SUSQUEHANNA RIVER BASIN COMMISSION
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Groundwater Withdrawal Application Summary

Source Name: Barnes Run Well #3 **SRBC Pending No.:** 2019-025

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:	Hazleton City Authority
Mailing Address Line 1:	400 E. Arthur Gardner Parkway
Mailing Address Line 2:	
City:	Hazleton
State:	PA
ZIP Code:	18201

Contact Person:

First Name:	Randy
Last Name:	Cahalan
Title:	Executive Director
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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:
2033

Total Project Water Usage	**Existing Usage (mgd)**	**Projected Usage For Design Year (mgd):**
Maximum 30-day Average Water Demand :	5.91	6.18
Maximum Daily Water Demand :	7.33	7.66
System Capacity :	9.397	9.397

1.4 Requested Withdrawal Amount:

Estimated Daily Hours of Operation per Day (Ex. = 5):	10
Maximum Instantaneous Withdrawal Rate (gpm):	300
Maximum 24-Hour Day (mgd):	0.43
Maximum 30-Day Average (mgd):	0.354

Barnes Run Well #3- Project Facility Description

This ground water withdrawal application is specifically for Barnes Run Well #3, of the Hazleton City Authority (HCA) system. HCA is a large public Water Supply System, which produces approximately 5.7 million gallons per day (mgd) of potable water, with a peak demand of 7.3 mgd. The Hazleton City Authority owns the main Hazleton system and smaller local systems including the Delano-Park Place, Derringer, and Tomhicken systems. BR#3 is part of the main Hazleton System. HCA has an interconnect with CAN-DO, Inc's Humboldt Industrial Park (HIP) water system, and an agreement for a minimum take by HIP of 0.20 mgd. Return flow of nearly all pumped water (~98%) is to the Greater Hazleton Joint Sewer Authority waste water treatment facility on Black Creek in Hazel Twp, approximately 2.5 miles NE of the subject Well. The Basin of BR#3 ultimately drains into Black Creek approximately 2 miles NE of BR#3 and just downstream of the Sewer Plant Discharge. The main Hazleton system is comprised of the following groundwater and surface water sources in addition to BR#3 :

- Barnes Run-Wolfes Run Pumping Station
- Buck Mountain Well #1
- Dreck Creek Pump Station
- Quakake Creek-Hudsondale Pump Station
- Lehigh River Pump Station (out-of-basin transfer)
- Mt. Pleasant Reservoir Pump Station
- Mt. Pleasant Well #6
- Mt. Pleasant Well #2
- Mt. Pleasant Well #5

All raw water is pumped to the filtration plant and distributed from that point. Storage is provided by both reservoirs (raw water) and storage tanks (finished water).

Raw Water Storage is provided by:	Capacity
Barnes Run Reservoir	
Humboldt/Wolfs Run Reservoir	143,861,000 (combined)
Harleigh Reservoirs1	
Harleigh Reservoir 2	24,045,000 (combined)
Mt. Pleasant Reservoirs Upper	
Mt. Pleasant Reservoir Lower	71,100,000 (combined)
Dreck Creek Reservoir Upper	456,930,000
Dreck Creek Reservoir Lower	32,000,000
Hudsondale Reservoir	8,750,000
Roan Reservoir	3,000,000

Reservoir Storage is approximately 739, 686,000 gallons

Finished Water Storage is provided by:	Capacity
Drifton Tank	300,000
Lattimer Tank	526,000
Council Crest Tank	500,000
Highland Tank	1,250,000
McKinley Tank-1	1,000,000
McKinley Tank-2	2,051,500
Monges St Tank	1,381,000
Roan Tank	5,000,000

Storage Tank Capacity is ~ 12,000,000 gallons

BR#3 is a 516 foot deep well, completed in 1978 and permitted with the commission in March of 1979. It is 10-inch diameter from the surface to 300 feet and a 6-inch hole to 516 feet. It is cased to 47 feet below ground surface. It has a Goulds 9RCLC, 9 stage, shaft turbine pump installed to a depth of 191 feet from the pump base which is at an elevation of approximately 1690 feet AMSL.

BR#3 is HCA's only active groundwater withdrawal in the Stony Run Basin. The ground water is pumped directly to the Barnes Run-Wolfes Run Pump Station. Surface water in the basin is sourced either from an intake on Stony Run at the Barnes Run-Wolfes Run Pump Station, or from a raw water intake from the Wolfes Run/Humboldt Reservoir, which is located on an upstream tributary of Stony Run. The Barnes Run-Wolfes Run Pump Station is located approximately 1600 feet north of BR#3. The reservoir is located approximately 2000 feet southwest of BR #3. The comingled water is then pumped approximately 5.4 miles to the main treatment facility and put into the system following treatment. The Wolfes Run/Humboldt reservoir provides 144 million gallons of storage capacity in the basin.

BR#3 was out of service for much of 2016/2017. The well had an average withdrawal of 293,000 gpd prior to being taken out of service. Currently the well has an SRBC approved withdrawal of 0.392 mgd and a peak withdrawal of 0.430mgd. The Pennsylvania Department of Environmental Protection (PADEP) has approved a withdrawal rate of 0.430 mgd for BR#3 with a peak of 0.600 mgd (Water Supply Permit #4079501). A 72-hour pumping test was completed in October of 2018 following approval of the Aquifer Test Plan by the SRBC. Based on the results of the Aquifer test, HCA is requesting a withdrawal of 0.354 mgd. A hydrogeologic report detailing the results of the testing is included in this application. There are no identified impacts to other users or the environment.