



## SUSQUEHANNA RIVER BASIN COMMISSION

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### Consumptive Use Application Summary

**Source Name:** Naginey Facility Consumptive Use

**SRBC Pending No.:** 2021-012

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

#### 1.0 Application Background

This section requests pertinent information related to the application that is being submitted.

#### 1.1 Project Sponsor

Company Name: Glenn O. Hawbaker Inc.

Mailing Address Line 1: 711 E. College Ave.

Mailing Address Line 2:

City: Bellefonte

State: PA

ZIP Code: 16823

#### Contact Person:

First Name: Benjamin

Last Name: Welch

Title: Manager of Environmental Services

Telephone: (814) 359-5085

Fax:

Mobile: (814) 470-6267

**E-mail:** [bmw@goh-inc.com](mailto:bmw@goh-inc.com)

#### 1.4 Requested Consumptive Use Quantity:

The consumptive use should be entered in million gallons per day (mgd) and rounded up to the nearest one thousand gallons (three decimal places). For multiple sources, provide the total quantity for existing and proposed consumptive use, as applicable.

##### 1.4.1 Projected Design Year:

0.31

##### 1.4.2 Existing Consumptive Use

0(mgd)

##### 1.4.3 Projected Consumptive Use

0.31(mgd)

#### 2.3 Facility Location

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

Street Address: 475 Naginey Road  
State: PA  
County: Mifflin  
Municipality: Armagh Township  
Zip Code: 17063

Glenn O. Hawbaker, Inc.  
Naginey Quarry  
SRBC Consumptive Use Application

**2.1 Project Facility Description**

Glenn O. Hawbaker, Inc. (GOH) owns and operates the Naginey Quarry (herein referred to as the “facility”), which is located at 475 Naginey Road in Mifflin County, Pennsylvania. The facility is located 1 mile southeast of Milroy, Pennsylvania. From US 322, take the Milroy exit, turn left onto Old US 322, then right onto North Main Street. From North Main Street, continue straight on Naginey Road for 1 mile to the quarry entrance on the north side of the Road. The facility consists of an active open-pit quarry, and stripping, drilling and blasting limestone bedrock, crushing and screening of aggregate materials, and reclamation activities are conducted at the site. The facility has been mined for approximately 98 years in total, with GOH assuming ownership in 2015. GOH intends to continue mining limestone at the facility well into the future.

GOH operates an aggregate processing and asphalt plant at the facility. Aggregate processing includes crushing and screening of limestone materials removed from the active quarry, generating stockpiles of various-sized stone products across the site. Loading of the various stone products also occurs at the facility. In addition to the aggregate plant, an asphalt plant also uses the crushed and sorted limestone materials to produce asphalt in a water-free process.

A 17.9-acre, 174-million-gallon quarry pit pond was formed at the facility when historical mining activities intercepted a water-bearing open karst zone. The pit pond is therefore representative of the regional groundwater surface, with water flowing through well-developed karst features in the vicinity of the withdrawal. Because the facility pit pond does not have a surface water outlet, the Susquehanna River Basin Commission considers the facility to be regulated as a groundwater withdrawal.

A 1.6-acre, 15.3-million-gallon processing water pond (approximately 163' x 420' x 30' deep) at the southern end of the pit pond was formed by constructing a gravel causeway across the quarry pit pond. The causeway serves as a shorter route across the pond in gaining access to production faces on the east side of the pit pond and separates the approximately 1.6-acre portion of the facility pit pond from the main water body specifically for use at the facility. Although there are no existing regulated water withdrawals at the facility, GOH currently pumps water from the remaining 16.3-acre, 159-million-gallon portion of the quarry pit pond into the 1.6-acre processing water pond for use at the facility.

Water from the main 16.3-acre body of the pit pond is pumped into the 1.6-acre processing water pond at a maximum rate of 0.300 million gallons per day (mgd) or 208 gallons per minute (gpm); this total daily usage represents the full capacity of the wash plant at maximum processing rates, assuming no water is lost. Water is withdrawn from the processing water pond for use in the facility's wash plant, tire wash, and for dust suppression. Of the 0.300 mgd utilized by the wash plant, most of the water is recycled through the plant as described below. However, approximately 0.075 mgd of makeup water is required to account for water losses to processing of limestone aggregate, water bound to product rock, use for dust suppression in the plant, and use at the tire wash.

Evaporative losses from the processing water pond, collection basin, slurry collection pond, and series of settling basins constitute an additional component of the facility's consumptive use. The processing water pond covers approximately 1.6 acres, the collection pond covers approximately 0.056 acres, and the slurry discharge pond and series of settling/polishing basins cover a combined approximately 0.31 acres, for a total of 1.94 acres of evaporative surfaces. Per correspondence with the Commission dated July 31, 2020, evaporative losses from the larger 16.3-acre quarry pit pond are not to be included in the total consumptive use volume. Table 1 summarizes the evaporative losses by month:

**Table 1: Evaporative Loss Summary**

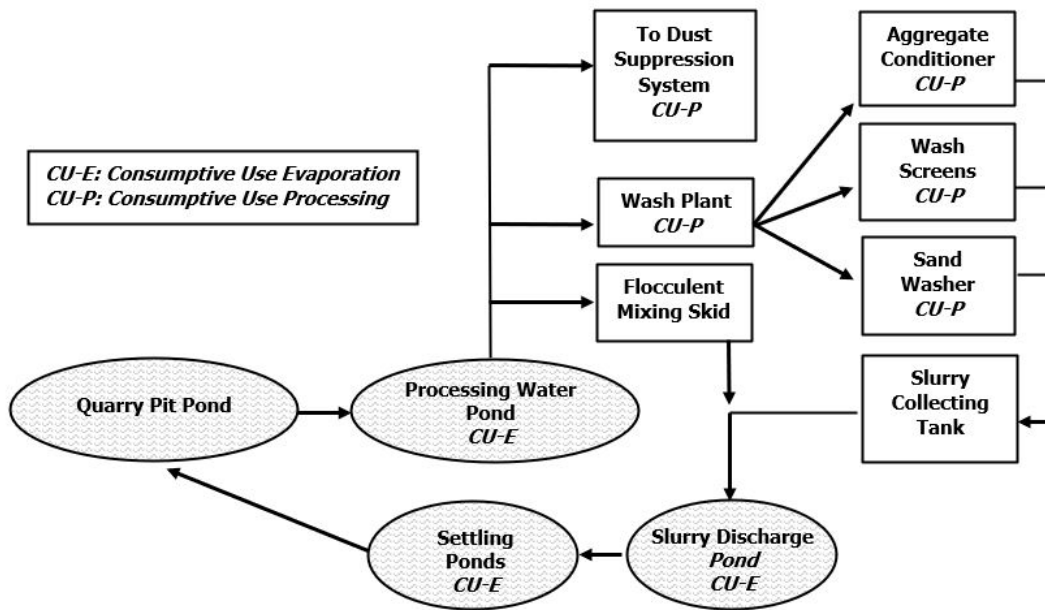
<b>Month</b>	<b>Evaporation Amount SRBC Averages (in)</b>	<b>Evaporation per Month (gal/month)</b>	<b>Evaporation per Day (gal/day)</b>
January	0.0	0	0
February	0.0	0	0
March	0.0	0	0
April	3.0	158,027	5,268
May	4.9	258,111	8,326
June	5.4	284,449	9,482
July	5.8	305,519	9,855
August	4.9	258,111	8,326
September	3.6	189,632	6,321
October	2.4	126,422	4,078
November	0.0	0	0
December	0.0	0	0

**Notes:**

Evaporation amount is based on evaporation rates contained in Commission Form 74

As the table shows, the maximum evaporative loss of 9,855 gpd occurs in July. Rounding to the nearest 0.010 gpd results in a total maximum 30-day average consumptive use of 0.085 mgd (142 gpm) for the facility.

At the aggregate processing plant, water is pumped from the processing water pond primarily to the wash plant and to a flocculent skid. The water is used by the aggregate conditioner, the main wash screen, and the sand washer. Once the limestone materials are washed, the remaining water not absorbed by the material will be collected into a slurry collection tank. At the flocculent mixing skid, the fresh water from the processing water pond will be mixed with an anionic flocculent. This flocculent mixture will then be mixed to the water from the slurry collection tank at a slurry discharge pond. After particulates have separated from the slurry, the water is pumped back into the main 16.3-acre quarry pond to provide further time to settle particulates.



Water pumped into the processing water pond is also used at the tire wash before entering the scales and for dust suppression on the plant roadways as needed.

Water is not discharged from the facility. Excess water from the tire wash and stormwater from the asphalt plant flow overland into a collection basin south of the settling ponds. This water was previously pumped into a slurry settling pond, was allowed to flow through a series of settling ponds for sediment settling and polishing, and slurry water from the settling ponds was pumped back into the processing water pond for reuse. However, sediment production outpaced the storage capacity of the ponds, and slurry water is now pumped back into the main 16.3-acre quarry pond.

Similarly, excess water from the aggregate plant and stormwater from the aggregate plant either flows into or is pumped into the slurry discharge pond, allowed to pass through the series of settling ponds, and is pumped back into the main 16.3-acre pond for reuse. A smaller portion of this water infiltrates through the subsurface back into the regional water table.

All stormwater is contained within the quarry pit. There are no stormwater control structures or other point-source discharges at the facility.