



IWS Completes California Tribal Water Reclamation Project

The Chicken Ranch Rancheria Indian tribe operates a casino near Jamestown, California. The Tribe was interested in replacing the existing textile filter wastewater system with the installation and construction of a New Water Reclamation Facility (WRF). This new plant would treat the collected wastewater to tertiary standards and use an extensive drip irrigation system for discharge of the treated water. The overall project cost for all of IWS work and the owner provided equipment was approximately \$2.3mm.

IWS worked with the project team to complete a constructibility review and add value engineering to the process. The Owners Instrumentation and Control Contractors included Jetco, Inc. and ICS Online, Inc. The project team exchanged ideas and project approach to add value and functionality to the project before breaking ground.

The scope of work for IWS included all collection piping, treatment system, building upgrade, site civil, and electrical installation as follows:

Collection System — Installation of approximately 700 ft of new sewer main line, complete with manholes and a grease trap lateral. This gravity sewer line was constructed in a steep slope area at the beginning of the service, which then extended under a new parking lot area. The sewer line was tied into the new wastewater treatment plant.

Site Civil — Included clearing and grubbing, excavation for all new facilities including the wastewater plant which was installed to a depth of 11 ft, with approx three feet above grade. The site work also included concrete pads for the equipment, concrete walkways and stairs for access, yard piping, installation of electrical conduits, site lighting, gravel finish, perimeter fencing, gates and extensive road and access improvements.

Building Upgrade — Included new structural modifications including pouring a new slab and new footings to add the required structural integrity of the concrete. The interior of the building, to be used for electrical distribution panels and as an operations building, required new sheetrock, painting, insulation and floor drains before it was ready for use.

Treatment System — IWS installed a Fluidyne (www.fluidynecorp.com) Sequence Batch Reactor ISAM, sized to treat up to 20,000 gpd with expansion to 40,000 gpd with an additional unit. This packaged plant, for secondary treatment, was installed with steel decking, railing, bar screen and associated pumps, electrical and mechanical components. The Fluidyne representative for the project was JBI Water (www.jbiwater.com).

Tertiary Filter — A Tertiary Fluidyne Filter Cloth unit was also installed at the end of the SBR for further polishing and treatment. IWS also installed a backwash sump



Completed Construction



Storage Tanks and Pump House



Rebar for Pad



Cloth Media Filter

and pump system, chlorine disinfection, and water Quality testing instrumentation.

Storage Tanks — The treated wastewater is pumped to (2) two 25,000 gallon bolted steel tanks for temporary storage provided by Superior Tank (www.superiortank.com).

Water Reuse — The treated wastewater is then pumped from a constructed masonry pump house to 6 drip irrigation zones for dispersal using over 20,000 linear feet of drip tubing. The drip field was installed in an area of dense trees and rock.

Controls — The Complete system is controlled by the ISAM Control Panel (Fluidyne) and separate Irrigation Control Panel. IWS installed the panels and worked

with the Owner's controls engineer to complete the installation of the process control programming and SCADA integration.

Start-up — The system was initially tested with clean water and then brought on line with the facility wastewater.

Craig Powell of the Chicken Ranch Rancheria Indian tribe said "IWS did a fantastic job for us. They helped to value engineer certain aspects of the project and complete our project on budget and on schedule. The IWS Superintendent was great to work with, very informative, and a great resource. We would highly recommend IWS for future work".



Concrete Pour



Recycled Water Distribution Line

For More Information Contact

West Coast Regions Peter C. Balas (pcbaldas@integratedwaterservices.com) Tel: 925-895-3895

Jay Alman (jalman@integratedwaterservices.com) Tel: 707-291-5283

Mountain West/Texas Regions Jeff Thomas (jthomas@integratedwaterservices.com) Tel: 720-221-4366