

## Water Reclamation “Green Programs”

- **Electrical Cogeneration and Heat Recovery:** The Water Reclamation Facility recovers the biogas (methane) from the solids treatment process and utilizes it to power two V 16 engine generators to offset 25 percent of electrical demand. The residual heat from the engine generators is recovered (15 billion BTU's) and utilized in the treatment process to heat the solids to the optimum temperature for treatment and more gas biogas generation. The value of the electricity and heat generated each year is \$260,000 annually.
- **Biosolids Land Application:** Highly Treated Biosolids are applied to agricultural ground for its high fertilizer value reducing the contribution to the landfill by over 2,500 dry metric tons. Over 122,000 pounds of nitrogen are applied to over 1,000 acres of agricultural production land, offsetting the need for commercial manufactured nitrogen fertilizers.
- **Passive Solar Heating:** Water Reclamation administrative building is designed with passive solar features for heating in winter, offsetting purchased energy needs for heating.
- **Water Reclamation:** Treated Wastewater is used for irrigation and other nonpotable uses at the Treatment Facility.
- **Habitat and Grassland Restoration:** Over 100 acres of land buffering the Wastewater Treatment Facility have been seeded to native grassland and taken out of agricultural production.
- **Shelterbelt Restoration and Creation:** Water Reclamation has cleaned dead wood out of existing tree lines and shelterbelts for the overall health. Water Reclamation has also been planting new tree lines around the property boundaries to increase screening and offset CO<sub>2</sub>. More than 1,000 trees have been planted in the last five years.
- **Recycling:** Water Reclamation recycles paper, plastic, aluminum and scrap metals.
- **Hybrid Vehicle:** Investigating hybrid vehicle technology for purchase in 2009.
- **Electric Utility Vehicle:** Investigating adding electric utility vehicle in 2009.
- **Bicycles:** Maintenance and Operations staff use bicycles to navigate the 60-acre facility weather permitting.
- **Efficiency Lighting:** Installing efficient lighting technology and motion switches.
- **Fuel Usage Reduction:** Modified hours of operation, systems, and process in 2007 to save 4,847 gallons of fuel without decreasing level of service to customers.
- **Improving HVAC:** Water Reclamation will be generating a master plan to replace and upgrade existing HVAC equipment that has served its useful life with more efficient equipment that may use excess available heat from methane generation, recovering heat in wastewater stream (heat pump), etc.