



SUSQUEHANNA RIVER BASIN COMMISSION

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Docket No. 20020821

Approval Date: August 15, 2002

ROYAL OAKS GOLF CLUB, L.P.

Ground-Water Withdrawal of 0.400 mgd from Well 1 for Golf Course Irrigation
North Cornwall Township, Lebanon County, Pennsylvania

Review Authority

This project is subject to review pursuant to Article 3, Section 3.10 of the Susquehanna River Basin Compact, P.L. 91-575, and Commission Regulations §803.4, relating to projects requiring review and approval, and §803.43, relating to ground-water withdrawals. The Commission received the application on July 22, 2002.

Description

Purpose. The purpose of the application is to request approval for a ground-water withdrawal from Well 1. The water will be used for irrigation of turf grasses at an 18-hole golf course.

Location. The project is located in North Cornwall Township, Lebanon County, Pennsylvania.

Project Features. The project sponsor has requested approval for the withdrawal (30-day average) of 0.400 million gallons per day (mgd) from Well 1. This well will be used in conjunction with a surface-water withdrawal from Beck Creek, and will not require an increase in the consumptive water use of 0.400 mgd, as previously approved in Commission Docket No. 20020203.

Well 1 was constructed in September 1991, as an 8-inch bedrock well to a depth of 120 feet. The well has 99 feet of steel casing grouted in place. The well penetrates the water-bearing limestone of the Ordovician Stonehenge Formation. The well is pumped to an off-stream pond that provides for water storage on-site. The pond is approximately 3.8 acres in size. The project sponsor has sufficient storage on-site for approximately 25 days of irrigation. The testing performed indicates that the pond has leakage that accounts for approximately 0.100 mgd.

Pumping Test. A 168-hour constant-rate pumping test was conducted from July 8 to 15, 2002. Pumping at an average rate of 400 gallons per minute (gpm) (0.576 mgd) over 168 hours produced 6.5 feet of total drawdown in Well 1. The monitoring points for the test involved five wells, including four residential wells, and the Lebanon Country Club well, and two stream monitoring points. Four observation wells showed measurable drawdown (approximately 0.5 feet), as a result of the pumping test. Stream monitoring during the testing of Well 1 showed a loss of streamflow from Beck Creek downstream of the Lebanon Country Club Property due to the well withdrawal. Following the completion of the required pumping test, the project sponsor further developed Well 1 and deepened it to 200 feet to reduce the turbidity present during the testing.

Findings

The project sponsor's withdrawal of water from Well 1 is subject to the Commission's ground-water withdrawal approval and reporting requirements, as per Commission Regulation 803.43.

Staff finds that, based on the testing data submitted, the withdrawal of water from Well 1 impacts the flow in Beck Creek and effects a net withdrawal from Beck Creek of greater than 27 gpm. Commission staff used data from the U.S. Geological Survey's stream gage 01573086, Beck Creek near Cleona, Pa., (which was active from 1963 until 1981), to calculate the 7-day 10-year flow (Q7-10 flow) for Beck Creek of 0.59 cubic feet per second (cfs) (264.8 gallons per minute (gpm)). The well pumping causes a stream withdrawal that is greater than 10 percent of the Q7-10 for Beck Creek (26 gpm), thereby requiring a passby flow to protect aquatic resources and downstream users.

Beck Creek is classified as a warm water fishery (WWF) in Title 25, Chapter 93 of the Pa. Code. However, the reach, located downstream of the Lebanon Country Club to the confluence with the Quittapahilla Creek, provides habitat suitable for an adult trout population due to the abundance of springs that discharge in this reach and its location immediately upstream from a trout stocking area (on the Quittapahilla Creek). Commission staff is recommending, and staff of the Pa. Fish and Boat Commission agree, that this lower reach of Beck Creek be treated as a cold water fishery (CWF). Based on this finding and the anticipated adult trout fishery, Commission staff used the Instream Flow Incremental Methodology (SRBC Publication No. 191, May 1998) to determine the appropriate passby flow requirement. Commission staff has determined a minimum flow of Q7-10 (264 gpm) is required to prevent loss of aquatic habitat.

Commission staff recommends that the U.S. Geological Survey's stream gage 01573560 on Swatara Creek near Hershey, Pa., be used as a reference gage for this site. The project sponsor could propose an alternative monitoring location to the Commission for staff review and approval.

According to staff's analysis, approximately 1 percent of the time streamflow will not be sufficient to maintain the recommended passby flow rate and meet the golf course irrigation needs. Further, staff recommends that the project sponsor investigate lining or sealing the irrigation pond to allow water to be reliably stored on-site for use during times of low streamflow, when the ground water may be unavailable.

The testing data show that the residential wells located near the Royal Oaks property may experience up to 0.5 feet of additional drawdown, as a result of pumping Well 1. Staff finds that adverse impact to most of these wells is highly unlikely, and recommends no follow-up monitoring of these wells. Staff has determined that the modifications to Well 1 that occurred following the completion of the required pumping test to reduce turbidity are unlikely to significantly change the impacts measured during the testing.

The project is subject to water conservation requirements, as per Commission Regulation §804.20(c).

The project sponsor has paid the appropriate application fee in accordance with Commission Regulation §803.28 and in accordance with Commission Resolution 98-19, as amended by Commission Resolution 2000-06. The project sponsor has provided all proofs of notification, as required in Commission Regulation §803.25.

The project is physically feasible, does not conflict with or adversely affect the Commission's Comprehensive Plan, and does not adversely influence the present or future use and development of the water resources of the basin.

Decision

The project's ground-water withdrawal of 0.400 mgd (30-day average) from Well 1 and an instantaneous pumping rate of 400 gpm is approved pursuant to Article 3, Section 3.10 of the Compact subject to the following conditions:

a. The project sponsor shall comply with all Commission regulations, including ground-water withdrawal reporting requirements, as per Commission Regulation §803.43.

b. The project sponsor shall keep daily records of the metered withdrawal and continuous water level monitoring from Well 1. The required reporting data shall be submitted to the Commission quarterly, and as otherwise required. The project sponsor shall install and maintain a meter, accurate to within five (5) percent, on Well 1.

c. The maximum instantaneous rate of production from Well 1 shall not exceed 400 gpm and a 30-day average daily withdrawal rate of 0.400 mgd.

d. The project sponsor shall allow a flow to pass in Beck Creek at its confluence with the Quittapahilla Creek of not less than 0.59 cfs (264 gpm). When the streamflow is less than this amount, the withdrawal shall be reduced to maintain 0.59 cfs (264 gpm) in the stream channel. When the natural flow is equal to or less than 0.59cfs (264 gpm), no water may be

withdrawn. The project sponsor shall use the U.S. Geological Survey's stream gage 01573560 on Swatara Creek near Hershey, Pa., as a reference gage for this site. The project sponsor could propose an alternative monitoring location to the Commission for staff review and approval.

e. The project sponsor shall comply with the water conservation requirements contained in Commission Regulation §804.20(c).

f. If the Commission determines that the operation of the project's ground-water withdrawal from Well 1 adversely affects any existing ground-water or surface-water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

g. Commission approval shall not be construed to exempt the project sponsor from obtaining all necessary permits and/or approvals required for the project from other federal, state, or local government agencies having jurisdiction over the project. The Commission reserves the right to modify, suspend, or revoke this action if the project sponsor fails to obtain or maintain such approvals.

h. The Commission reserves the right to inspect or investigate the project facility, and the project sponsor shall allow authorized employees or agents of the Commission, without advance notice or a search warrant, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained. Such employees or agents shall be authorized to conduct tests or sampling, to take photographs, to perform measurements, surveys, and other tests, to inspect the methods of construction, operation, or maintenance, to inspect all measurement equipment, to audit, examine, and copy books, papers, and records pertinent to any matter under investigation, and to take any other action necessary to assure that the project is constructed, operated, or maintained in accordance with the terms and conditions of this approval or any other rule, regulation, or order of the Commission.

i. If the project sponsor fails to comply with any term or condition of this docket, the Commission may suspend, modify, or revoke its approval of same, and may impose appropriate fines and penalties. Upon written notice by the Commission, the project sponsor shall have thirty (30) days to correct such noncompliance, unless an alternate period is specified in the notice. Failure to comply within thirty (30) days, or within the alternate period identified in the notice, shall result in a ninety (90)-day suspension of approval of this docket. If the project sponsor fails to address the noncompliance to the satisfaction of the Commission within the suspension period, this approval may be revoked. Nothing herein shall preclude the Commission from exercising its authority to immediately modify, suspend, or revoke this approval where it determines exigent circumstances warrant such action, or from imposing fines and penalties, regardless of the period of noncompliance.

j. The Commission reserves the right to reopen any project docket or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment.

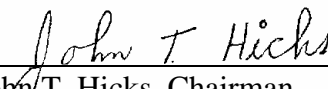
k. Commission approval confers no property rights upon the project sponsor. The securing of all rights necessary and incident to the project sponsor's development and operation of the project shall be the sole and exclusive responsibility of the project sponsor, and this approval shall be subject thereto.

l. This approval is effective until August 15, 2027. The project sponsor shall submit a renewal application by February 15, 2027, and obtain Commission approval prior to continuing operation beyond August 15, 2027.

m. The project sponsor has a period of three (3) years from the date of this approval to initiate the project or such approval will automatically expire, unless an extension is requested by the project sponsor and approved by the Commission. Likewise, if the project is discontinued for such a time and under such circumstances that an abandonment of the project may be reasonably inferred, the Commission may rescind the approval of the project unless a renewal is requested by the applicant and approved by the Commission.

By the Commission:

Dated: August 15, 2002



John T. Hicks, Chairman
New York Commissioner