

CASE STUDY

Sustainable Solutions at Bear Republic Brewing

Project Type: Food & Beverage, Water Reuse

Location: Cloverdale, California

HIGHLIGHTS

New system generates approximately 50% of the brewery's electrical needs and 25% of its hot water.

Project achieved a 50% reduction in overall water use.

Increased water reuse by 25% for their for internal cleaning and wash-down.

BREWING A SUSTAINABLE FUTURE

Bear Republic Brewing Company faced a critical juncture as its success led to a production volume of 82,000 barrels annually. Operating out of Healdsburg and Cloverdale, California, the brewery needed to balance its nationwide distribution with the environmental realities of a drought-prone region. To address these pressures, the company partnered with IWS for a sustainable wastewater treatment solution that would protect both the local ecosystem and the brewery's financial health.

CHALLENGES FACED

- **Municipal Strain:** Rapid expansion was overwhelming the local municipal wastewater treatment system, necessitating a more efficient onsite disposal method.
- **Water Intensity:** Brewing is historically water-intensive, often requiring up to 7 gallons of water for every gallon of beer produced, which became unsustainable during California's drought conditions.
- **Operational Continuity:** Bear Republic recognized the imperative for expansion, yet they harbored concerns about the potential fallout from construction disruptions on both their financial health and customer relationships.



SOLUTIONS IMPLEMENTED

- **Infrastructure Support:** Installation of concrete containment pads and a substantial concrete firewall.
- **Systems Integration:** Completed building of a new lift station, solids removal systems, and intricate piping networks.
- **Energy Recovery:** IWS, working with Cambrian Innovations and Summit Engineering, spearheaded the pioneering project. The installation of an EcoVolt Reactor, a cutting-edge system designed to treat high-strength brewery wastewater, stands as one of the first of its kind in the state. Deployed micro turbines, gas flares, and a combined heat and power (CHP) turbine to convert captured biogas into usable electricity and heat.



OUTCOME AND IMPACT

- **Environmental Relief:** The installation of the EcoVolt Reactor significantly decreased the biological load the brewery placed on the municipal wastewater system.
- **Energy Independence:** By capturing and converting biogas, the brewery generates nearly 50% of its electricity and 25% of its hot water heating onsite.
- **Water Circularity:** The facility successfully reclaimed a quarter of its wastewater, allowing for the reuse of 25% of their total water for internal wash-down and cleaning tasks.



The collaboration between Bear Republic and IWS transformed a significant operational challenge into a competitive advantage. By embracing "turn-key" innovative technology, the brewery moved beyond simple wastewater compliance to become a producer of renewable energy and reclaimed water. This project highlights IWS's ability to adapt to the needs of an active production facility, delivering a complex, sustainable infrastructure project that safeguards both the environment and the brewery's long-term operational viability.

"IWS played a critical role in bringing together all the pieces of this new technology and integrating it into our existing operation. IWS was proactive in taking steps to keep the project on track, was responsive to our changing needs as an active production facility, and had the skill-set to turn-key the project - which meant they didn't have to go far to get the answer when issues arose. We would highly recommend IWS for future projects."

Richard Norgrove, Jr., Brewmaster and COO



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