



## SUSQUEHANNA RIVER BASIN COMMISSION

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### Surface Water Withdrawal Application West Branch Susquehanna River & Consumptive Use Application Project Summary

**SRBC Pending No.: 2022-030**

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

#### **Project Sponsor**

**Company Name:** Pennsylvania Grain Processing LLC

**Address:** 2525 84th Ave

**State:** MI

**City:** Zeeland

**Zip Code:** 493464

**Contact Person:** Bridgette Rillema

**Title:** Environmental Manager

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#### **Requested Surface Water Withdrawal Quantity**

**Projected Design Year:** 2007

**Existing Withdrawal Quantity:** 2.505(mgd)

**Requested Withdrawal Quantity:** 2.505(mgd)

**Maximum Instantaneous Withdrawal Rate:** 1740(gpm)

**Estimated Daily Operation:** 24(hours/day)

#### **Requested Consumptive Use Quantity - Yes**

**Existing Consumptive Use:** 2(mgd)

**Requested Consumptive Use:** 2(gpm)

**Pre-Compact/Grandfathered CU:** 0

#### **Facility Location**

**Street Address:** 250 Technology Drive

**State:** PA

**County:** Clearfield

**Municipality:** Clearfield Borough

**Zip Code:** 16830

### **Surface Water Withdrawal Source Information**

**Source Name:** West Branch Susquehanna River

**Source Type:** stream

**Subbasin:** West Branch Susquehanna

## 2.1 Project Facility Description

Water approved for withdrawal from the West Branch Susquehanna River will be utilized by the Project Sponsor for the production of anhydrous ethanol from corn at the Pennsylvania Grain Processing, LLC (PGP) facility located in Clearfield Borough, Pennsylvania. This surface water withdrawal application is for the renewal of an existing SRBC Docket (Docket No. 20070904).

PGP proposes to withdraw up to 2.505 mgd from the West Branch Susquehanna River, and a consumptive use of up to 2.000 mgd for the manufacture of anhydrous ethanol. The Project Sponsor estimates that the maximum 30-day surface water withdrawal and consumptive water use will be approximately 2.503 mgd and 2.000 mgd, respectively. Annual average consumptive water use is anticipated to range from 1.500 to 1.750 mgd.

Water is used in various processes including fire protection, non-contact process cooling, and incorporation into product. The facility produces approximately 108 million gallons of anhydrous ethanol per year. As a by-product of ethanol production, the facility also produces approximately 403,000 tons of distillers dried grains with solubles.

The dry mill ethanol facility has the following major process areas:

- Grain unloading, storage, handling, and milling
- Mash preparation, cooking, and conversion
- Fermentation
- Distillation and dehydration
- Stillage separation and evaporation
- Corn distillers dried grains with solubles (DDGS), drying, storage, and load-out; and
- Ethanol denaturing, storage, and load out.

Facility equipment includes four natural gas-fired boilers to supply process and heating steam, four natural gas-fired dryers; three natural gas-fired regenerative thermal oxidizers (RTO); one wet scrubber, an emergency diesel engine/generator and diesel fire pump; a cooling tower; two flares; dry material receiving, handling, processing/storage equipment; and several product storage tanks. Process condensate and distillation

wastewaters will be internally recycled and reused, where possible, to minimize overall water use.

The facility shall withdraw water from the West Branch Susquehanna River at its existing intake located upstream of the Raftsmen Memorial Dam in Clearfield Borough. The intake consists of a submerged passive wedgewire intake screen with an air backwash system and a warm water discharge pipe to suppress the formation of frazzle ice, when required.

Process water is pretreated using multimedia and/or sand filters, if required, followed by Reverse Osmosis (RO). Filtration may be necessary to remove suspended solids from the raw water supply to protect the downstream RO treatment train. RO treatment is used to decrease the total dissolved solids concentration of the makeup water to limit the potential for scale formation during processing. RO permeate will be directed to the ethanol production process and RO reject water will be returned to the West Branch Susquehanna River.

In addition to the RO reject water and water purification backwash water, the production of ethanol will generate boiler blowdown and cooling tower blowdown water, fugitive steam emissions, and wastewater from air purification devices. Process water will be metered and discharged to the West Branch Susquehanna River adjacent to the facility.

PGP is proposing to utilize the collected stormwater as an additional source of process water at the facility. The stormwater is collected at two spill containment areas, the Truck/Rail Loadout Containment and Chemical Receiving Containment areas. The stormwater collected in the containment areas is contaminated by small amounts of fuel, oil or other fluids from the delivery and receiving trucks. The drainage areas to each containment basin is limited to the individual containment areas. The contaminated stormwater would be pumped from the spill containment basins into the Process Building for use in the facility's production process.

Water for sanitary purposes at the facility will be supplied by Clearfield Municipal Authority and conveyed to the Clearfield Municipal Authority's wastewater treatment plant, which discharges to the West Branch Susquehanna River near the confluence of Clearfield Creek. The facility's potable water supply requirements are estimated to be a maximum 30-day average of 0.003 mgd, with a maximum day of 0.005 mgd.