

WATER CONSERVATION UPDATE

2009 “Water for America” Request for Grant Proposals Due Jan 14, 2009

Bureau of Reclamation Commissioner Bob Johnson has announced the first funding opportunity for fiscal year 2009 under the Water for America Challenge Grant Program is now available online at www.grants.gov. Reclamation is seeking proposals for cooperative projects that create water banks and markets or improve the water delivery efficiency of a system through conservation or operational improvements.

"Population growth, climate variability, chronic water supply shortages, and increased competition for water will challenge communities in the West," said Johnson. "This initiative is aimed at helping communities address the twenty-first century water challenges and ensure they have adequate water supplies now and into the future." Water Marketing and Efficiency grants were previously known as Challenge Grants under the Water 2025 Initiative.

Projects will be selected for funding through a competitive process and should meet the goals of the initiative. 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.

Proposals must be submitted as indicated on www.grants.gov by January 14, 2009, at 4:00 p.m. MST. It is anticipated the awards will be made during the summer of 2009. For more information on Water for America visit www.usbr.gov/wfa.

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.



Construction of automated surface irrigation project in Imperial Valley. A similar project on level basins has started in the Yuma Valley. This research is funded by Reclamation's Science and Technology program.

Grant & Cooperative Agreements Selected for Award for 2009 Yuma Area Water Conservation Program

The Yuma Area Office has announced selections for grant and cooperative agreement awards for 2009 for the local water conservation program. Awardees were selected by a competitive process. Grants are for a maximum of 50% cost-share. Cooperative Agreements include cost-share as well as technical assistance.

The awardees are:

- Mohave valley Irrigation and Drainage District, \$50,000, for well flow measurement and telemetry;
- Colorado River Indian Tribes, \$80,000, for expansion of their canal SCADA system;
- Coachella Valley Resource Conservation District, \$25, 218, for development of



improved methods of statistical sampling for soil salinity assessment;

- Yuma County Water Users Association, \$78,792, for flow measurement at selected locations within their canal system; and
- University of California Cooperative Extension, \$40,192, for demonstration of surface irrigation automation.

Awards should be made by January 30, 2009.

Work Has Started on Demonstration Project for Identification of Canal Seepage through Deep Imaging

We have begun work on a project to demonstrate rapid methods of identifying locations of canal seepage by deep electromagnetic imaging. Measurements of the electrical conductivity below canals are rapidly made by towing an array of sensors with a small boat while recording the location of the measurements with a GPS system. Locations of particular interest can be investigated in further detail with ground-based instruments.

Electrical conductivity measurements will be correlated to soil properties that affect seepage rate such as per cent clay content by “ground-truth” data collection. Soil and groundwater samples will be collected at selected locations to ground-truth the electrical data.

These methods have been widely used for purposes such as identifying movement of groundwater contaminants or seepage through dams and levees. But they have not been used in the U.S. for identifying irrigation canal seepage. This demonstration project will evaluate this technology for rapidly gathering seepage information over the long distances required for irrigation canals.

With the information gained from these measurements, it is expected that we can identify the most effective locations to target works to minimize seepage losses.

Five cooperating entities in the Yuma Area are participating in this project. The selected canals are:

- East and Central Main Canals, Yuma County Water Users Association;
- Gila Gravity Main Canal;

- Reservation Main and Mohave Canals, Bard Water District;
- East Highline Canal, Imperial Irrigation District; and
- 73-19 Lateral, Colorado River Indian Tribes.



Sensor array is being towed along the East Main Canal. The electrical conductivity down to 45 feet below the surface is measured to identify locations of higher or lower seepage.

Yuma Area Office (YAO) Awarded Funding for Research on Automated Surface Irrigation in 2009

YAO was awarded \$18,000 by Reclamation’s Science and Technology Program to continue research on automated surface irrigation in 2009.

This research project intends to construct and operate automation systems on two types of surface irrigation – level basins and graded borders – on existing farms in cooperation with the Universities of California and Arizona. These automation systems will use “smart” programmable logic controllers. Initial construction of the systems has started. The next step will be programming the “smart” controllers and testing of the control software, which is scheduled for 2009.

Future plans are to incorporate control of the district delivery flow rate, telemetry of the water delivery change requests and data to the districts. This will help to translate the on-farm water savings into overall district water-savings. Additional plans are to develop more affordable and universal methods of wireless control of farm gates.

