withdrawal from Well No. IW-1 shall not exceed 0.650 million gallons and the total annual withdrawal from all wells shall not exceed 51.15 million gallons (8.525 mgm times 6 months).

e. 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.

f. The docket holder shall pay for surface water use which exceeds the amount of water withdrawn from Wells Nos. IW-1 and IW-2 in accordance with Administrative Manual – Part III Basin Regulations – Water Supply Charges.

g. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

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

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

j. 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).

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

l. 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.

m. 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.

n. 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.

o. 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*.

p. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges 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 (or the later date established by an extension that has been timely requested and approved), 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.

q. 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.

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

s. 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.

t. 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.

u. 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 10, 2014**

**EXPIRATION DATE: September 10, 2024**