

Wastewater Treatment: LCM Aerobic System meets BOD limits

New fresh juice beverage facility invests in future. Stuart Ward of Process Engineered Water Equipment explains aerobic BOD removal...

Case Study

A little history taught Hood River Juice Company management wastewater would be key to their continued manufacturing



of high quality juice products. Triple digit growth necessitated building a new facility on 6 acres of port property acquired for the purpose. And connecting to the POTW located a few hundred yards away brought its own advantages. The process goal for the design team was the efficient removal of BOD, TSS and other constituents (both suspended and dissolved) prior to discharge. All water from the plant fruit un-loading and manufacturing areas would be captured and treated.

Biological & DAF Design

The HRJ wastewater team met with the city and presented a complete package. The system included EQ tank components, LCM aerobic biological treatment, a new



Stuart Ward observes LCM aerobic system in action

PEWE *Poly-E²*™ DAF and two *PolyAccu Dose*™ stations for both flocculent and nutrient feeds. PEWE rounded out the system with a centrally located and free-standing integrated *Command Control*™ PLC panel.

Process water is collected continuously in the EQ tank and then enters the LCM aerobic biological unit for removal of largely dissolved impurities. The DAF provides final clarification. Bio-solids are pumped to a holding tank for later wet hauling. The entire system can move water via gravity once it is initially pumped to the



Poly-E² 50 DAF

EQ tank. This helps reduce the carbon footprint by limiting energy consumption. The whole system is located in a special room behind the maintenance shop for easy periodic cleaning and access.



Bio-solids are rich in nutrients

Final Results

Building a completely new manufacturing facility was not an overnight process. Doing things right takes time. PEWE had the system delivered and installation support on site for commissioning. Upon start-up the water flowed and the two new blowers brought life sustaining dissolved oxygen to the aerobic biological unit. The soluble organics were readily metabolized by the developing bacteria colony. The flow proportional chemical system efficiently dosed the proper amount. And the all welded polypropylene PEWE *Poly-E²*™ DAF proved efficient and easy to maintain by operational staff.



Owner David Ryan is pleased with the new wastewater treatment system. Waters discharged to the city POTW meet stringent permit requirements. Hood River Juice's Green clean water efforts have taken a big step forward and they are especially pleased to help the local environment.





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