

biogas

Brewery Installing Wastewater Treatment and Biogas Production Plant

Tuesday, 05 June 2018

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The City of Chilliwack in Canada is building a **Global Water Engineering high-strength wastewater pretreatment facility to handle the effluent from the new Molson Coors \$200 million (US\$153.9 million) plant in the Fraser Valley of British Columbia, which will produce beverages made with mountain-fed water at the foot of the Cascade Mountains.**



MCC City of Chilliwack - ANUBIX™ - B bioreactor (GWE)

The 230-year-old beer maker is scheduled to start production in its new state-of-the-art brewery in 2019, delivering about 1000 jobs in the construction phase, with another 10 the brewery as it attains full production.

Wastewater from the new brewery will be pumped to the new facility, located adjacent existing municipal treatment works, from which it will then pass to the existing Chilliwack Water Treatment Plant for final polishing and ultimate discharge. The pretreatment plant generates operating income for the City while removing the need for the brewery to have its own operators – has a capacity of 1500m³ of wastewater a day, with the removal of 75% Chemical Oxygen Demand, COD.

In addition to producing high-quality effluent, the anaerobic design will require less energy than conventional aerobic treatment solutions, produce lower levels of waste sludge and need fewer chemicals, said Global Water & Energy Vice President, Ian Page, whose company is a subsidiary of GWE.

“The City of Chilliwack and Molson Coors have worked together in a far-sighted manner to deliver an outstanding wastewater pretreatment process that reliably safeguards the environment while facilitating jobs,” stated Page.

According to Page, the plant will also be able to produce biogas from the anaerobic digestion process. A portion of this will be used initially to heat wastewater entering the anaerobic reactor, replacing any need to use fossil fuels to power the heating process involved. The excess biogas generated also ultimately be available for resale commercially.

“Based on results already achieved for Molson Coors and at GWE wastewater treatment and waste-to-energy plants in North America and worldwide, the plant could ultimately achieve average daily biogas product of over 900 kW a day, or 300 MW a year if commercial customers are found,” concluded Page.

The City of Chilliwack’s ANUBIX™ - B plant is based on an Upflow Anaerobic Sludge Blanket (UASB) type of anaerobic reactor, which accepts relatively high amounts of the biodegradable suspended solids (SS) in the influent. Its high removal efficiency (85 – 95 percent BOD and COD removal) allows for smaller aerobic polishing treatment afterwards, while achieving low excess sludge production and power consumption in the small-footprint aerobic polishing stage.

ANUBIX™ - B technologies have been employed at scores of breweries worldwide, including in the Americas, Europe and Asia. Different configurations of ANUBIX™ technologies are deployed at food, beverage and agribusiness facilities globally, where they are used to transform wastewater treatment from a disposal issue to a source of green energy.

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