

Twisp, OSB work out wastewater agreement

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Photo courtesy Jacob Young

Deb Jones-Schuler delivered spent grain from OSB's brewery to pigs at her home near Winthrop.

New brewery will increase town's treatment volume

Most people will be interested in what goes into bottles when Old Schoolhouse Brewery (OSB) begins producing beer at its new brewery. But Twisp's public works director will be paying attention to what flows from the brewery into the town's sewer system.

The new brewing facility at TwispWorks will become Twisp's only industrial customer when it starts producing beer later this spring. Twisp officials have welcomed the new brewery as a boost to the local economy, but have also had to address the increased burden the facility will place on the town's water treatment system.

Over the past year, the town and OSB have been working to develop plans to deal with the wastewater that will result as a byproduct of the beer brewing process.

“We’re putting sugar water back into the system. It’s pretty inert, but it affects a small town’s treatment plant,” said Jacob Young, who manages operations OSB.

The new brewing facility is expected to install tanks in April and begin brewing beer in May, Young said. It will initially make about 1,200 barrels per year, and will produce 5,000-plus barrels annually when it is at full capacity, he said.

The new brewery will enable OSB to expand production beyond its current capacity of 1,000 barrels per year at its brewery in Winthrop, and help it meet demand outside the valley for its award-winning beer.

OSB hired a consultant who specializes in brewery wastewater management last year to design a “side streaming” system to reduce the burden that the brewery wastewater will place on the town’s treatment plant.

“The side streaming program is keeping it from going down the drain, or neutralizing it when it does go down the drain,” Young said.

During the brewing process, spent grains and hops will be settled out and water used in the brewing process will be held in underground tanks where it will be pretreated before discharging into the town system, Young said.

When wastewater reaches the town treatment plant, it is treated in aeration tanks where micro-organisms consume organic material in an initial phase of the treatment process, which ultimately results in clean water that is returned to the Methow River.

It’s not the volume of wastewater from the brewery that is the issue, but the “strength” or “loading” of the wastewater, said Andrew Denham, Twisp public works director. Strength and loading refer to the added burden in terms of the biological process needed to treat wastewater.

“It’s the measurement of the oxygen demand that loading puts on the wastewater treatment plant — the more bugs [micro-organisms] you need and associated tankage,” Denham said. “It also creates more biosolids.”

Untreated discharge from a brewery is typically about 15 – 20 times “stronger” than average residential waste, in terms of the biological processing needed, Denham said. OSB is hoping its pretreatment will reduce the strength to only around 8 – 9 times stronger than residential wastewater, he said.

“We have spent a large amount of money on an underground holding tank, where we can balance the water’s pH and filter out other elements,” Young said. “It’s a pretty high-tech system.”

Because of the added burden on the town's water treatment system, OSB and the town have agreed to a contract that stipulates how much the brewery, which is classified as a "significant industrial user," will pay for sewer services. The Town Council approved the contract last week.

The contract provides higher rates for higher levels of organic material in the discharge, and provides for tiered rate increases over the next three years. "As they become higher capacity with more production, rates would go up," Denham said. "They're paying a significantly higher rate than residential rates, as they should."

Public works staff will sample the discharge at the brewery to determine the amount of loading. "If they have low loading, they will be charged a lower rate," Denham said. "You can see why it's so important for them to pretreat," he said. "They will be a significant contributor to the sewer fund."

"We're dedicated to being here in the valley," Young said. "Ultimately we have the support of Twisp and are being charged a very fair rate. It's the cost of doing business in a small town. Plus, the water is really good here."

The brewery is not expected to use a significant amount of water on the front end of the brewing process, Denham said. "Most of the water they bring in, they want to make beer out of," he said.

Spent grain — the cracked barley left over after brewing — is another byproduct of making beer. Like many breweries, OSB has arranged to give spent grain from its Winthrop brewery to local farmers and ranchers to feed cattle, pigs and turkeys. The new brewery will have even more spent grain to give away, and a more efficient way to do it, Young said. The brewery in Winthrop stores the grain in trash cans, but the new brewery will have large "totes" that can be transferred by flatbed.

The new brewery will be housed in a 4,000-square-foot building that is nearing completion near the center of the TwispWorks campus. TwispWorks is paying for construction through a grant and will own the building. OSB will lease the space, and received a loan from the Methow Investment Network to help fund the new project. A taproom connected to the new brewery is also being built, and will likely open in 2020, Young said.



Photo by Ann McCreary

The controls for OSB's pretreatment system are in place in the new brewery building. The contract between the town and OSB sets limits on how much the brewery can discharge "until we've upsized our wastewater treatment plant," Denham said.

"They can only discharge a certain amount that keeps us within our permit range, and leaves the ability for the town to grow in terms of residential users. I'm reserving capacity for residential growth," Denham said. At a future time, when Twisp has completed a planned upgrade of the town's wastewater treatment plant, a new contract to expand the amount discharged by OSB can be negotiated, he said.

Denham said the town of Twisp and OSB have had "an excellent partnership" in planning for the new brewery and developing the contract between the town and the brewery. The effort involved in preparing for a new industry in Twisp will be well worth it, Denham said. "It will definitely be a benefit to the town," he said. "The main benefit is the commerce."