

## ***WATER CONSERVATION UPDATE***

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Newly-installed, Weighing Lysimeters at the University of Arizona, Yuma Valley Experiment farm. These instruments can precisely measure crop water use in place. The resulting information is disseminated to growers who can fine-tune weather-based irrigation scheduling.

### **Water 2025 Challenge Grants Request for Grant Proposals Announced for Fiscal Year 2008**

Bureau of Reclamation Commissioner Bob Johnson has announced that the Request for Proposals for the Water 2025 Challenge Grant Program for Fiscal Year 2008 is now available. Reclamation is seeking proposals for cooperative projects that will increase water use efficiency, conservation, and/or water marketing.

"The potential for conflicts over water is increasing in the western United States," said Johnson. "This Challenge Grant Program is one tool that we have in the Water 2025 initiative to prevent those conflicts through proactive management of the scarce water resources we have today."

Since its launch in 2004, the Water 2025 Challenge Grant Program has funded 122 projects, which represent a combined investment of more than \$96 million, including a non-Federal cost-share of more-than \$70 million.

The program focuses on achieving goals identified in the Secretary of the Interior's Water 2025 initiative that in the long-term seeks to avoid crises and conflicts over water in the Western United States. This program provides a 50/50 cost-share funding to irrigation and water districts for projects focused on water conservation, improved efficiency, and water marketing.

Entities that may submit proposals are irrigation and/or water districts, water authorities of federally recognized Tribes and other entities created under State or Territory law with water management authority.

The deadline for submitting proposals is April 28, 2008 at 3:00 p.m. Mountain Daylight Time. It is anticipated that awards will be made during the summer of 2008 with an estimated project start date in early September, 2008.

To apply for a 2008 Water 2025 Challenge grant, go online to the following website: [www.grants.gov](http://www.grants.gov). Search by funding opportunity number: 8SF811386.

For questions on this request for proposals, please contact the Grants and Cooperative Agreements Representative, Gerald Casares, at (928) 343-8262 or by email at [gcasares@usbr.gov](mailto:gcasares@usbr.gov).





Tom Gill from Reclamation's Hydraulics Lab tests an electric actuator to automatically open a farm port gate at the Imperial Valley farm automation site.

## Irrigation Water Management Methods Improving through Studies Co-Sponsored by Reclamation

Reclamation and partners are developing automated irrigation controls to improve on-farm water use efficiency. Manually operated surface irrigation systems have some practical constraints to achieving optimum irrigation efficiency. Trained laborers may not be available; gates may need to be opened in the middle of the night or other inconvenient times, etc. Further, flow rates, water advance rates, intake changes, and other information may be difficult or impossible to obtain. Automating these controls could mitigate these difficulties and be able to incorporate this information to irrigate fields at the optimum efficiency. Significant improvements in recent years in electronic automation equipment for pressurized irrigation and water system control make irrigation automation even more promising.

A study co-sponsored by Reclamation's Science & Technology (S&T) Program and the Universities of Arizona and California this year will use programmable logic controllers and electric actuators to demonstrate automatic control systems. The S&T study will be on level basins in Yuma Valley and graded borders Imperial Valley. Now, Reclamation is working with the universities to develop the algorithms to write the software code

and designing the components. Construction for the two demonstration sites is anticipated in the summer of 2008.

In related studies, Reclamation is co-sponsoring two irrigation scheduling/water-use studies with the University of Arizona – Yuma Agricultural Center. One study will obtain better water-use information on vegetable crops by using weighing Lysimeters (see photo on page 1). Another study will refine water-use information on Medjool Dates using real-time data from on-site capacitance-type soil moisture sensors.

## Flow Measurement Structures Made of Recycled Milk Jugs

Flow measurement structures designed for lined, open canals should be durable, easy-to-make and install, economical, and attractive. We have found a material that meets all of these requirements—recycled plastic lumber. This is pure, high density, recycled plastic, marine grade, not the composite lumber found in local lumber stores. It is also useful for other structures such as wave suppression baffles or flashboards.

Anyone with basic carpentry tools can make a plastic lumber structure. We have developed a set of shop drawings for plastic lumber structures for standard size lined ditch or canals as well as design procedures. For more information please contact Mark Niblack at [mniblack@usbr.gov](mailto:mniblack@usbr.gov) or call (928) 343-8253.



Flow measurement structures such as this flume are being made of recycled plastic lumber.

