



SUSQUEHANNA RIVER BASIN COMMISSION

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Groundwater Withdrawal Application Summary

Source Name: Golf Course Well UN37

SRBC Pending No.: 2018-068

This summary is only a portion of the application materials and is meant to provide general information about the proposed project.

1.1 Project Sponsor

Company Name: The Pennsylvania State University
Mailing Address Line 1: 139J Physical Plant Building
Mailing Address Line 2: 209 Water Treatment Plant Building
City: University Park
State: PA
ZIP Code: 16802

Contact Person:

First Name: James
Last Name: Baird
Title: Utility Systems Engineer - Water
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1.3 Existing and Projected Facility Water Use

The usage should be entered in million gallons per day (mgd) and rounded off to the nearest one thousand gallons (three decimal places).

Projected Design Year:
2035

Total Project Water Usage	Existing Usage (mgd)	Projected Usage For Design Year (mgd):
Maximum 30-day Average Water Demand :	0.261	1.07
Maximum Daily Water Demand :	0.885	1.08
System Capacity :	3.24	3.24

1.4 Requested Withdrawal Amount:

Estimated Daily Hours of Operation per Day (Ex. = 5): 24
Maximum Instantaneous Withdrawal Rate (gpm): 670
Maximum 24-Hour Day (mgd): 1.08
Maximum 30-Day Average (mgd): 0.96

2.2 Facility Location

Please enter the address of the parcel where the Project Facility is located.

Street Address: 1523 West College Avenue, State College, PA

State: PA

County: Centre

Municipality: Ferguson Township

Zip Code: 16802

Subbasin: West Branch Susquehanna

2.1 FACILITY DESCRIPTION

Past and Present Water Sources

The Pennsylvania State University (PSU) owns and operates Well UN-37 for seasonal golf course irrigation. The PSU Golf Courses consist of the Blue Golf Course, located in Ferguson Township, Centre County, Pennsylvania, and the adjacent White Golf Course, located in both Ferguson Township and State College Borough. The address of the PSU Golf Courses is 1523 West College Avenue, State College, Pennsylvania. The entrance to the Golf Courses is located on West College Avenue (PA Route 26), approximately one mile west of the intersection of PA Route 26 and US Business Route 322 (Atherton Street). Well UN-37 is situated on the White Golf Course in Ferguson Township and supplies irrigation water to both golf courses, as shown on Figure 1A, Facility Location Map. PSU intends to continue to own and operate this well for irrigation of the PSU Golf Courses.

Currently, Well UN-37 is approved by the Susquehanna River Basin Commission (SRBC) for a groundwater withdrawal (30-day average) of 0.96 million gallons per day (mgd) per Docket No. 19890106, modified August 9, 2001. Prior to 1974, irrigation water for the PSU Golf Courses was obtained from Well 28, also located on the White Golf Course approximately 1100 feet southeast of Well UN-37. According to SRBC Docket No. 19911111, the pre-1971 golf course irrigation usage was 0.648 mgd. Well 28 collapsed and was reconstructed in 1974 as Well UN-28A, several feet from the original well. (The original Well 28 is sometimes referred to as Well 28-out; i.e., outside the Well 28A building.) Well UN-28A was then used for golf course irrigation prior to construction of Well UN-37. Well UN-28A is part of PSU's potable water system and has not been used for golf course irrigation, except for a few times, since Well UN-37 was constructed in 1990. Well UN-28A has not been used since 2002 and, currently, does not contain a pump.

According to Docket No. 19890106, the estimated peak day water use for golf course irrigation was 1.44 mgd. From 1999 through 2015, PSU's records indicate that the peak day usage was 0.885 mgd on May 8, 2005. The maximum, consecutive, 30-day usage during those same years was 0.261 mgd in 2015. Water is pumped from Well UN-37 at approximately 650 gallons per minute (gpm) and piped into two ponds on the golf courses. The two ponds have a combined water

storage capacity of approximately 3.94 million gallons above the bottom of the wet-well intake pipe for the irrigation system. The maximum existing capacity to pump from the ponds into the irrigation system is 1100 gpm, which is equivalent to 1.584 mgd on a 24-hour basis. However, pumping typically occurs no more than 17 hours per day.

Projected Demand

In the future, PSU anticipates irrigating more areas of the golf courses that are not currently irrigated, as well as conducting more irrigation on areas that are currently being irrigated. This increased irrigation will require three 750-gpm pumps at the ponds, for a total capacity of 2250 gpm. These pumps will be pumped at a maximum of 8 hours per day, which is equivalent to a maximum daily demand/usage of 1.08 mgd. A projected, maximum, 30-day average demand of 1.07 mgd assumes extensive drought conditions and extended withdrawal near the maximum daily usage of 1.08 mgd. This usage would be higher than the currently docketed (and proposed) consecutive 30-day average withdrawal rate of 0.96 mgd from Well UN-37. Therefore, if needed, the additional 0.11 mgd (1.07 mgd minus 0.96 mgd) would be obtained from Well UN-28A. Presently, Well UN-28A is not being utilized. PSU proposes to cap the combined 30-day average withdrawal from Wells UN-37 and UN-28A at 1.07 mgd. PSU is also considering the possibility of irrigating with re-use water in the future (i.e., using effluent from PSU's wastewater treatment plant). The maximum projected short-term capacity to pump from the ponds into the irrigation system, using the three 750-gpm pumps, is 3.24 mgd.

PSU proposes to re-docket Well UN-37 for a groundwater withdrawal (30-day average) of 0.96 mgd.