

Eudora's wastewater plant now conserving potable water use

The City of Eudora's Wastewater Plant was using approximately 1.2 million gallons of potable water per month in 2003 for wastewater treatment processes. In September 2004, Eudora's wastewater treatment plant used only 2000 gallons of potable water. What changed?

In December 2003, Kathy Hernandez, foreman at Eudora's Wastewater Treatment Plant, began to consider ways to conserve water for the city's water treatment plant. Eudora's water treatment plant has a capacity of 1.8 million gallons per day.

Eudora is a growing community. Kathy wanted the wastewater utility to help ensure that the city could improve its efficiency in both water and wastewater

of one day's production of potable water each month.

Kathy had seen other plants that recycle water from the wastewater effluent. She suggested that Eudora recycle effluent water. The water could be used in the treatment process for wastewater. After receiving approval for the plan from KDHE, she visited with the



Kathy Hernandez points to a yard hydrant fed by recycled water.

The realization was that the the wastewater plant was using the equivalent of one day's production of potable water each month.



One of Eudora's digesters.

operations. The realization was that the the wastewater plant was using the equivalent

of one day's production of potable water each month. Together they developed a plan to make the idea feasible and cost effective for the city.

Kathy's idea was presented to the Eudora City Council; the council gave approval to move forward with the

improvements. JCI Industries of Kansas City, Missouri was awarded the contract for the improvements. The work was completed in July 2004 at a

cost of approximately \$40,000. The recycled water is now used in the treatment of wastewater at the digesters, UV Channel (which is not presently in use), grease pit, and Waste Activated Sludge-Return Activated Sludge (WAS-RAS) pit. The recycled water is pumped from the plant effluent to each process point in the plant. A pump maintains a pressure of 60 pounds. Kathy reported that no problems have been experienced by the city with the new treatment process.

The city sells water to customers for \$9.95 for the first 1,000 gallons and \$4.50 for each additional 1,000 thereafter. If the city had been



Eudora plant effluent.



Eudora's recycle pump.

billing the wastewater fund for the water used at the wastewater treatment plant, the water bill would have been \$5,405 per month for 1.2 million gallons. Because wastewater effluent is now used in the wastewater process instead of potable water, the cost would have been reduced to \$14.45 per month.

The true savings to the City however, is only the cost of producing 1.2 million gallons actually since the departments do not bill each other.

Regardless of what spin might be applied to the cost savings, the benefit to the city is that because of the changes envisioned and implemented,

potable water usage at the wastewater treatment plant has been reduced from 14,400,000 gallons per year to approximately 24,000 gallons per year.

Check it out ...

Check KRWA's website www.krwa.net for updates on KRWA sponsored training sessions and much more. Watch how local volunteers continue to build water systems, community centers, fire stations and more through the KAN STEP program. You'll find photos of ongoing work and each project as it is completed. KRWA's website is another source for news and information about the water and wastewater industries.

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