

## Bureau of Reclamation Facility Wins Inaugural Better Buildings Federal Award

The Department of Energy has declared the Bureau of Reclamation's Brackish Groundwater National Desalination Research Facility to be the winner of the inaugural Better Buildings Federal Award. The award recognizes high-performing buildings across the federal government that achieve significant energy savings over the course of a given fiscal year. The building that achieves the greatest reduction in energy intensity, measured in British thermal units (Btu) per square foot, wins the competition. In Fiscal Year 2012, the Brackish Groundwater National Desalination Research Facility reduced its energy intensity by a remarkable 53.6 percent as compared to its September 2011 baseline (a reduction of 232 Btu per square foot).

The Brackish Groundwater National Desalination Research Facility is located in Alamogordo, New Mexico, and opened for research in 2007. The facility's mission is to research and develop advanced water treatment technologies for brackish water sources. In the summer of 2011, electronic technician Steve Holland and facility manager Randy Shaw began an effort to reduce energy wasting practices. They reviewed technical manuals and facility drawings to determine



changes that could be made. As a result, they changed Heating, Ventilation, and Air-Conditioning (HVAC) control settings to minimize energy use during unoccupied hours and reduced landscape lighting durations, 24-hour lighting, and indoor night lighting. The impressive energy savings were achieved through an investment of just \$783.90. Incredibly, the energy savings came in a year in which the facility was conducting a record amount of research activity.

Specifically, Mr. Holland and Mr. Shaw:

- Rewired indoor 24-hour lighting to wall switches.
- Rewired exterior parking lot lighting so that 30 of 37 lights, which were historically on from dusk to dawn, are deactivated two hours after dusk.
- Reset the HVAC control system software so that the HVAC system is operated in its efficient, unoccupied mode for the equivalent of 250 days a year.
- Rearranged HVAC ductwork to and from the electrical transformer and server rooms to allow waste heat to heat the test bay area and cool air from the test bay area to cool the transformer and server rooms.
- Reduced the temperature setting on the heat trace used on insulated plumbing throughout the site.
- Readjusted the hot water heater from 135 degrees Fahrenheit to 115 degrees Fahrenheit.

- Opened window blinds on the south side of the building, which faces the winter sun, to improve the solar heat gain in office areas during the winter.
- Identified and corrected a problem in the office area heating system.

Congratulations are in order to the Brackish Groundwater National Desalination Research Facility as the winner of the first ever Better Buildings Federal Award!