Statement of Mike Ryan, Great Plains Regional Director
Bureau of Reclamation
U.S. Department of the Interior
Before the
House Water and Power Subcommittee

Field Hearing: Managing Water for the Future: How Federal, State and Local Agencies are Supporting Agriculture

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Madam Chairwoman and Members of the Subcommittee, I am Mike Ryan, Great Plains Regional Director for the Bureau of Reclamation (Reclamation). I am pleased to be here today to discuss how Reclamation works with our customers here in Colorado to conserve and deliver water to the agricultural community and other water users. Agriculture has a long history here in Colorado, and we recognize its importance to our economy and culture.

Reclamation operates two trans-mountain water projects in Colorado, the Colorado-Big Thompson (C-BT) Project and the Fryingpan-Arkansas (Fry-Ark) Project. The C-BT Project delivers supplemental water to roughly 830,000 people, irrigates nearly 650,000 acres, and generates enough power for approximately 58,300 homes. The Fry-Ark Project delivers supplemental water to roughly 650,000 people, irrigates nearly 281,000 acres, and generates enough power for approximately 35,000 homes for a year.

Today I will provide an overview of several activities Reclamation has been involved in to conserve water in northeastern Colorado, as well as more recent efforts such as the Platte River Recovery Implementation Program on the Central Platte River in northeastern Colorado.

Reclamation currently has two primary programs available to agricultural water mangers. The WaterSMART Program and the Field Services Program help address 21st century water supply challenges such as population growth, increased competition for finite water supplies, and climate change. These programs are designed to encourage water conservation and sustainable use of water supplies and to foster improved water management on a watershed basis.

WaterSMART

WaterSMART Grants (previously known as Challenge Grants), fund proposals from water users to conserve and use water more efficiently, increase the use of renewable energy in water management, protect endangered and threatened species, facilitate water markets, and carry out other activities to address climate-related impacts on water or prevent water-related conflict. Projects are cost-shared on a 50-50 basis and are awarded through a competitive process. The fiscal year (FY) 2011 budget request for WaterSMART Grants is $27 million. To date, WaterSMART Grants are on track to conserve approximately 540,000 acre-feet of water per year westwide when all projects are fully constructed. From FY 2004 through FY 2009, over $73.8 million in Federal funding has been awarded to 167 projects in 16 western states.

On April 30, 2010, Reclamation published three WaterSMART Funding Opportunity Announcements using FY 2010 funds: System Optimization Review Grants; Advanced Water Treatment Pilot and Demonstration Project Grants; and Research Grants to Develop Climate Analysis Tools. Each grant area has specific criteria targeted at specific goals of the WaterSMART Program. Candidate projects will be selected for funding through a competitive process and will be evaluated using established criteria listed in each Funding Opportunity Announcement. It is anticipated that awards will be made by the end of September 2010.

Since 2004, when the then-Challenge Grant Program was implemented, through 2009, when it was replaced by WaterSMART, Reclamation has partnered with water conservancy districts across eastern Colorado through projects that have received grants. Examples include:

1) In 2004, the Lower South Platte Water Conservancy District was awarded a Challenge Grant. Reclamation provided $277,868, which was used by the District to pay for up to 50% toward the installation of flow measuring devices for wells, irrigation ditches and recharge ponds within the District. At the completion of this project, the Challenge Grant made it possible to assist in providing measurement of 432 wells and 236 surface diversions. Because of the funding the District can now properly account for approximately 9,855 acre-feet of water that previously was not accounted for before installation of the measurement devices.

2) In 2005, the Central Colorado Water Conservancy District, Groundwater Management Subdistrict was awarded a Challenge Grant. The grant allowed the Subdistrict to create a rebate program for 50% of the cost for constituents to install well meters. This resulted in improved reporting of groundwater pumping in 937 of the Subdistrict's South Platte alluvial wells. The project is estimated to save up to 2,870 acre-feet of water per year and allows for the better management of up to 11,480 acre-feet of water per year. The total project cost was $1,060,852, including Reclamation's contribution of $300,000.

3) And, in 2008, the Upper Arkansas Water Conservancy District was awarded a two-year Challenge Grant in the amount of $296,724 to assist in the installation of telemetry data-collection platforms and flow control at high-alpine reservoirs. The District is currently implementing the grant which will also assist in the installation of gauges at reservoir outlet channels and streams that will generate the accurate water flow measurements needed for good water management. The project is expected to save 1,566 acre-feet of water per year.

WaterSMART Basin Studies

Under the WaterSMART Basin Studies Program, Reclamation has solicited letters of interest from non-Federal entities throughout the 17 western states to conduct river basin or sub-basin studies where water supply and demand imbalances may exist. This element of the WaterSMART Program is also a key component of Reclamation's plan for implementing the SECURE Water Act (Subtitle F of Public Law 111-11). The Basin Studies announced to date are focusing on the Colorado River Basin, the Yakima River Basin, and the St. Mary and Milk River Basins. These studies will identify basin-wide water supply issues that could potentially

be resolved with changes to the operation of water supply systems, modifications to existing facilities, development of new facilities, or non-structural changes. The Basin Studies will incorporate the latest science, engineering technology, climate models and innovation. The desired outcomes are basin-specific plans recommending collaboratively developed solutions that will help meet water demands and foster sustainable development.

Through the Basin Study Program, the Bureau of Reclamation will partner with basin stakeholders to define options for meeting future water demands in targeted river basins in the West. Reclamation is collaborating with states and local entities on a 50/50 cost-share basis to conduct the studies. Decisions about future basin studies under WaterSMART will be informed by input and feedback from non-Federal stakeholders.

Water Conservation Field Services Program

The Field Services Program is designed to encourage water conservation, assist water development and management, and foster cooperation for improved water management on a regional, statewide and watershed basis. Here in Colorado, the Field Services Program enables Reclamation to assist water districts in developing small scale water-efficient technologies, xeriscaping initiatives, and educational outreach programs. Reclamation's request for this program in FY 2011 is $7.85 million.

To date, Reclamation has provided funding under the Field Services Program to help improve water resource management and the efficiency of water use throughout Colorado.

One such partner is Colorado State University and its work in the Lower Arkansas River Valley. Over the years, the Lower Arkansas River Valley has been experiencing the effects of rising water tables, excessive salt buildup, and increasing selenium concentrations, both on land and in the riparian system. These issues reduce productivity of lands, in some cases to the point of land retirement from irrigation, and often result in degradation of water supplies. Reclamation has provided $551,630 in funding under the Field Services Program to Colorado State University to assist in conducting field monitoring, modeling, and pilot implementation efforts to find solutions for problems in the irrigation-stream-aquifer system in the Lower Arkansas River Valley. It is hoped that their work in the Lower Arkansas will eventually be applicable to both the Colorado and South Platte River systems, which face similar issues.

In another Field Services Program in 2006, Reclamation partnered with the Department of Soil and Crop Sciences, Colorado State University on a research project to demonstrate limited irrigation technology as an approach to sustain irrigated agriculture while meeting increasing urban water demand in Colorado. The demonstration project, which is scheduled to continue until 2011, has several objectives: 1) to highlight for producers the value of water conserving limited irrigation cropping systems; 2) to evaluate limited irrigation as an economic alternative to land abandonment or dryland agriculture; and 3) to provide information to state agencies and urban water users about the potential of agricultural water transfers as one way to address increasing urban water needs. To date, Reclamation has provided over $229,000 in funding.

Reclamation is also partnering with Northern Colorado Water Conservancy District and the Integrated Decision Support Group at Colorado State University in 2009 to develop crop

coefficients for multiple crops using remote sensing data from the South Platte. This uses local data to develop local crop coefficients that capture crop behavior specifics to help water users better understand water needs and supplies and promote water use efficiency. Reclamation has provided $50,000 in funding toward this effort, and it is expected to be completed in 2011.

I have described Reclamation's efforts to preserve and enhance agricultural water conservation in Colorado. I would now like to describe another project underway here.

The Platte River Recovery Implementation Program

The Platte River Recovery Implementation Program (Program) is providing significant resources toward recovery of endangered species in the Central Platte River system which allows Reclamation to continuing operating federal projects that support agriculture and communities in northeastern Colorado. The FY 2011 request for this program is $12.7 million.

The Platte River Basin has historically undergone extensive development for irrigation, power generation, and municipal water uses. Concerns over the development of the area's water projects, and their effects on endangered species in the Central Platte River, has resulted in uncertainty for these water supplies. The States of Colorado, Nebraska, and Wyoming, and the Department of the Interior entered into the Program, which provides Endangered Species Act compliance for existing water uses in the Platte River Basin and their associated economies. Subject to appropriations, Reclamation is providing over $157 million throughout the 13-year first increment of the Program, which began on January 1, 2007. The states of Colorado, Nebraska, and Wyoming are matching Reclamation by contributing over $160 million in cash and cash-equivalents to the Program. This collaborative, cost-shared approach provides northeastern Colorado the assurance that these water projects can continue to operate while addressing endangered species needs on the Central Platte River.

Conclusion

In conclusion, Reclamation has a variety of infrastructure, as well as new or ongoing programs underway to assure reliable water supplies for agricultural, environmental, residential, and other future uses in Colorado and the Great Plains Region. We appreciate the opportunity to summarize them for the Subcommittee today.

This concludes my written statement. I am pleased to answer any questions you may have.