

FY 2010 WaterSMART Water and Energy Efficiency Grants

California

Shafter-Wasco Irrigation District, South Interconnection between North Kern Water Storage District and Shafter-Wasco Irrigation District

Reclamation Funding: \$300,000

Total Project Cost: \$602,700

Shafter-Wasco Irrigation District, a Central Valley Project contractor, will construct an intertie with North Kern Water Storage District so that water supplies in the area can be exchanged and banked more effectively. The project, which includes construction of a turnout and pipeline, will allow Kern River water and previously-stored groundwater to be delivered to Shafter-Wasco Irrigation District's distribution system to complete exchanges and thereby increase water supply reliability in the area.

James Irrigation District, Water Banking Project Expansion

Reclamation Funding: \$300,000

Total Project Cost: \$648,000

The James Irrigation District will develop a 114-acre recharge area to capture high flows from the Kings River and make those supplies available to other water users. The project includes development of a water bank that will provide a location for other water users to bank water. In addition, the District will construct a control structure that allows the use of gravity to minimize the energy costs of delivering water to the recharge area. The project is expected to result in 1,482 acre-feet of water savings annually.

Delano-Earlimart Irrigation District, Turnipseed Groundwater Bank Expansion

Reclamation Funding: \$300,000

Total Project Cost: \$986,005

The Delano-Earlimart Irrigation District will expand the existing 80-acre Turnipseed Groundwater Bank to 160 acres to provide storage for a dry-year water supply and to facilitate the capture of San Joaquin flood waters. The expansion will facilitate the recharge of up to 11,520 acre-feet annually and is expected to result in 4,300 acre-feet of water savings annually. Water resulting from the project will be used to meet dry year demands in the District and will also be marketed to other water users in the area.

Bella Vista Water District, Water Treatment Plant Backwash Recycling Project

Reclamation Funding: \$300,000

Total Project Cost: \$683,863

The Bella Vista Water District in Shasta County, California, will install new water mains and pumps to capture and recycle wastewater generated by the District's Water Treatment Plant. The project is expected to make use of wastewater currently discharged into Dry Gulch, thereby reducing the District's diversion from the Sacramento River by 540 acre-feet annually. Water savings resulting from the project are expected to benefit designated critical habitat for Chinook Salmon in the Sacramento River.

Fresno Irrigation District, Briggs Canal Improvement Project

Reclamation Funding: \$300,000

Total Project Cost: \$715,000

The Fresno Irrigation District will construct conveyance improvements, including lining a portion of the Briggs canal and installing a new pipeline, to increase the capacity of recharge facilities. The project is expected to result in savings of 1,200 acre-feet of water annually, which will be used for aquifer recharge.

San Luis and Delta Mendota Water Authority, Flow Measurement Program

Reclamation Funding: \$226,600

Total Project Cost: \$453,200

The San Luis and Delta Mendota Water Authority will install flow meters to provide real-time flow monitoring in four penstocks at the O'Neill Pump and Generating Plant, the major transfer facility between the San Luis Reservoir, the Delta Mendota Canal, and the San Luis Canal. The project is expected to result in water savings of approximately 23,345 acre-feet annually through reduction of existing delivery losses. Conserved water will allow for deliveries to other Central Valley Project contractors or will be stored in the San Luis Reservoir.

North Kern Water Storage District, Canal Turnout to N. Kern Water Storage District

Reclamation Funding: \$300,000

Total Project Cost: \$1,971,494

The North Kern Water District will construct a second turnout from the Friant-Kern Canal, which will allow the District to divert and deliver wet-year Central Valley Project water to recharge groundwater basins. The project is expected to result in water savings of approximately 5,000 acre-feet annually through recharge and banking.

Eastern Municipal Water District, Perris Water Filtration Plant Reject Recovery Facility Project

Reclamation Funding: \$300,000

Total Project Cost: \$6,765,828

The Eastern Municipal Water District will construct a facility to treat water that is currently discharged to the sewer so that additional water can be provided to the Perris Water Filtration Plant for ultimate use as potable water. Once completed, the project is expected to save approximately 950 acre-feet of water each year, resulting in a decrease in imported raw water consumption by the District. The recovery facility is also projected to result in savings of 4,412 kilowatt-hours of electricity for every 1 million gallons of water diverted from the sewer. The project is expected to benefit endangered and threatened aquatic species by reducing the amount of water removed and imported to Southern California from the Sacramento River Delta and the Colorado River.

Tulare Irrigation District, Plum Basin Project, Phases 1&2

Reclamation Funding: \$300,000

Total Project Cost: \$2,173,000

The Tulare Irrigation District will construct two storage reservoirs with a combined storage capacity of 491 acre-feet to increase the groundwater banking and water marketing capabilities of the District. The project is expected to result in water savings of approximately 2,270 acre-feet annually by capturing and storing flood waters that would otherwise be unavailable. A portion of the conserved water will be delivered to the District for groundwater banking and a portion will be delivered to farmers during the growing season.

United Water Conservation District, Saticoy Moss Screen Pipeline Gate Automation Project

Reclamation Funding: \$78,268

Total Project Cost: \$156,540

The United Water Conservation District will make automation and modernization improvements to more effectively distribute surface water to two agricultural irrigation pipeline systems and the El Rio Spreading Grounds. The project will allow an additional 500 acre-feet of water to be contributed to the El Rio Spreading Grounds to enhance the sustainability of local groundwater supplies.

Henry Miller Reclamation District, Temple Santa Rita Canal System Modernization Project
Reclamation Funding: \$240,668 **Total Project Cost: \$490,095**

The Henry Miller Reclamation District will modernize its delivery system by retrofitting existing check structures with modern long-crested weirs and advanced gates, as well as installing an automatic flow control structure to reduce unnecessary canal spills. The project is expected to result in water savings of approximately 8,900 acre-feet annually. Conserved water will allow the District to divert less water and reduce groundwater pumping.

Los Molinos Mutual Water Company, Water Management System Modernization and Conservation

Reclamation Funding: \$100,000 **Total Project Cost: \$222,675**

The Los Molinos Mutual Water Company will install computer management systems, a custom Geographic Information System, and Supervisory Control and Data Acquisition data loggers to more effectively manage its delivery system. The project is expected to result in water savings of approximately 3,000 acre-feet annually. Conserved water will remain in Mill Creek to benefit Chinook Salmon and Steelhead migration.

Eastern Municipal Water District, High Efficiency Clothes Washer Install Program

Reclamation Funding: \$300,000 **Total Project Cost: \$1,236,250**

The Eastern Municipal Water District will install approximately 1,700 high-efficiency residential washing machines to replace older, less-efficient models. Water conserved as a result of the project is anticipated to improve the District's ability to meet the demand of its customers and to reduce demands on imported water supplies from the State Water Project and the Colorado River.

West Basin Municipal Water District, Restroom Retrofit Program

Reclamation Funding: \$296,250 **Total Project Cost: \$645,726**

The West Basin Municipal Water District will expand an existing program to retrofit toilets, urinals, and faucets in older buildings with more efficient equipment. The project is expected to result in savings of approximately 87 acre-feet of water annually, reducing the need for imported water from the Colorado River and Bay-Delta system.

Tulare Irrigation District, Tulare Irrigation District: Water Conservation and Reuse Pipeline Project

Reclamation Funding: \$700,000 **Total Project Cost: \$3,233,000**

The Tulare Irrigation District will construct a new pipeline system that will deliver treated wastewater to the District's growers and groundwater recharge facilities. The project is expected to result in water savings of approximately 11,600 acre-feet of water annually. It is anticipated that the project will reduce groundwater pumping and will raise groundwater levels, reducing local and regional water conflicts.

Colorado

Henrylyn Irrigation District, Enhanced Water Management and Conservation Through a Supervisory Control and Data Acquisition System

Reclamation Funding: \$94,794

Total Project Cost: \$220,188

The Henrylyn Irrigation District in northeastern Colorado will install a solar-powered Supervisory Control and Data Acquisition system that will allow the District to reduce over-deliveries, to meet demands more precisely, and to capture excess flows from the South Platte River during short-term precipitation events. The project is expected to result in the conservation of 4,130 acre-feet of water annually. Conserved water will be available for sale, lease, or exchange through existing and potential water markets in the over-appropriated South Platte River Basin.

Ute Mountain Ute Tribe Farm & Ranch Enterprises, Conserving Water Using SCADA Technology and Improved Irrigation Water Management

Reclamation Funding: \$300,000

Total Project Cost: \$606,750.53

The Ute Mountain Ute Tribe Farm & Ranch Enterprises will install automated irrigation management systems and soil moisture monitoring stations, which will be integrated into a Supervisory Control and Data Acquisition system to allow more precise decisions about how much water to apply and when to apply it. The project is expected to result in savings of approximately 1,327 acre-feet of water annually. Conserved water will remain in the reservoir for other water users.

Dolores Water Conservancy District, South Canal Lining Project

Reclamation Funding: \$118,351

Total Project Cost: \$236,703

The Dolores Water Conservancy District will install a geomembrane liner in 2,800 linear feet of earthen canal. The project is expected to result in savings of approximately 246 acre-feet of water annually that is currently lost to seepage in a drought-prone area of southwestern

Kansas

Kansas Bostwick Irrigation District No. 2, Open Lateral Conversion to Buried Pipeline

Reclamation Funding: \$300,000

Total Project Cost: \$765,590

The Kansas Bostwick Irrigation District, No. 2, will convert two large open laterals to buried pipeline, eliminating two large waste-ways and associated seepage and operational losses. In addition, the project will include the installation of metered turnouts. The project is expected to result in the conservation of 864 acre-feet of water annually.

Montana

Lower Yellowstone Irrigation Project Board of Control, Supervisory Control and Data Acquisition & Water Measurement Project

Reclamation Funding: \$298,413

Total Project Cost: \$596,826

The Lower Yellowstone Irrigation Project Board of Control will install or improve water control structures, including spillway structures, pumping stations, and monitoring stations, to provide Supervisory Control and Data Acquisition communications with 17 key sites along the applicant's 330-mile distribution system. A new diversion structure that can accommodate fish screens will also be installed as part of the Pallid Sturgeon Recovery Program. The project is expected to reduce the Lower Yellowstone Irrigation Project's diversions from the Yellowstone River by 40,000 acre-feet annually. Conserved water will remain in the Yellowstone River.

Town of Kevin, Water System Improvement Project

Reclamation Funding: \$300,000

Total Project Cost: \$1,805,500

The Town of Kevin, Montana will install new PVC water mains to address current leaks in its cast-iron system and will construct wind and solar power generation systems that will supply power to a new water chlorination structure and telemetry system. The project is expected to conserve 41 acre-feet of water annually, which will remain in a sandstone aquifer that supplies the Town's groundwater wells.

Nebraska

Bostwick Irrigation District in Nebraska, Open Lateral Conversion to Buried Pipe Project

Reclamation Funding: \$250,000

Total Project Cost: \$595,287

The Bostwick Irrigation District in Nebraska will convert 6.8 miles of open ditch canal lateral to buried pipe, a project expected to result in savings of approximately 1,360 acre-feet of water annually. Conserved water will be used to reduce water delivery shortages, will be stored for future use or marketing opportunities, or will otherwise assist in achieving compliance with the Republican River Compact.

Nevada

Big Bend Water District, Water Use Efficiency and Conservation Improvement

Reclamation Funding: \$1,000,000

Total Project Cost: \$2,210,000

The Big Bend Water District will address existing losses in the delivery of water to the Town of Laughlin through system improvements, including lining of pond sites at the District's treatment plant and service line upgrades. The project also includes pumping station electrical upgrades that are expected to increase energy efficiency. Existing service lines will be upgraded with copper service lines intended to prevent corrosion and reduce the likelihood of future leaks. The project is expected to result in 450 acre-feet of water savings annually. Water conserved through the project will be contributed to southern Nevada's available water supply.

Southern Nevada Water Authority, Landscape Rebate Program

Reclamation Funding: \$1,000,000

Total Project Cost: \$10,550,000

The Southern Nevada Water Authority will expand its landscape rebate program, which provides a financial incentive for residential property owners to replace turf with water-efficient landscaping. Under the program, a deed of covenant ensures that no turf will be installed in the project area following retrofit. This expansion of the program is projected to result in savings of approximately 1,390 acre-feet of water annually. Water conserved through this project will be used to help meet current and future demands in the face of sustained drought in the Colorado River Basin.

New Mexico

Arch Hurley Conservancy District, Application of Sodium Bentonite to Decrease Water Loss from Seepage

Reclamation Funding: \$120,000

Total Project Cost: \$258,180

The Arch Hurley Conservancy District will address seepage in 1,000 linear feet of open dirt canal through the application of bentonite, a sealant that creates an impenetrable liner. The elimination of seepage in this portion of the canal is expected to result in savings of approximately 11,500 acre-feet of water annually in an area where full water allocations are frequently impossible and water is allocated through rationing.

Oregon

Three Sisters Irrigation District, Collaborative Restoration Project

Reclamation Funding: \$1,000,000.00

Total Project Cost: \$6,629,724

The Three Sisters Irrigation District will convert 5,200 feet of existing unlined canal to buried pipeline, install four new automated fish screen weir gates, and put into place a Supervisory Control and Data Acquisition system. The project is expected to result in 1,500 acre-feet of water savings annually in the Upper Deschutes Basin in Oregon. Approximately 833 acre-feet in water saved as a result of the project will be marketed to the Deschutes River Conservancy for a protected instream right, complementing habitat restoration efforts in Whychus Creek for threatened species, including Bull Trout, Red Band Trout, Summer Steelhead, and Chinook. Once the project is completed, water users will receive pressurized water, reducing pumping needs and associated energy costs.

Tumalo Irrigation District, Piping of the Tumalo Feed Canal

Reclamation Funding: \$1,000,000.00

Total Project Cost: \$3,200,00

The Tumalo Irrigation District will convert 6,528 feet of the open Tumalo Feed Canal to pipeline. The state of Oregon will receive rights to the 1,242 acre-feet of water expected to be conserved through the project. Conserved water will be applied to permanent in-stream use, which will provide critical base habitat for native red-band trout, bull trout, mountain white fish, and reintroduced anadromous Mid-Columbia steelhead.

Texas

Lower Colorado River Authority, Gulf Coast Irrigation Division Gate Rehabilitation and Control Project

Reclamation Funding: \$257,139

Total Project Cost: \$535,401

The Lower Colorado River Authority in Texas will retrofit and automate eleven check gate structures in its Gulf Coast Irrigation Division. Each check gate structure will consist of two aluminum slide gates powered by solar panels. The project also includes installation of a radio-based data communication system and a Supervisory Control and Data Acquisition system. The project is expected to result in 2,560 acre-feet of water savings annually. Conserved water will be marketed to existing municipal water customers through an agricultural-to-urban water transfer program established under 1999 Texas law. The project will also reduce energy consumption by approximately 132,000 kilowatt hours per year, primarily through reduction in pumping.

Laguna Madre Water District, Reuse Water System Improvements

Reclamation Funding: \$300,000

Total Project Cost: \$2,014,265

The Laguna Madre Water District will install wastewater effluent treatment improvements, including pump stations, filter equipment, and a storage tank, to provide water for landscape irrigation. The project also includes the installation of an energy recovery turbine to create electricity from wastewater flows. The project is expected to allow the District to conserve 366 acre-feet annually by reducing its diversion from the Rio Grande. Conserved water will be allocated to by the State Water Master to irrigation districts within the Rio Grande Valley.

The City of Harlingen Water Works System, Effluent Reuse Water System

Reclamation Funding: \$142,126

Total Project Cost: \$284,252

The City of Harlingen will design and construct a system to treat effluent, including a pipeline to deliver water to a series of ponds and wetland sites, for use at a municipal nature park. The project is intended to reduce effluent discharges to the Arroyo Colorado River, which supports a number of endangered and threatened species. Water made available as a result of the project will be banked and marketed to existing municipal users in the region.

Hidalgo County Irrigation District #6, Canal Lining, Solar Monitoring Station, and Water Marketing

Reclamation Funding: \$300,000

Total Project Cost: \$653,525

The Hidalgo County Irrigation District #6 will construct improvements to its water delivery system, including lining of 3.3 miles of open canal, installation of a solar powered monitoring station, and construction of an outlet structure. The project is expected to result in water savings of approximately 905 acre-feet of water annually, including 150 acre-feet that will be provided to the Lower Rio Grande Valley National Wildlife Refuge. Additional water conserved as a result of the project will be made available to other water users.

Brownsville Irrigation District, Southeast District Conveyance System Improvement Project

Reclamation Funding: \$300,000

Total Project Cost: \$687,026

The Brownsville Irrigation District will install 11,500 linear feet of PVC pipe, eight flow meters, and an additional pump to improve the District's responsiveness to shifting water demands in Cameron County, Texas. The project is expected to result in savings of approximately 164 acre-feet of water annually. Conserved water will be left in-stream in the Rio Grande River.

Utah

Weber Basin Water Conservancy District, Layton Canal Lining and Water Marketing Project

Reclamation Funding: \$687,055

Total Project Cost: \$2,369,155

The Weber Basin Water Conservancy District will line 10,300 feet of the Layton Canal and install two flow measurement weirs and four new magnetic meters to address water demands in an area with significant projected population growth. This project was previously identified as a high priority for the District through a System Optimization Review conducted with Reclamation funding. The project is expected to result in 3,500 acre-feet of water savings each year and measurable energy savings due to reduce pumping requirements. Conserved water will be stored in an existing reservoir and marketed to new or existing customers through water lease and exchange agreements.

Uintah Water Conservancy District, Water Management and Supervisory Control and Data Acquisition System Upgrade

Reclamation Funding: \$300,000

Total Project Cost: \$601,305

The Uintah Water Conservancy District will upgrade its existing Supervisory Control and Data Acquisition system, including installing new data collection equipment, retrofitting meters with flow measurement devices, and undertaking other system automation improvements to allow the system to operate more efficiently. It is expected that the project will result in savings of approximately 1,830 acre-feet of water annually, which will be banked in the Steinaker and Red Fleet Reservoirs and marketed to other water users.

Kays Creek Irrigation Company, Water Conservation and Water Marketing Project

Reclamation Funding: \$249,480

Total Project Cost: \$498,960

The Kays Creek Irrigation Company in Layton, Utah will modify existing piping to allow pressurization, convert 2600 feet of open ditch to pipe, and install additional piping to facilitate pressurized irrigation. The project is expected to conserve 444 acre-feet of water annually, which will be marketed to other districts or municipalities.

Weber Basin Water Conservancy District, Uintah Bench Retail Secondary Water Meter Project

Reclamation Funding: \$290,144.77

Total Project Cost: \$784,175.05

The Weber Basin Water Conservancy District will install 1,000 residential water service meters in an area where actual water use cannot currently be measured. Data collected from new meters will be provided to residents and will be used to target water conservation efforts to specific areas. As a result of the project, which was identified as a high priority for the District through a System Optimization Review conducted with Reclamation funding, 9,765 acre-feet of water will be better managed.

Washington

Agnew Irrigation District, Dungeness Basin Water Conservation

Reclamation Funding: \$299,857

Total Project Cost: \$661,682

The Agnew Irrigation District in Clallam County, Washington will convert four miles of open irrigation ditches to pipe, which is expected to result in savings of approximately 658 acre-feet of water annually. Conserved water will remain in the Dungeness River during the period most critical to fish benefiting the Puget Sound Chinook, Hood Canal Summer Chum, Bull Trout, and Puget Sound Steelhead. The District will also work with the Washington Water Trust to facilitate the launch of the Dungeness Water Exchange, which is intended to restore in-stream flows during critical low periods.

Naches-Selah Irrigation District, Installation of Geomembrane Lining

Reclamation Funding: \$252,022.75

Total Project Cost: \$504,045.50

The Naches-Selah Irrigation District in Yakima County, Washington will install 5,400 linear feet of geomembrane lining over the earthen section of the District's main canal. The project is expected to result in savings of approximately 273 acre-feet of water each year. Once the project has been completed, the District expects to reduce its diversions from the Naches River.