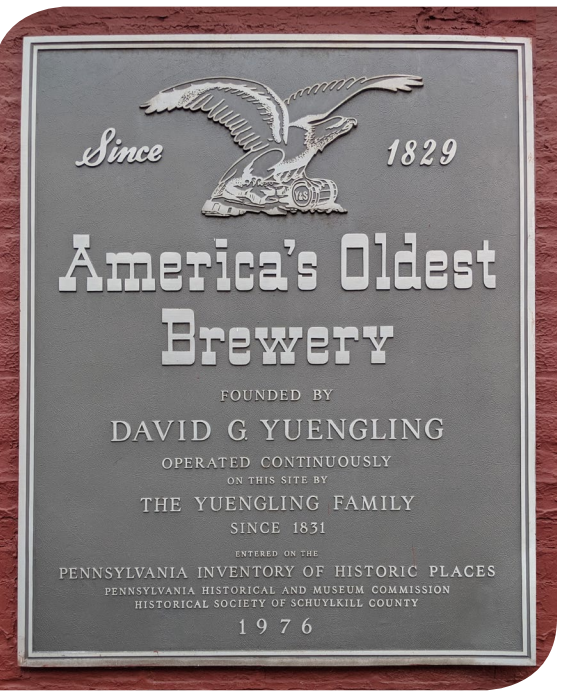


## CASE STUDY

**Aqua WashPress®**  
Yuengling – Pottsville, PA



# America's Oldest Brewery Improves Bottom Line with a "Solids" Solution

## Background

D.G. Yuengling & Son, Inc. is the oldest operating brewing company in America, established in 1829. It is one of the largest breweries by volume in the country and based on volume sold in 2018, Yuengling was identified as the top craft beer company in the U.S. according to the Brewers Association. While producing the highest quality beer remains their mission, they remain committed to supporting local communities and preserving the natural ingredients their products are made of – 97% of which is water. As the beer making process is highly water intensive, there is an ever-increasing focus on reducing the impact on our environment and conserving water and energy. The following examines how partnering with Parkson pays dividends on both the bottom line in profits and a positive impact on the environment.

## The Challenge

The Yuengling brewery plant in Pottsville, PA, brews four major products – Ale, Lager, Pilsner and Porter – each with a different brewing process. Their wastewater contains mostly sugar and yeast and small quantities of spent grain, which is treated at their onsite wastewater treatment plant, built in 2000. Spent grain from the cooker is sluiced and sent to a static screen for recovery of solids, separation, and then discharge directly to a dumpster. Although separation of the spent grain was achieved in this treatment process, significant amounts of water were retained in the lids, creating multiple challenges including:

- High discharge volumes required frequent landfill hauling. The Yuengling dumpster is 30 cubic yards and required emptying 12 times per month, resulting in an average of \$65,000 per year in waste hauling costs.
- High water content jeopardized landfill approval due to the potential failure of Paint Filter Testing. Prior to every trip to the landfill, the operators were engrossed with thoughts of possible remedies that may need to be employed, should the landfill reject the dumpster contents.

Yuengling had operated the static screens for several years, tolerant of the screens' performance and the resulting operational inefficiencies, however, decided it was time for change.

## The Discovery

In search for ways to reduce cost and water content and improve their operational efficiency, the mill deferred to their long-time engineer for possible solutions. The engineer then reached out to the Parkson team based on prior positive experience with Parkson and Parkson's local representative on numerous projects. The team was made aware of the difficulties Yuengling was experiencing with their spent grain handling and after a thorough evaluation of the current operations, advised that a Parkson Aqua WashPress® Dewatering Screw Press would be ideal to address the labor efficiencies, resource inefficiencies, and operator concerns associated with the spent grain handling.

## The Solution

The Aqua WashPress® (AWP) was selected by Yuengling to ease handling issues associated with the discharge of the static screens. The unit provides dewatering and compaction while a flexible operating control sequence allows operations to modify the sequence of operation to meet the requirements of various applications and batches. As a result, more water is recovered so less water is hauled with the solids, reducing landfill volume and providing cost savings with minimal change to the operations.

Working with the mill's engineer, the Parkson team custom designed a system to fit below the existing mezzanine structure.

Yuengling hired a contractor to install the Aqua Wash-Press and the system was installed quickly with no downtime in handling the spent grain. The unit was placed directly below the static screens where the day dumpster had been located, and the day dumpster was then moved to receive

washed, compacted spent grain coming from the AWP.

The Aqua WashPress was able to receive and drain all the free water that was passed from the static screen. Operations was able to sequence the AWP's process operation to meet the specific demands of the spent grain. Drain water from the AWP was plumbed to the same channel that is receiving the drained water from the status screens.

The unit performed well during the initial months of operation, however, when the Pilsner brew came into production, the dewater capabilities of the Aqua WashPress decreased. Parkson participated in troubleshooting, but it was determined the nature of the solids were sufficiently different to prevent efficient



Discharging spent grain from AWP



AWP receiving spent grain

dewatering. Yuengling examined their internal operations and were able to modify the spent grain process ahead of the AWP, which provided solids that were readily dewaterable.

## The Results

Since Yuengling brewery installed the Parkson Aqua WashPress in August 2018, they have reduced hauling efforts down to two to three times per month. This has resulted in an average cost savings of nearly \$50k per year and no more headaches at the landfill. Once implemented, the Aqua WashPress became an obvious asset that provided the following benefits:

- The frequency of the dumpster being emptied decreased dramatically. As stated, prior to installation, the dumpster was filled up to 12 times per month. Since the AWP has been installed, the dumpster is now filled only two to three times per month. This represents a dramatic savings to the facility.
- The AWP was designed to produce processed screenings that pass the paint filter test. Since the installation, the risk and angst associated with rejection of the dumpster at the landfill has completely been removed. Operations is now able to eliminate any resources associated with landfill rejection, allowing them to focus on their daily tasks without interruption from this non-essential distraction.

The Yuengling team is pleased with its operation and results and reports that operations are running smoothly.



Spent grain entering the AWP hopper



Dewatered and compacted grain ready for landfill



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