



SUSQUEHANNA RIVER BASIN COMMISSION

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Groundwater Withdrawal Application Summary

Source Name: Well 16

SRBC Pending No.: 2021-111

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: Pine Grove Borough Water System
Mailing Address Line 1: 3 East Wood Street (Garage)
Mailing Address Line 2:
City: Pine Grove
State: PA
ZIP Code: 17963

Contact Person:

First Name: Leonard
Last Name: Clark
Title: Street/Water Department Supervisor
Telephone: 570-345-3555
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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:
2036

Total Project Water Usage	Existing Usage (mgd)	Projected Usage For Design Year (mgd):
Maximum 30-day Average Water Demand :	0.81	1.41
Maximum Daily Water Demand :	1.241	2.294
System Capacity :	2.736	2.736

1.4 Requested Withdrawal Amount:

Estimated Daily Hours of Operation per Day (Ex. = 5): 12
Maximum Instantaneous Withdrawal Rate (gpm): 350
Maximum 24-Hour Day (mgd): 0.504
Maximum 30-Day Average (mgd): 0.499

Pine Grove Borough (Pine Grove) currently operates eleven groundwater supply wells with a combined Susquehanna River Basin Commission (SRBC) permitted system limit of 2.736 million gallons per day (mgd). Pine Grove provides water to about 2,186 customers through a single linear well field drilled in the Black Creek area in Echo Valley. All return flow is treated at the Pine Grove Joint Treatment Authority Wastewater Treatment Plant and is discharged into Swatara Creek. Pine Grove reports a current average water withdrawal of 0.717 mgd with a peak demand of 1.241 mgd. The future projected demand is expected to remain constant with a slight decrease in residential demand due to population decline, offset by an increase in manufacturing demand.

Pine Grove sought to provide redundancy in potable groundwater supply to its existing groundwater supply well network. Pine Grove also sought to augment capacity to meet the erratic swings in industrial usage. Industrial demand would peak at unpredictable times, taxing the system. The two new wells, Well 16 and Well 17, were drilled to assess the feasibility of a new water supply area outside of the influence of the current Black Creek well field.

The locations for Well 16 and Well 17 were determined using the fracture trace method and the wells were drilled in December 2016. The wells were drilled into shale bedrock to a depth of approximately 300 feet (Well 16) and 365 feet (Well 17) using the air percussion method. Well construction met Pennsylvania Department of Environmental Protection standards for public water supply wells.

Drilling Wells 16 and 17 serves three purposes:

1. To provide redundancy to the current well field drilled in the Black Creek area in Echo Valley.
2. To provide increased water capacity of better water quality compared to the well field in Echo Valley, located in a different aquifer. Water from Echo Valley has a relatively low pH, which is costly to treat.
3. To provide an overall increase in total system capacity. The increased system capacity will help to better mitigate the unpredictable industrial demand.

Two 72-hour constant rate aquifer tests were conducted on Wells 16 and 17, pumping at a rate of 350 gpm (0.504 mgd) and 67 gpm (0.0965 mgd) respectively. The Well 16 aquifer test was conducted in November 2019 and the Well 17 aquifer test was conducted in August 2020. Two hydrogeologic reports have been prepared to summarize the results of this testing. The requested withdrawal rate is based on the aquifer test results, groundwater availability of the Upper Little Swatara Creek basin, lack of potential impacts to other users and resources, and not pumping Wells 16 and 17 simultaneously.