

U.S. Water's Waste Water Solution Significantly Reduces Juice Processing Plant's Sewer Costs

A new construction juice processing plant in California was facing high sewer surcharges due to the plant's waste water from juicing, rinse and bottling lines. The plant processes about 140,000 gallons of juice a week, utilizing approximately 130,000 gallons of water a day. The amount of total suspended solids and organics discharge in the waste water, if left untreated, was estimated to result in seven million dollars a year in sewer costs. The plant looked to U.S. Water for a cost-effective, waste water solution.

CASE STUDY

Considering that the juice processing plant was not yet built, U.S. Water conducted a preliminary plant survey of a nearby, similar facility. During the survey, U.S. Water representatives gathered information on all of the overall plant operations including water sources, process requirements and discharge/waste water streams. City sewer fees and surcharges were also accessed. A integrated, waste water solution was presented to the plant.

U.S. Water provided engineering services to the treatment plant, which included all piping, electrical, structural and system design. Chemical feed systems provided coagulant, floccant and pH adjustment. Rotary screens assisted with solids removal, and the plug flow reactor maximized the chemical efficiency prior to the Dissolved Air Flotation (DAF) unit. Clarified water is then discharged to the plant drain and solids are

discharged to the plant waste sump/pit. In addition to the waste water treatment and equipment, U.S. Water provided boiler and cooling water treatment.

U.S. Water successfully met all of the plant's compliance, start-up and budget requirements. The facility was producing product approximately six months after contracts were executed. U.S. Water's treatment was able to reduce the amount of total suspended solids by 80 - 90%. Before U.S. Water's integrated solution, sewage costs were projected at seven million a year. Current sewage costs are 4 million a year, a three million dollar savings.

Since then, the plant has continued to expand and utilize additional engineering and equipment services from U.S. Water. Currently, U.S. Water is assisting in developing a water re-use program for the plant.

SYSTEM ACHIEVEMENTS



U.S. Water's waste water program has saved the plant three million dollars a year in sewer costs.



U.S. Water successfully met all of the plant's compliance, start-up and budget requirements, delivering a complete and operational solution in approximately six months.



Waste water system during installation.



DAF discharge.



Waste water before and after treatment.