

## FY 2012 WaterSMART Water and Energy Efficiency Grants

### California

#### **City of Corona, City of Corona Advanced Metering Infrastructure Project**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$1,359,610**

The City of Corona, California, will install 5,560 advanced water meters, resulting in real-time meter reading capabilities at residential, commercial, and landscape sites. Once the project has been completed, water users will be able to monitor usage through a secure customer website so that adjustments can be made during peak periods and leaks and other water losses can be addressed as soon as possible. The project is expected to result in water savings of 592 acre-feet annually, which will allow the City to reduce its water imports. The City estimates that approximately 1,776 megawatt hours of energy per year will be saved by the project as a result of reduced pumping needs.

#### **City of Torrance, Stormwater Basin Recharge and Enhancement**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$1,073,860**

The City of Torrance, California, will construct wetlands and infiltration areas, as well as installing new pumps and other water management improvements, at existing storm water basins. The project is intended to enhance those existing sites so that storm water can be filtered and used to recharge groundwater rather than flowing untreated to the ocean. The project is expected to result in water savings of 325 acre-feet annually through groundwater recharge. Wetlands constructed as part of the project will also serve as habitat for a number of endangered bird species.

#### **Delhi County Water District, Water Conservation, Energy Efficiency & BioGas Production Project**

**Reclamation Funding: \$500,000 (\$1,485,000 over 3 years) Total Project Cost: \$3,332,693**

The Delhi County Water District, near Turlock, California, will install a biogas collection system at its existing wastewater treatment facility. The improvements will allow the recovery of between 20,000 and 40,000 cubic feet of methane-rich biogas each day, or roughly 300 gasoline equivalent gallons of biogas per day for use as a compressed natural gas transportation fuel or for use in power generation. In addition, the project includes construction of a pipeline and pumping system to deliver treated water for use at a nearby sod farm. The project is expected to result in water savings of 701 acre-feet annually by replacing water currently supplied through other sources.

#### **Inland Empire Utilities Agency, Regional Residential Landscape Retrofit Program**

**Reclamation Funding: \$200,000**

**Total Project Cost: \$566,497**

Inland Empire Utilities Agency in Chino, California, will install high-efficiency, weather-based irrigation controllers and high efficiency sprinkler nozzles for 400 residential water users. Once completed, the improvements are expected to result in a reduction of 520 acre-feet of imported water annually.

**Kaweah Delta Water Conservation District, Packwood Creek Water Conservation Project  
Reclamation Funding: \$400,000 (\$800,000 over 2 years) Total Project Cost: \$1,610,866**

The Kaweah Delta Water Conservation District, in Tulare County, California, will install four new automated check structures and will automate an existing check structure at Packwood Creek. The project will allow for increased quantities of otherwise unstorable storm and flood waters to be delivered to existing basins for ground water recharge. The project is expected to result in the better management of approximately 29,360 acre-feet of water annually. The project also includes restoration of Valley Oak riparian forest habitat near the site, which is expected to benefit a number of endangered species.

**Municipal Water District of Orange County, Water Efficient Site Certification and Smart Irrigation Rebate Program**

**Reclamation Funding: \$299,850**

**Total Project Cost: \$821,809**

The Municipal Water District of Orange County will provide rebates for installation of residential water efficiency improvements in over 700 households, including advanced irrigation timers and rotating nozzles. The project is expected to result in 138 acre-feet of water savings each year once completed, which will remain in regional storage reservoirs and groundwater basins for other uses.

**Natomas Central Mutual Water Company, Dodge Crossing Automation Project**

**Reclamation Funding: \$240,100**

**Total Project Cost: \$480,300**

The Natomas Central Mutual Water Company, near Sacramento, California will automate the Dodge Crossing control structure, including a full Supervisory Control and Data Acquisitions station with flow meters at the nearby Chappel West Pump Station to improve operations. The project also includes installation of a hydraulically balanced control gate to minimize fluctuating water levels. The project is expected to result in water savings of 430 acre-feet of water annually, which will remain in the Sacramento River. The project is also projected to reduce energy consumption by approximately 15,300 kilowatt hours per year by avoided pumping currently required to capture operational spills.

**Pixley Irrigation District, Gravity Conveyance and Conservation Project**

**Reclamation Funding: \$750,000 (\$1,500,000 over 3 years) Total Project Cost: \$4,362,375**

The Pixley Irrigation District in Tulare County, California, will work with the Lower Tule Irrigation District to increase the capacity of the existing Casa Blanca Canal and also construct a new 7.5-mile canal. Together, those improvements will facilitate the increased delivery of surplus water and flood flows and will also address current seepage losses. Once completed, the project is expected to result in water savings of approximately 9,850 acre-feet annually, which will allow for avoided groundwater use.

**Sacramento Suburban Water District, Sacramento Suburban Water District North**

**Antelope In-Conduit Hydroelectric and Pump Back Conjunctive Use Project**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$1,286,610**

The Sacramento Suburban Water District will install a hydroelectric turbine in an existing transmission pipeline, which will allow the District to generate electricity as deliveries are received from Folsom Reservoir. The estimated annual capacity of the renewable energy system is 200 kilowatts. The project also includes installation of a new booster pump at the site, which will allow the District to reverse the flow of water when necessary to provide banked groundwater to other agencies connected to the pipeline. Together, the improvements are expected to increase water management flexibility so that groundwater can be used more effectively during dry periods.

**Semitropic-Rosamond Water Bank Authority, Regional Antelope Valley Water Bank  
Reclamation Funding: \$300,000 Total Project Cost: \$1,395,631**

The Semitropic-Rosamond Water Bank Authority will construct an 80-acre groundwater recharge basin, a recovery well, and four turnouts to the recharge facility to provide additional groundwater storage capacity in the Antelope Valley region of southern California. Through the project, which builds on initial phases completed with Reclamation funding, water provided by project partners will be delivered to the recharge basin for storage and delivered to each banking partner via recovery when requested, thereby increasing flexibility in the management of water. The project is expected to result in groundwater banking of approximately 6,300 acre-feet each year on average, and is also expected to result in water savings of 312 acre-feet each year through conversion of existing land use for the recharge basins.

**Idaho**

**Consolidated Irrigation Company, Improve Irrigation Efficiencies and Provide Sustainability**

**Reclamation Funding: \$750,000 (\$1,468,181 over 3 years) Total Project Cost: \$2,959,363**

Consolidated Irrigation Company in Preston, Idaho will convert 6 miles of unlined earthen canal with 3.5 miles of high-pressure pipe to address seepage and evaporation losses. The project, which also includes the installation of advanced measuring devices at each service connection, is expected to result in water savings of 9,484 acre-feet per year once completed. Water conserved as a result of the project will be marketed to other districts and municipalities in the local area, including the growing City of Preston, or will otherwise be used to meet the needs of existing water users during periods of shortage. The project also includes the installation of a 500-kilowatt hydropower facility to generate renewable energy as water in the pipeline drops into Glendale Reservoir.

**Boise Project Board of Control, Mora Canal Automation Enhancement Project**

**Reclamation Funding: \$39,813 Total Project Cost: \$79,628**

The Boise Project Board of Control in Idaho will automate the Mora Canal headgate facilities. New actuators will be controlled by an existing data logger, enabling better management of the flows into the Mora and New York canals and thereby minimizing spills of tailwater to downstream irrigation facilities or the Snake River. The project is expected to result in water savings of 4,500 acre-feet annually once completed, which will remain in the Anderson and Arrowrock reservoirs to be made available for other uses.

**Montana**

**Fort Shaw Irrigation District, Improving Fort Shaw Irrigation District Water Efficiency to Improve Sun River Flow**

**Reclamation Funding: \$300,000 Total Project Cost: \$669,640**

The Fort Shaw Irrigation District in Montana will upgrade its water delivery system by lining 2,000 feet of unlined canal and installing a separate section of 2,310 feet of pipe. The project is expected to result in water savings of 5,000 acre-feet annually through avoided seepage and other transportation losses. Conserved water will be left in the Sun River to help maintain and improve minimum stream flows to sustain the ecology of the river system.

## **Greenfields Irrigation District, Improving Greenfields Irrigation District Water Management to Improve Sun River Flow**

**Reclamation Funding: \$268,565**

**Total Project Cost: \$526,395**

The Greenfields Irrigation District, near Great Falls, Montana, will install a new variable speed pump and a 3,500 foot pipeline to pump wastewater water back into a District canal and thereby reducing wastewater flows. The project is part of the continuing efforts of the District, working with the Sun River Watershed Group and others, to address problematic wastewater flows into Muddy Creek. The construction of this project is expected to improve the water quality in Muddy Creek and allow for the reuse of approximately 3,000 acre-feet of water annually. Water conserved by this project will be left in the Sun River to enhance instream flows.

## **Nebraska**

### **Bostwick Irrigation District in Nebraska, Water Conservation Piping Project**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$662,677**

The Bostwick Irrigation District in Nebraska will convert 7 miles of open ditch to buried pipe, an improvement expected to result in water savings of 1,573 acre-feet of water annually that is currently being lost to seepage and evaporation. The project also includes installation of a variable frequency drive to increase pumping efficiency. Water conserved as a result of this project will be stored in the Harlan County Reservoir, on the Republican River to maintain high lake levels and future water supply and for use during drought years.

### **Frenchman-Cambridge Irrigation District, Cambridge Canal Automation Project**

**Reclamation Funding: \$299,715**

**Total Project Cost: \$632,016**

The Frenchman-Cambridge Irrigation District in Cambridge, Nebraska, will automate and install a Supervisory Control and Data Acquisition system on the headgate from the Harry Strunk Reservoir into the Cambridge canal, and will also automate four other check structures. Automating the system will allow the District to monitor the upstream pool elevation at the diversion dam and adjust the gates to capture flows as effectively as possible. The project is expected to result in water savings of approximately 3,074 acre-feet of water annually, which will remain in the Harry Strunk Reservoir to assist in maintaining the Republican River Compact.

### **Upper Republican Natural Resources District, Republican River Basin Ground and Surface Water Protection Program**

**Reclamation Funding: \$100,000**

**Total Project Cost: \$200,000**

The Upper Republican Natural Resources District will provide rebates to farmers for soil-moisture probes and related soil-moisture technology to reduce water use in a 1.7 million-acre region of southwest Nebraska. The project is expected to result in water savings of 2,160 acre-feet annually, which will remain in the High Plains Aquifer. The District calculates that 962,000 kilowatt hours of energy will be saved through avoided pumping costs once this project has been implemented.

## **Nevada**

### **Southern Nevada Water Authority, Water Smart Landscapes Rebate Program II**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$3,300,000**

The Southern Nevada Water Authority will expand its existing rebate landscape rebate program, which provides a financial incentive for residential property owners to replace turf with water efficient landscaping. The project is expected to result in the replacement of approximately 2.6 million square feet of turf, with an expected water savings of 448 acre-feet per year. Water conserved through this project will be left in the Colorado River for instream uses in the historically threatened Colorado River Basin and will contribute to existing water banks in California, Arizona, and Southern Nevada.

**Truckee-Carson Irrigation District, Automation of Structures on the V Line Canal**  
**Reclamation Funding: \$103,506** **Total Project Cost: \$208,042**

The Truckee- Carson Irrigation District will automate six check structures within the V-Line Canal to enable level and flow control for more efficient water conveyance and increased public safety. The project is expected to result in water savings of 3,445 acre feet annually, which will allow for reduced diversions from the Truckee River.

**New Mexico**

**Carlsbad Irrigation District, Improved Water Measurement and Accounting for the Carlsbad Irrigation District**

**Reclamation Funding: \$153,779** **Total Project Cost: \$446,338**

The Carlsbad Irrigation District will install advanced water measurement devices and will implement a Supervisory Control and Data Acquisition system so that real-time, remote monitoring can be used to reduce spills and otherwise ensure that the District's water deliveries match users needs as accurately as possible. The project is expected to result in water savings of 4,000 acre-feet annually.

**Oregon**

**Central Oregon Irrigation District, Malott Tail Water Recovery Project**

**Reclamation Funding: \$18,960** **Total Project Cost: \$257,178**

The Central Oregon Irrigation District will construct a retention system, including installation of an energy efficient pump, to recapture and reuse irrigation, storm, and run-off water to decrease the amount of water deliveries necessary for irrigation. The project is expected to result in water savings of 398 acre-feet annually. In addition to improving efficiency, the project is expected to help to improve water quality in the Lower Crooked River, potentially benefitting reintroduced steelhead in that portion of the river.

**North Unit Irrigation District, Water and Energy Conservation Initiative Phase II**

**Reclamation Funding: \$300,000 (\$600,000 over 2 years)** **Total Project Cost: \$1,347,935**

The North Unit Irrigation District in Madras, Oregon, will work with the Central Oregon Irrigation District to pipe one mile of the I lateral to address seepage losses. The project is expected to result in 1,300 acre-feet of water savings annually. Through a partnership with the Deschutes River Conservancy, conserved water will be marketed to restore instream flows in a critical reach of the Crooked River. The project will also lead to increased flows through existing turbines, which will enable the Central Oregon Irrigation District to generate an additional 318,638 kilowatt-hours of energy each year. The project is also expected to allow approximately 191,178 kilowatt-hours of energy to be saved annually through pumping reductions.

**North Unit Irrigation District, Lateral 58-11 Piping Project**

**Reclamation Funding: \$200,000 (\$942,982 over 3 years)** **Total Project Cost: \$1,923,447**

The North Unit Irrigation District will also pipe two miles of Lateral 58-11, an earthen canal that currently loses a significant amount of water to seepage. The project is expected to result in water savings of approximately 673 acre-feet annually. Conserved water will be used to restore instream flows in the Crooked River. The District estimates that approximately 158,155 kilowatt-hours of energy will be saved annually through pumping reductions.

**Ochoco Irrigation District, Ochoco Main Canal Multi-purpose Screen and Automation  
Reclamation Funding: \$146,909 Total Project Cost: \$299,814**

The Ochoco Irrigation District in Prineville, Oregon, will install a new flume to allow more accurate water measurement, a new gate with automated control, and a multipurpose screen at the District's main canal diversion near the Ochoco Dam outlet. The project is expected to result in water savings of 2,870 acre-feet annually by reducing seepage and spills. Conserved water will remain in storage for other uses. The District also estimates that the project will allow approximately 656,640 kilowatt-hours of energy to be saved annually through reduced pumping of water from the Crooked River.

**Owyhee Irrigation District, Lower Owyhee River Rehabilitation Project Phase II  
Reclamation Funding: \$299,000 Total Project Cost: \$1,161,004**

The Owyhee Irrigation District in Nyssa, Oregon, will convert 4.5 miles of existing open ditch conveyance to closed pipeline and will also install 20 advanced flow meters and an automated side sweep cleaner to improve the operational efficiency of the delivery system. Once completed, the project is expected to result in water savings of 188 acre-feet annually. Water conserved through the project will remain in Lake Owyhee to be available for other downstream users. In addition, installation of this pipeline is expected to facilitate future on-farm improvements by landowners who may take advantage of the pressurized system to convert from furrow irrigation to sprinkler and drip irrigation.

**Three Sisters Irrigation District, Watson-McKenzie Main Canal Pipeline Project  
Reclamation Funding: \$750,000 (\$1,500,000 over 3 years) Total Project Cost: \$5,915,841**

The Three Sisters Irrigation District in Oregon will pipe 14,000 feet of the Watson-McKenzie Main Canal and will install meters at farm turnouts. The project is expected to result in water savings of approximately 1,850 acre-feet annually. Conserved water will be dedicated for instream flows through the Deschutes River Conservancy. Additional water in Whychus Creek is expected to improve riparian habitat and benefit Bullhead Trout and Steelhead. The pressurized pipeline resulting from this project will also allow farmers who receive deliveries from the District to implement further improvements. As part of an existing partnership, the Natural Resources Conservation Service will provide assistance, as available, for those farmers to expedite coordinated water conservation improvements in the area.

## **Texas**

**City of Cedar Hill, Cedar Hill Smart Meters in Action for Resources in Texas  
Reclamation Funding: \$300,000 Total Project Cost: \$750,000**

The City of Cedar Hill, Texas will install 3,000 advanced residential, commercial, and industrial water meters. The city will also implement an aggressive leak detection program by establishing a remote reading and communications network and online, real-time water consumption data. Completion of the project is expected to result in water savings of 336 acre-feet annually.

## **Utah**

**Huntsville Irrigation District, Canal Piping Water Conservation Project  
Reclamation Funding: \$750,000 (\$1,500,000 over 3 years) Total Project Cost: \$3,744,054**

The Huntsville Irrigation Company, near Ogden, Utah, will convert 11 miles of main ditches and canals to pipe to address significant seepage losses. The project will also include construction of new pipe intake and overflow structures and installation of a solar-powered Supervisory Control and Data Acquisitions system. The project is expected to result in water savings of about 1,409 acre-feet annually. Conserved water will be used to avoid interruptions in water supply during the irrigation season and will otherwise remain in the South Fork Ogden River, stretching water supplies in the Weber Basin. Pressurization of the system will also allow farmers to convert from flood irrigation to more efficient sprinklers in the future.

## **Moon Lake Water Users Association, Lake Fork Connector Pipeline Water Conservation Project**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$637,654**

The Moon Lake Water Users Association will construct a 6,100 foot pipeline to avoid current seepage losses in the conveyance of water from Moon Lake to water users. Once the new pipeline has been completed, more efficient deliveries from Sand Wash Reservoir will be used to meet water users' demands. The project is expected to result in 240 acre-feet of water savings annual, which will be stored for use during times of drought.

## **Moroni Irrigation Company, Moroni Irrigation Company Improvements**

**Reclamation Funding: \$750,000 (\$1,500,000 over 3 years) Total Project Cost: \$5,500,000**

The Moroni Irrigation Company in Sanpete County, Utah, will convert approximately 12.5 miles of open channel irrigation canals to pipe to reduce current seepage and evaporation losses. The project will also include improvements to an existing diversion structure and the installation of new meters. The project is expected to result in water savings of approximately 3,000 acre-feet annually in an area that frequently experiences water shortages. Conserved water will remain in the San Pitch River for other uses. Once the project has been completed, the pressurized system will allow farmers to convert from flood irrigation to more efficient sprinkler systems.

## **Provo River Water Users Association, Weber Provo Canal Efficiency Modification Project**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$635,734**

The Provo River Water Users Association in Pleasant Grove, Utah will complete improvements to the Weber Provo Canal, including installing a low-flow gate to the existing diversion structure, installing a new weir to improve low-flow measurement capabilities, and improving an existing screen. Together, the improvements are intended to improve water management by facilitating more effective adjustments to diversions and allowing diversion of surplus water, when available, for storage and use during drought periods. The project is expected to result in water savings of 3,000 acre-feet annually.

## **Weber Basin Water Conservancy District, Willard Canal Lining**

**Reclamation Funding: \$400,000 (\$998,496 over 3 years) Total Project Cost: \$2,080,200**

The Weber Basin Water Conservancy District, in Layton, Utah, will line approximately 2,600 feet the Willard Canal that currently loses a significant amount of water to seepage. The District will also install a flow meter at the terminus of the lining and expand the Supervisory Control and Data Acquisitions system. The project is expected to result in water savings of 4,100 acre-feet annually in an area with significant projected population growth. Conserved water will be marketed to new or existing customers through water lease and exchange agreements.

## **Washington**

### **Roza Irrigation District, Enclosed Conduit Project Pump 5, 6, 12**

**Reclamation Funding: \$300,000**

**Total Project Cost: \$1,109,008**

The Roza Irrigation District in Sunnyside, Washington, will pipe 7.4 miles of laterals and will install advanced flow meters to improve water measurement. The project is expected to conserve 767 acre-feet of water annually that is currently lost to direct evaporation, seepage, and operational waste. Conserved water will remain in the Yakima River or be stored in reservoirs to supplement existing water supplies for future needs.

## **Wyoming**

### **Bridger Valley Water Conservancy District, SCADA System Implementation Project**

**Reclamation Funding: \$42,000**

**Total Project Cost: \$84,960**

The Bridger Valley Water Conservancy District in Mountain View, Wyoming will automate outlet gates at two locations and will implement a Supervisory Control and Data Acquisitions system to improve the District's ability to manage its water delivery system. The project is expected to result in water savings of 3,888 acre-feet per year by avoiding current spills and imprecise deliveries. Conserved water will remain in reservoirs for use during extended drought periods.