

# TAKE **5** FOR ENERGY CONSERVATION!



## The City of Tehachapi Celebrates New Efficiencies in Wastewater Treatment

In summer of 2009, the general consensus in Tehachapi was that something had to be done about wastewater. It doesn't seem like much of a problem for those of us who really don't give much thought to what happens after water goes down a drain, but City Manager Greg Garrett says that, "Moving wastewater is an energy hog". The time had come to put the wastewater treatment facility on a diet. With a \$2.3 million grant and a \$2.3 million loan from the State Water Resources Control Board via the California Clean Water State Revolving Fund, Tehachapi was ready to move forward.

The project took over three years to complete with the planning phase taking twenty-four months. "When you



Wastewater Plant Sludge

plan a project like this a city must consider long range costs of energy and maintenance with ease of expansion as demands increase," Garrett related during the recent ribbon cutting ceremony. With great pride, Mayor Ed Grimes, Garrett and Utility Manager Jon Curry brought together citizens and city staff, representatives from W.M. Lyles (the contractor), AECOM technical advisors, and Southern California Edison (SCE), energy provider for the ribbon cutting. This made the project completion official.

To keep energy costs down once wastewater leaves the toilet, shower, or sink and moves through the treatment system meant that new technologies would need to be discovered. Filters, pumps, keeping good bacteria alive, constant monitoring, and wringing as much water as possible out of sludge are all part of the process. As a result, the Tehachapi plant has now moved into the high-tech world of computers. Before, most of the operation was manual. Making adjustments required personnel to be physically on site pushing buttons, turning knobs and taking readings. The new computer monitoring system makes changes in real time, saves energy, and increases the life of equipment, reducing the time required by personnel to maintain the operation. Staff can now access the computer system remotely and make adjustments as needed. The efficiency of the operation was made clear when Jon Curry stated, "The average city has one operator for every 600 wastewater and water service connections, and we (the City of Tehachapi) are running at one operator for every



A Sempra Energy utility



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WWTP SCADA system runs on a desktop at the City of Tehachapi admin office.

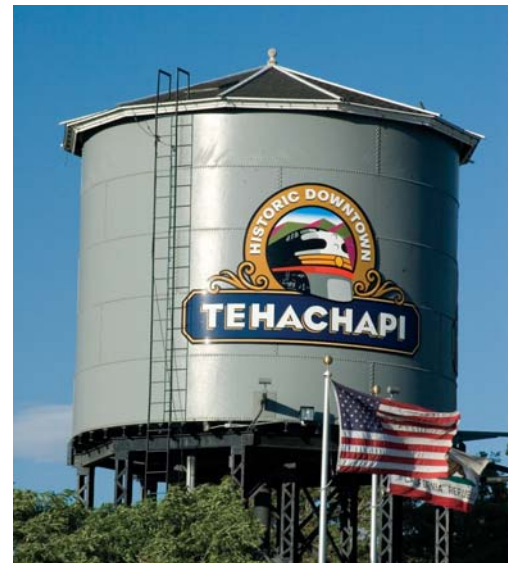
1,000 wastewater and water service connections.”

Garrett added, “Environmentally you want to do the right thing. We looked at every detail.” Southern California Edison, through their “Savings by Design” program, covered every aspect when it came to lowering energy costs for the new administration and maintenance buildings — suggesting the use of low wattage lighting and plug load sensors. The incentive provided by SCE was \$29,934, which enabled the City of Tehachapi to incorporate these energy savers into their design. The energy hog has morphed into a lean, power efficient wastewater treatment facility with an estimated energy load savings of 195,307 kWh annually. That was made possible by forward-looking partners who were eager to cover all opportunities.



## Tehachapi Project by the Numbers New Efficiencies in Wastewater Treatment

Grant	\$2.3 Million
Loan	\$2.3 Million
Total Funding	\$4.6 Million
SCE Incentive	\$29,934
Energy Load Savings	195,307 KWH



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