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Committee on Energy & Natural Resources
United States Senate

Oversight Hearing
on
Bureau of Reclamation's Implementation
Of the SECURE Water Act and Water Conservation Initiative

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Good afternoon, Chairwoman Stabenow, Ranking Member Brownback, and Members of the Subcommittee. My name is Dan Keppen, and I serve as executive director of the Family Farm Alliance (Alliance).

The Alliance is a grassroots organization of family farmers, ranchers, irrigation districts and allied industries in 16 Western states. The Alliance is focused on one mission: To ensure the availability of reliable, affordable irrigation water supplies to Western farmers and ranchers. We are also committed to the fundamental proposition that Western irrigated agriculture must be preserved and protected for a host of economic, sociological, environmental and national security reasons – many of which are often overlooked in the context of other policy decisions.

I would like to acknowledge and thank Alliance Members Dick Moss (Provost & Pritchard, Visalia, California), Tom Knutson (Nebraska State Irrigation Association), Pat O'Toole (Ladder Ranch, Wyoming) and Larry Hicks (Little Snake River Conservancy District, Wyoming) for their assistance in developing this testimony.

Introduction

I am honored to be here today to discuss the *SECURE Water Act* (SECURE) and the Bureau of Reclamation's Water Conservation Initiative, which includes the WaterSMART Grant Program, the Basin Study Program, and the Title XVI Program. The Family Farm Alliance has twice previously testified before the Committee on climate change and water, and offered specific recommendations on the SECURE legislation. We were pleased to see that many of our recommendations were included in the final law. I will address SECURE is this testimony, particularly as it relates to broader climate change legislation that may be considered by the Senate. The Alliance believes that the goals and programs of the *SECURE Water Act* should be specifically incorporated into any comprehensive climate legislation to ensure that they receive adequate resources and emphasis.

I have also been asked today to explain the Family Farm Alliance Water Management Case Study Report, which we are currently developing, and has relevance to several of the topics on this hearing's agenda. I have included two of these case studies as appendices to this testimony, which we hope will provide insight into the positive and negative aspects associated with implementing conservation projects involving agricultural water users and government partners.

Alliance Involvement with *the SECURE Water Act* and Climate Change Issues

The Family Farm Alliance Board of Directors in 2007 established a subcommittee to develop a white paper that addresses the important issue of climate change, its possible impact on Western water supplies and irrigated agriculture, and recommendations on how to plan and provide stewardship for this change. The report was prepared by an Alliance climate change subcommittee, our Advisory Committee, and water resources experts from around the West.

That document - titled *"Water Supply in a Changing Climate: The Perspective of Family Farmers and Ranchers in the Irrigated West*"- was released just over two years ago.

Our report shows that climate change could further strain fresh water supplies in the American West. We must begin to plan for that now, and not wait until we are forced to make decisions during a crisis.

Reinforcing the *SECURE Water Act*

Last year, Congress moved to address the potential impacts of climate change on western state water supplies. It approved the *SECURE Water Act* (signed into law by President Obama in March 2009 as P.L. 111-11, Title IX, Subtitle F) creating federal inter-agency programs to assess the effects of climate change on water supplies, develop strategies and technologies to address potential water shortages and increase the collection of data on current and future water supply availability. The Family Farm Alliance supported the *SECURE Water Act* in part because it provides water managers with highly beneficial "on-the-ground" solutions to infrastructure problems exacerbated by global climate change. SECURE authorizes the Secretary of the Interior to provide cost-shared grants for planning, designing, or constructing improvements to water infrastructure that conserve water, provide management improvements, and promote increased efficiencies. This expands opportunities for the types of projects already funded through the Bureau of Reclamation's WaterSMART Grant Program, which many Family Farm Alliance members have benefited from. These projects provide for improved water management, enhanced supplies, water conservation, and greater efficiencies, thereby stretching dwindling water supplies.

Questions About Implementation of the *SECURE Water Act*

The Alliance strongly supported the *SECURE Water Act*. Our members now have questions about how this program is being implemented. They want to know where the dollars are being spent, what types of projects and programs are receiving priority –and, most importantly – how can they get involved? It is our hope that today's hearing will lead to improved dialogue between the Bureau of Reclamation and Western water users that begins to answer these questions.

Other Climate Change Legislation Considerations

There is broad scientific consensus that even modest changes in the global climate would likely alter precipitation patterns in ways that could pose serious threats to water supplies and agricultural production worldwide, particularly in arid regions such as the American West where a large portion of agricultural production is dependent upon irrigation. A significant reduction in the amount of food and fiber produced by American farmers would have adverse consequences for our economy and national security and for our trading partners abroad.

In the past year, legislation has been introduced to address climate change in a comprehensive and aggressive manner. We had hoped that Congress would share our concern that safeguarding the nation's ability to feed itself should be one of the principal goals of any legislation whose purpose is to marshal a national effort to minimize and adapt to the effects of climate change. Unfortunately, while House-passed climate legislation (H.R. 5424) and legislation (S. 1733) introduced by Senators Boxer and Kerry would commit the federal government to employ "*all practical means"* to protect fish and wildlife from the adverse effects of climate change, those proposals include no comparable commitment to ensuring the continued vitality of domestic agriculture and agriculturally-based rural communities. Legislation (S. 1933) introduced by Chairman Bingaman takes a more reasonable approach to natural resources adaptation, and it specifically incorporates the goals and measures of SECURE. But it, too, places the greatest emphasis on fish and wildlife.

The Family Farm Alliance supports the goal of conserving natural resources with fish and wildlife adaptation planning, research and programs. But the lack of comparable attention to adaptation needs of domestic agriculture and rural communities calls into question the intent and effects of a large-scale effort focused exclusively on natural resources.

If Congress enacts comprehensive climate-change legislation, it must include additional adaptation programs for irrigated agriculture and rural resource-based communities if such efforts are to be given the necessary attention and resources. Farms and communities in the western United States face the prospect of economic disruption and increased competition and conflict over agricultural and water resources as a result of climate change. Helping them adapt to and withstand the impacts of climate change should be no less a national priority than meeting the needs of fish and wildlife and of farmers in other nations.

We refer you to the October 27, 2009 statement the Alliance submitted to the Senate Committee on the Environment and Public Works. It provides specific observations and recommendations on how Congress can provide adaptation programs that benefit Western irrigated agriculture and rural communities. We hope this subcommittee can play a role in advancing these recommendations as the Senate considers climate change legislation.

The Bureau of Reclamation's WaterSMART (Challenge) Grant Program

Reclamation's Challenge Grants – now renamed WaterSMART Grants - leverage Federal funding by requiring a 50 percent non-Federal cost-share contribution. Grants are available to States, tribes, irrigation and water districts, and other entities with water or power delivery authority. Many members of the Family Farm Alliance have benefited from this program in recent years. Appendix B summarizes how one of our members – Tulare Irrigation District (CALIFORNIA) - has funded a variety of water-saving projects with the assistance of WaterSMART Grant funds.

Tulare Irrigation District (TID) is fortunate to have aggressive staffers who are always looking for opportunities and are willing to invest time and money to secure grants for projects that conserve water and promote conjunctive management of surface and groundwater. TID has benefited from partnering with others and sharing project benefits. These types of partnership generate significant local and regional support for project proposals. The keys to TID's grant success have been: 1) Paying close attention to grant requirements; 2) Sufficient planning to demonstrate a thoughtful and consistent approach; and 3) Recognition that a "phased" approach can be used to incrementally fund larger projects.

TID and other Alliance members have also identified shortcomings in the administration of the WaterSMART Grant program and have developed the following recommendations on how to address those problems:

A. There is often a "disconnect" between required funding timelines and needed National Environmental Protection Act/National Historic Preservation Act (NHPA) reviews. In California, local water users believe these reviews could be satisfied in a much more expeditious manner by relying on existing, similar state reviews. For aging water infrastructure, the historic review requirements should be modified, perhaps by developing a programmatic approach to the NHPA requirements for water facilities.

B. Federal administrators sometimes have a lack of understanding about the limited construction "window" that is available when working on water delivery systems. Early "kickoff meetings" with project proponents and Reclamation personnel should be a required step in these projects.

C. Grant applicants sometimes face financial and time-management difficulties looking for multiple partners to share the benefits of a proposal, especially for smaller grants. If multiple benefits and collaborative efforts are to be emphasized, commensurate funding should be made available to support these necessary administrative actions.

The vast majority of Family Farm Alliance members who have benefited from WaterSMART Grants believe that there is not enough money to address the needs that are out there (see "Other Needs" below). We were pleased to see that the Bureau of Reclamation's Fiscal 2011 budget request includes $27 million of WaterSMART Grants, double the FY 10 level of funding. This is a good start.

Our Members and others in western irrigation also lament the absence of any current program to address major rehabilitation needs, similar to the now-defunct "Small Reclamation Projects Rehabilitation and Betterment Program".

Importance of Federal Climate Change, Conservation and Infrastructure Assistance

Water conservation, recycling and desalination efforts and water transfers are important tools for

improved management of increasing scarce water resources. However, these demand-management actions must be balanced with supply enhancement measures that provide the proper mix of solutions for the varying specific circumstances in the West.

Supply enhancement should include rehabilitation of existing facilities and construction of new infrastructure. Rehabilitation measures should focus on maximizing the conservation effort through increased delivery efficiencies, construction of re-regulation reservoirs to minimize operational waste, and construction of new dams and reservoirs in watersheds with inadequate storage capacity to increase beneficial use and provide operational flexibility. Additional groundwater supplies should also be developed, but in a manner where groundwater use falls within the safe yield or recharge parameters of the aquifer. Conjunctive management of surface and groundwater supplies should be encouraged. Installation of additional stream gauges, water meters, groundwater recharge projects to employ during times of high surface flow, groundwater monitoring wells and better estimates of consumptive use are of paramount importance for the equitable management of available water supplies.

The federal government needs to seriously consider adopting a policy of supporting new projects to enhance water supplies while encouraging state and local interests to take the lead in the planning and implementation of those projects. Local and state interests have shown enormous creativity in designing creative water development projects. For example, the State of Wyoming has initiated its Dam and Reservoir Program, in which proposed new dams with storage capacity of 2,000 acre feet or more and proposed expansions of existing dams of 1,000 acre feet or more qualify for state funding. Wyoming water managers and policy makers recognize that dams and reservoirs typically provide opportunities for many potential uses. While water supply is emphasized in the Wyoming program, recreation, environmental enhancement, flood control, erosion control and hydropower uses are also explored as secondary purposes.

Many water projects are ready to be developed in the West, as demonstrated by studies completed by the Family Farm Alliance and the Bureau of Reclamation in 2005. While conservation and recycling programs have done a tremendous job of meeting new growth, only a small amount of new water storage capacity has been developed in the past 30 years. Maintaining the status quo simply isn't sustainable in the face of unstoppable population growth, diminishing snow pack, increased water consumption to support domestic energy, and increased environmental demands. It's time to start building the water infrastructure needed to cope with a changing climate, meet the needs of a burgeoning population, and support a healthy agricultural base in the West.

Family Farm Alliance Water Management Case Study Report

The Family Farm Alliance is currently compiling in to a report a number of case studies that highlight real-world examples of water conservation, water transfers and markets, aging infrastructure problems, and watershed restoration / enhancement. This document will be used in several forums. For example, we would like to describe water conservation and management

projects that work well (best management practices), especially those that have benefited from WaterSMART grants, and pass the lessons learned from those projects on to the Bureau of Reclamation. One of those case studies, involving the Tulare Irrigation District (CALIFORNIA), is included as an appendix to this testimony. We are also hoping that observations and recommendations from these types of projects can be used to help influence how the *SECURE Water Act* will be implemented by Reclamation. Our report can further be used as a template to advocate for the types of conservation activities that could be potentially funded under the climate change bills currently moving through Congress.

Another area of focus in our report will include water markets and transfers, where we would like to provide examples of successful efforts, identify where there are impediments to success, and describe where adverse impacts negated such benefits. These studies will help form the framework for Alliance policy on water transfers, which will be advanced in the agricultural / urban / environmental water sharing coalition we are involved with in the Colorado River Basin. We are already assembling work for transfer programs undertaken in the Central Valley (CALIFORNIA), in the Klamath Basin (CALIFORNIA / OREGON), in Southern California, and along the Front Range of the Rocky Mountains (COLORADO).

We will also include examples of aging water infrastructure predicaments facing our members. Findings and recommended solutions can be used in our ongoing efforts to implement the loan guarantee provisions we advocated for in the Rural Water Supply Act and to underscore the additional funding needs that are required to address key infrastructure issues in the West, such as the St. Mary Facilities (MONTANA) and rehabilitation of Minidoka Dam spillway (IDAHO).

Finally, we will describe the complications facing local water users, the creative solutions that can be developed to meet those problems and recommendations that ensure continued, locally-driven success. We already have developed one case study in Nebraska, where irrigation districts have completed project transfers resulting in expanded opportunities to partner with new entities to improve infrastructure, flood control, and water management. Another case study in Wyoming that describes the efforts of a local conservation district to take the lead in implementing holistic watershed solutions is included as an appendix to this testimony.

An important objective of our final report will be to demonstrate that water managers, ranchers and farmers are resourceful and creative individuals that should play an active role in resolving the water conflicts of the West.

When our report is completed, it will include at least a dozen individual case studies for projects located in virtually very major river basin in the Western United States. We look forward to sharing the final report with this committee and other important water policy makers.

Other Needs

The *SECURE Water Act* and Reclamation's WaterSMART Grant Program are two important

tools that improve the availability of reliable, affordable irrigation supplies and partially mitigate for climate change impacts to Western water resources. However, critical problems remain to be solved, and the Bureau of Reclamation and Congress can help address these needs.

1. ***Create Flexible Financing Options to Help Water Managers Proactively Deal with Aging Infrastructure and Climate Impacts to Western Water Supplies***

The Bureau of Reclamation (Reclamation) built and manages the largest part of the critical water supply infrastructure that is the foundation of the economic vitality of the 17 Western States. Much of this federally-owned infrastructure is now 50-100 years old, approaching the end of its design life, and needs to be rebuilt and rehabilitated for the next century. The Congressional Research Service has calculated the original development cost of this infrastructure to be over $20 billion, and Reclamation estimates the current replacement value of its water supply and delivery infrastructure at well over $100 billion. These facilities are an essential component of the nation's food-production system and their operation helps ensure our ability to provide reliable and secure food for its own citizens and the rest of the world.

The problem with fixing aging public infrastructure is primarily financial. There are not enough federal dollars to go around for these burgeoning needs. Yet, in the case of Reclamation water facilities, most of the rebuilding of this federal water infrastructure is paid for by the end users who contract with Reclamation for their water supplies. Reclamation estimates that $3 billion will be needed from project users in the near-term to provide for essential repairs and rehabilitation of Reclamation facilities.

This is where the problem begins: under its legal authority, Reclamation must treat expensive, major rehabilitation and replacement projects as operation and maintenance costs (O&M) that must be paid for by the water users both in advance, and in the year in which the costs are incurred. For some of these projects, it is not uncommon for annual O&M bills for these rehab projects to be thousands of times larger when compared to previous years, with little time for water users to prepare. With the federal government holding title to these facilities, water users can not easily obtain financing to meet their O&M obligations, nor can they simply pass along huge increases in costs to their water customers in such a short period of time.

In the past, Reclamation offered its water users direct loans to cover their share of these major expenses, allowing them to finance over many years their contractual share of these costs over time. However, these direct loans had been discontinued, as mounting pressures on the federal budget redirected funds that were traditionally dedicated to these loan programs. As a result, in most of these cases, the unthinkable happens: these vital rehabilitation and replacement projects are delayed or dropped, leaving the facility in badly decomposing or unsafe condition for future generations to deal with, and setting up the perfect storm of facility failure and resulting damages to property and person.

With leadership from your Committee, Congress has sought creative ways to address this challenge, and we are encouraged by two recent key legislative fixes:

A. P.L. 111-11, signed into law last March, includes new authorities to address aging canal systems in urbanized areas of the West. An important part of this law, (Title IX, Subtitle G) authorizes the Secretary of Interior to advance funding for the costs of "extraordinary operation and maintenance work" that can be repaid by local authorities, with interest, over 50 years. The 50-year repayment option applies to both reserved works and those works whose management has been transferred to local entities by Reclamation. This extended repayment authority has been welcomed by our members as a means of securing affordable financing for repairs to federal facilities.

B. Title II of the Rural Water Supply Act of 2006 (PL 109-451) authorized a loan guarantee program within Reclamation that would leverage a small amount of appropriated dollars into a large amount of private lender financing available to qualified Reclamation-contractor water districts with good credit. In other words, the Congress has given the authority to Reclamation to co-sign a loan to help their water contractors meet their contract-required, mandatory share of rebuilding and replacement costs of federally-owned facilities.

I regret to report that this latter tool – the Reclamation loan guarantee option– continues to be held up because of incorrect interpretations of clear Congressional direction by the Office of Management and Budget (OMB). An April 3, 2008 memo prepared by OMB concluded that the Bureau can carry out the loan program only if it is willing to siphon large amounts of funding away from other programs and needs within its budget. This is not what Congress intended. In 2008, we shared with this Committee our findings that showed OMB's conclusions are wrong and that they are driven by a desire to prevent implementation of the program. We are baffled by OMB's opposition to a device specifically designed to help non-federal entities raise non-federal money to repair federally owned infrastructure at little or no cost to the federal government.

We need your help, through Congressional oversight and possibly new legislative language, to tell OMB that they are wrong, and to allow the Bureau of Reclamation to proceed with implementation of the loan guarantee program as Congress intended it to function. In addition, further Congressional attention and effort will necessary in order to help western water managers deal with aging water infrastructure and climate impacts to western water supplies.

2. *Streamline the Regulatory Permitting Process*

Modern, integrated water storage and distribution systems can provide tremendous physical and economic flexibility to address climate transformation and population growth. However, this flexibility is limited by legal, regulatory, or other institutional constraints, which can take longer to address than actually constructing the physical infrastructure. The often slow and cumbersome

federal regulatory process is a major obstacle to realization of projects and actions that could enhance Western water supplies.

The Family Farm Alliance has long worked on finding ways to streamline the regulatory process, and worked closely with past administrations and Congress towards that end. In the past year, our members are becoming increasingly concerned about the number of environmental policies that are currently being re-written by this Administration. It appears the changes being contemplated could result in stricter requirements that would further slow down federal approvals on water projects that are already very time-consuming and challenging. We are concerned about the following administrative actions that could carry the risk of real potential harm for Western irrigators:

- Economic and Environmental Principles & Guidelines for Water and Related Resources Studies. The White House in December released a draft of new standards for federal water projects that for the first time put environmental goals on the same plane as economic development concerns. The proposed overhaul of 1983 standards for the Army Corps of Engineers (Corps) directs the agency to fold non-monetary benefits into project assessments by measuring improvements to wildlife habitats and biodiversity. These proposed changes for the Corps and Bureau of Reclamation may have a significant impact on new water project planning and federal funding in the future.

- National Environmental Policy Act Expansion. It is our understanding that the Administration may soon issue an executive order adding climate change to the list of factors federal agencies must take into account when evaluating projects and policies. Some conservation groups have pushed for the expansion of the 40-year-old National Environmental Policy Act (NEPA), which currently requires agencies to consider environmental factors such as land use, biodiversity and air quality. Our members fear that requiring analysis of climate change impacts during the NEPA process, especially at the project-specific level, will slow economic recovery while providing no meaningful environmental benefits.

- ESA Administrative Revisions. The U.S. Fish and Wildlife Service (USFWS) is considering wide-ranging revisions to the 1973 Endangered Species Act (ESA), that could provide new definitions for some key provisions, including those addressing critical habitat and consultations between service biologists and other agencies over projects that could impact protected animals and plants. For example, the USFWS earlier this year proposed to revise a 2005 designation of critical habitat for the bull trout, a threatened species protected under the ESA. If finalized, the proposal would increase the amount of stream miles originally designated as bull trout critical habitat in five Western states by 18,851 miles and the amount of lakes and reservoirs designated as critical habitat by 390,208 acres. The problem here is, for many Western water users, the maze of requirements for ESA permits that can restrict activities or delay projects for months or years. We essentially supported the administrative regulatory changes put forward prior

to 2009 that would have streamlined the consultation process. It now looks like those changes have been reversed, with no apparent request for agency input offered to the regulated community.

- EPA Pesticide Restrictions. EPA is making a precedent-setting decision to impose pesticide restrictions that will essentially prohibit their use in large areas of Washington, Oregon, California and Idaho. The most serious deficiency in EPA's announced plan involves expansion of no-use buffer zones to every ditch, drain, canal, and irrigation furrow that might eventually drain from an agricultural field into a salmon habitat. EPA also recently singled out the state of Florida as the first state in the nation on which they are proposing to establish a nutrient standard for all bodies of water. These proposed standards are being imposed on the basis of an EarthJustice lawsuit and will establish nitrogen and phosphorus standards different from the rest of the country. This is another very disturbing development, but consistent with other recent administration actions.

- EPA Reconsideration of the "Water Transfers Rule". A 2008 U.S. EPA rule allows water transfers from one water body to another without Clean Water Act (CWA) permits. We now understand that EPA is planning on reconsidering the "Water Transfers Rule", which states that a mere transfer of water from one meaningfully distinct navigable body of water to another does not require a NPDES permit, even though the water being transferred may add new pollutants to the receiving body of water. The Justice Department in a recent document says EPA may abandon the rule, a move that would subject water transfers throughout the nation to pollution permitting requirements. This could have severe consequences in states like California, where huge quantities of water are moved from one basin to another.

Many of the above administrative changes are drawing praise from environmental organizations that have been advocating them for some time. The Family Farm Alliance hopes that the Administration will give equal consideration to the concerns of agricultural organizations. We pledge to work with the Administration, Congress, and other interested parties to build a consensus for improving the regulatory processes associated with improving water systems.

CONCLUSION

The impacts of climate change on sensitive Western water supplies, while not totally understood today, will significantly challenge all water users in the West – municipal, industrial, agricultural, and environmental – in the near future. Being prepared requires investment and adaptation in the management of Western water supplies. To survive this trial, our efforts need to begin today – before crises, before conflict, and before there are winners and losers. The *SECURE Water Act* is a very positive step in the right direction, providing much needed opportunities for partnerships with federal agencies; providing direction for federal policymakers in dealing with the impacts of climate change on our precious water supplies; and providing some innovative new tools that will be necessary in order for the federal government to proactively work with local and state water

authorities on real solutions. The WaterSMART Grant Program could be improved in some minor ways, but, overall, a consistent complaint we hear from throughout the West is that there isn't enough money in the program to meet the overall need.

We stand ready to assist you, Madame Chair, and the Members of this Subcommittee in furthering these efforts that are so important to all our communities in the face of such an uncertain and challenging future. We must emphasize, however, that we are facing water problems right now. As evidenced in California's San Joaquin Valley, legislation, water transfers and data collection alone will not resolve these problems. The amount of water on the planet remains the same. We need policy and water decisions that are based on sound science. And we need the infrastructure to conserve, reuse, store, treat, manage and convey water to where and when it is needed, at the quality and quantity needed, to resolve these problems and avoid even more severe consequences that loom on the horizon.

Thank you for the opportunity to testify before this Committee today. I would be happy to answer any questions you might have.

Appendix A: Tulare Irrigation District – a case study highlighting more recent grant ("Challenge Grant", now termed "WaterSMART Grants") and funding opportunities with a focus on USBR programs.

Backdrop -

Many Western water projects are reaching the end of the original economic and design life. Dollars for preventative maintenance and system rehabilitation are hard to come by, while at the same time, costs are increasing because less water is being sold, regulations are increasing, farmed acreage is reduced, and energy and labor are more expensive. Water supply reliability has been reduced in recent years, which means that ways to increase additional yield are needed to even get back close to meeting demand. Fortunately, new technology is available to improve operational control. And local water managers are realizing that new partnerships are needed in order to obtain reasonable costs for improvements, all the while ensuring that benefits are shared.

In California, Integrated Regional Planning (IRP) efforts are gaining in prominence. The State of California has embedded the IRP approach in Propositions 50 and 84 and the water bond proposal that will be voted upon in November 2010. The IRP approach advocates for collaboration and achievement of multiple benefits. It encourages a blending/exchange of resources to maximize local benefits, and the outcome is usually controlled more by regional partnerships then any one individual agency.

Organization –

Tulare Irrigation District (TID) covers 67,600 acres in California's San Joaquin Valley. TID is a Central Valley Project Friant contractor with major water rights on the Kaweah River and access to groundwater. Two growing communities - Visalia and Tulare – affect TID's operations. The district is water-short and located in an area of regional groundwater overdraft, exacerbated by conditions caused by San Joaquin River restoration efforts.

Key Actions –

System Optimization Review (SOR) – TID in 2009 undertook a $655,000 planning study (with $300,000 USBR cost share) that will evaluate historic diversions, currently available supplies; existing delivery system capacity; past and projected demands; and groundwater pumping estimates (municipal and agricultural) and estimated safe yield. The SOR will assess potential groundwater recharge/banking projects and other projects/programs (pre-feasibility level), addressing specific issues raised in the SOR study. Based on this assessment, the SOR Study will prepare a Strategic Plan to address the pressing issues TID faces in the next several years. It will update the TID Groundwater Management Plan and re-assess current resources and capabilities. The Study will include a focused strategic planning effort to engage in regional collaboration, especially with nearby cities and other regional water managers. Projects and programs pre-feasibility analysis will also be performed.

Plum Basin Phase 1 – This $1,060,000 project (including a 2009 Challenge Grant cost share of $300,000 and partnered with the City of Tulare) proposes the construction of groundwater recharge basins and control structures.

SCADA Upgrade - Improvements to District canal operations with new SCADA equipment and construction of new automated control structures will cost $765,300, with 2005 Challenge Grant cost share of $300,000.

Other TID grant successes –

- USBR Field Services Grant $50,000 in FY 2007 for SCADA improvements at the Tagus Basin, a District water recharge and regulation facility;

- USBR Field Services Grant $50,000 in FY 2008 for the design and installation of a ramp flume on Rockford Canal near Da Costa Basin.

- NRCS AWEP funding in FY 2009 for conservation projects - $4,000,000 to be spent over 5 years with TID growers;

- ARRA Drought Relief Funding in FY 2009 of $925,000 for 2 well enhancements and 26 well rehabs for TID growers.

Lessons Learned –

Tulare Irrigation District (TID) is fortunate to have aggressive staffers who are always looking for opportunities and are willing to invest time and money to successfully secure grants for projects that conserve water and promote conjunctive management of surface and groundwater. TID has benefited from partnering with others and sharing project benefits, which generates significant local and regional support for their project proposals. The keys to TID's grant success have been: 1) Paying close attention to grant requirements; 2) Sufficient planning to demonstrate a thoughtful and consistent approach; and 3) Recognition that a "phased" approach can be used to incrementally fund larger projects.

TID and other Alliance members have also identified some defects with Challenge Grant administration and have offered up recommendations to repair those flaws:

A. There is often a "disconnect" between required funding timelines and needed National Environmental Protection Act/National Historic Preservation Act (NHPA) reviews. In California, local water users believe these reviews could be satisfied in a much more expeditious manner by relying on existing, similar state reviews. For aging water infrastructure, the historic review requirements should be modified, perhaps by developing a programmatic approach to the NHPA requirements for water facilities.

Recommendations to Address Challenge Grant Defects (cont'd)

B. Federal administrators sometimes have a lack of understanding about the limited construction "window" that is available when working on water delivery systems. Early "kickoff meetings" with project proponents and Reclamation personnel should be a required step in these projects.

C. Grant applicants sometimes face a conflict between the desire to spread the grant program benefits and the efficacy of spending significant sums of money to secure smaller grants.

TID believes there is not enough Challenge Grant money to address the needs that are out there. They also lament the absence of any current program to address major rehabilitation needs, similar to the now-defunct "Small Reclamation Projects Rehabilitation and Betterment Program".

Appendix B: Little Snake River Conservation District. A case study highlighting integrated collaborative watershed management and the importance of locally-led management efforts.

Backdrop –

In most Western states, much of the water used derives from snowmelt in mountainous areas. We are hearing more frequent reports from state and local governments and water users who question how the federal government is managing the watersheds. Forested lands cover about one-third of the nation's land area, and although they have roles in timber production, habitat, recreation and wilderness, their most important output may be water. Forests provide natural filtration and storage systems that process nearly two-thirds of the water supply in the U.S. Forest vegetation and soils, if healthy and intact, can benefit human water supplies by controlling water yield, peak flows, low flows, sediment levels, water chemistry and quality. One of the biggest threats to forests, and the water that derives from them, is the permanent conversion of forested land to residential, industrial and commercial uses.

Real management is needed in the real "reservoir" of the West – our federally-owned forest lands in upper watershed areas.

Location –

The Little Snake River is a Colorado River Headwaters Basin arising on the continental divide with land in both Colorado and Wyoming. It is a major tributary to the Yampa and Green Rivers in the Upper Colorado Basin.

Geography and Hydrology

The area is relatively geographically isolated from any large metropolitan or urban communities (> 300 miles from Denver or Salt Lake City). Population in the basin is less than 1,000 people. There are three towns in the basin, Baggs, Dixon, and Savery with populations of 400, 82, and 26, respectively. There are 20,000 acres of irrigated lands adjacent to the main stem of the Little Snake River and its major tributaries. Land ownership in the basin is approximately 31% private, 8% state, and 61% federal (BLM & USFS).

Elevations and precipitation in the basin range from 10,000 feet and 55 inches of annual precipitation to 6,000 feet and 8 inches of annual precipitation. Low elevation landscapes are dominated by desert shrub land communities and transition to mixed mountain shrub, aspen, and pine/spruce/ fir plant communities at the highest elevation.

Average annual water yield out of the basin is approximately 449,000 acre-feet (AF) per year. Total consumptive water use in the basin is approximately 44,000 AF per year. The largest annual consumptive use is for municipal water project via a trans-basin diversion (21,000 AF) followed by agriculture (20,000 AF) and environmental and miscellaneous uses (3,000 AF). The first water rights for irrigation where filed with the Territory of Wyoming in March of 1875.

Land Use and Habitat Characteristics -

Predominant land uses are range land agriculture, recreation, and - more recently - fluid mineral development (oil & gas). Historically, the basin also supported some timber harvest and hard rock mining for copper, gold, and silver. Because of the basin's geographic isolation and low population, it has not incurred major deleterious impacts associated with human activity until the recently development of fluid minerals. Consequently, the area has a fairly intact ecosystem that supports the largest population of Colorado Cutthroat Trout, flannel-mouth suckers, and round-tailed chubs. It also supports some of the largest populations of Columbian Sharp-tail and Greater Sage Grouse in the U.S. The basin is also home to 8,000 elk, 21,000 mule deer, 22,000 antelope, 130 species of birds, 15 species of fish, and numerous other species of mammals and amphibians.

In 1844 John C Fremont traversed the Little Snake River Valley and noted in his journals *"The country here appeared more variously stocked with game than any part of the Rocky mountains we had visited: and its abundance is owing to the excellent pasturage and its dangerous character as a war ground"*. The game (wildlife) that attracted the warring Native American tribes to area was a byproduct of the excellent pasturage that Fremont spoke of. It is also the reason the area attracted early ranchers. The first cattle entered the Little Snake Basin in 1871 when Noah Reader brought 2,000 head that where turned out at the mouth of Savery Creek. In 1873 George Baggs brought 2,000 head into the valley near the vicinity of the town bearing his name. Today the area supports around 25,000 head of cattle, 6,000 head of sheep, and 2,500 head of horse both domestic and wild.

Organization -

The Little Snake River Conservation District (LSRCD) has a locally elected board of supervisors and is staffed by dedicated professionals.

Key Integrated Collaborative Watershed Management Actions -

- Muddy Creek and Savery Creek Clean Water Act Section 319 Watershed Projects. The LSRCD has received and administered over $1 million dollars from EPA to implement best management practice for livestock grazing.

- Muddy Creek Wetlands. Established the largest wetland project in the State of Wyoming and received over $800,000 in grant funding for this project including $165,000 from Ducks Unlimited.

- Little Snake River Aspen Conservation Joint Venture. Locally lead effort with BLM & USFS, private land owners to restore and enhance 12,000 acres of Aspen forest.

- Little Snake River Watershed Fish Barrier Assessment. Collaborative effort with Trout Unlimited, LSRCD, and local landowners/irrigators.

Key Integrated Collaborative Watershed Management Actions (cont'd) -

- Little Snake Watershed Fish Barrier Removal and Aquatic Ecosystem Restoration Project. Joint project with numerous local, state, federal, and NGO partners. Current expenditure and obligation for this project is $2.5 million.

- Cooperative Conservation Planning Initiative (CCPI). This is a USDA-NRCS farm bill program. The LSRCD is the local sponsor on two different CCPI projects including the Fish Barrier Removal and Hazardous fuels - forest health projects in the Little Snake Basin.

- Battle Collaborative Stewardship Contract. The USFS and the LSRCD agreed to address hazardous fuels on 3,000 acres of the Medicine Bow National Forest due to bark beetle infestation.

- Little Snake River Conservation Planning initiative. This is a joint effort among the LSRCD, NRCS, The Nature Conservancy (TNC), and private land owners. It consists of inventorying and updating conversation plans for 42,000 acres of private lands for consideration under Conservation Easements.

Results -

- In 2005 the local community, working with the State of Wyoming, constructed a 23,000 acre foot $30 million dollar water storage project to provide water for municipal, agricultural, fisheries and recreational use.

- As part of the overall watershed project, Clean Water Act Section 319 monies were utilized to implement grazing Best Management Practice to restore and enhance riparian and upland areas. Other funds and partners have assisted with the restoration and enhancement of more than 20 miles of river and stream channels for both cold and warm water fish species. Over 800 acres of wetland habitat has been constructed, improved, and enhanced.

- 3,500 acres of forest treatment has been completed to reduce hazardous fuels and improve wildlife habitat.

- Thousands of acres have been put under conservation easements in order to perpetuate agricultural use and protect critical wildlife habitat.

- Ten irrigation diversion structures have been modified to allow for fish passage and in 2011 all remaining irrigation diversion structures in the Little Snake basin are scheduled for modification for fish passage.

Recognition -

Since 1991 numerous agencies, organization, and NGO's have recognized the Little Snake River community and the local governmental natural resource agency, the Little Snake River Conservation District (LSRCD), as leaders in natural resource conservation. Following are list of acknowledgments and achievements.

- 1996 USDI-BLM Rangeland Stewardship Award.
- 1996-2000 National Demonstration Project "Seeking Common Ground –Livestock and Big Game on Western Range Lands".
- 1997 & 2002 EPA volume II & III Section 319 Success Stories.
- 2007 National Association of Conservation District South West Region Collaborative Conservation Award.
- 2009 Rocky Mountain Elk Foundation Imperial Habitat Partner.

Numerous articles featuring work conducted by the LSRCD, area land owners, and its partners have been featured in popular publications like Farm Journal, Beef Today, Bugle Magazine, Wyoming Wildlife, and Range Magazine as well as peer reviewed journal publication in the Journal of Soil and Water Conservation (2008) and the Journal of Rangeland Ecology (2009).

Lessons Learned -

These efforts have all been locally-led. Conservation of natural resources in the Little Snake River Basin integrated with agrarian life style and perpetuation of this culture is the highest priority for the local community in the Little Snake Basin. In Wyoming, the local residents have passed a conservation property tax to carry on this work. Since 1990 this tax has generated approximately $8 million dollars in local revenues. These funds have leveraged over $40 million dollars in project money to implement conservation and development projects in the Little Snake River Basin.

Today the Little Snake River Basin hosts a myriad of wildlife, and robust natural resources while sustaining compatible agricultural uses and natural resource based recreation business. This was accomplished through local leadership and commitment of the Little Snake River Conservation District working collaboratively with over 30 different partner organizations and agencies that have assisted in the conservation of the Little Snake Basin, in a collaborative locally-led process.

Properly managing federal watersheds and encouraging federal agencies to work with the agricultural community to solve local water problems is imperative. Through thoughtful planning, the Administration can play a truly important role in helping find the solutions that have proved so elusive to date.