

## Drought Resiliency Project Grants

### California

#### **City of Torrance, North Torrance Well Field Project**

**Reclamation Funding: \$297,000**

**Total Project Cost: \$1,100,000**

The City of Torrance, located in Los Angeles County, will improve its resiliency to drought by drilling Well No. 10 in the North Torrance Well Field. The ongoing occurrence of extreme drought has affected the City's allocation of imported water from the Metropolitan Water District. The addition of this well will increase the local water supply available by 3,849 acre feet per year, an amount equal to 23.8% of its total supply. This project will allow the City to use more of its adjudicated supply of groundwater, and reduce its dependence on imported supplies in dry years, which is identified as a priority in the City's drought contingency plan. In wet years, the City can "bank" a portion of its groundwater supplies to support conjunctive use during drought.

#### **Inland Empire Utilities Agency, RP-3 Basin Improvement Project**

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

**Total Project Cost: \$3,964,683**

The Inland Empire Utilities Agency in Chino, California will construct improvements at a storm water management facility to capture, recharge and convey 3,311 acre-feet per year of storm water, dry-weather runoff, and recycled water that can be made available for use in drought years. Improvements include the construction of a new basin to increase the storage and area of recharge. The project, identified as a drought response planning action in the Agency's Recharge Master Plan Update, will increase available water supplies in the Chino Basin and will increase flexibility to divert flows to a recharge site.

#### **Coachella Valley Water District, Bermuda Dunes Groundwater Substitution Project**

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

**Total Project Cost: \$4,082,430**

The Coachella Valley Water District in Southern California will construct a pipeline and pump station to increase flexibility to deliver water from surface water supplies, allowing the District to deliver 1,040 acre-feet per year of non-potable water in place of potable groundwater for irrigation. This project will help reduce groundwater overdraft, a severe drought related concern in the Coachella Valley, by delivering an alternative water source for a large irrigation use sector. The project is part of the source substitution program identified in the District's Coachella Valley Water Management Plan to reduce groundwater overdraft.

#### **Semitropic Water Storage District, Groundwater Well Extraction Improvements for Return of Stored Water – Phase II**

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

**Total Project Cost: \$716,499**

Semitropic Water Storage District in the southern San Joaquin Valley, will equip 7 existing recovery wells with pumps, motors, discharge piping, and electrical equipment for completion of an aquifer storage and recovery project estimated to provide an additional 2,240 acre-feet per year of water over a 30-year lifecycle. The project will provide drought resiliency benefits to district water users and third-party districts and landowners that participate in the Semitropic Storage Banking Program by enabling more effective extraction of banked water supplies. The District has been in a drought for the past five years.

**South Tahoe Public Utility District, Advanced Metering Infrastructure (AMI) System – Phase III**  
**Reclamation Funding: \$297,606** **Total Project Cost: \$5,712,900**

The South Tahoe Public Utility District in Northern California will install an Advanced Metering Infrastructure (AMI) System to provide real-time water demand and use information for 14,000 drinking water connections. The District will add 1,863 additional meters as part of this project, all of which will provide real time information to customers and the District through the AMI. Collectively, the project will improve management of over 13% of the District's total supply. Customers will be able to access their water use data through a web portal, helping them meet water efficiency goals and detect potential leaks. The District will use hourly water meter usage data for drought contingency planning efforts, to react quickly to water leaks, and to implement water use restrictions.

**Town of Apple Valley, Apple Valley Desert Water Reuse Project**

**Reclamation Funding: \$300,000** **Total Project Cost: \$1,372,500**

The Town of Apple Valley, located in San Bernardino County in Southern California, will convert the source of irrigation water at five locations from potable water to reclaimed water by constructing a pipeline that will transport reclaimed water from the Apple Valley Water Reclamation Plant, and retrofitting the existing irrigation system at each site to utilize reclaimed water. Irrigating with reclaimed water will reduce use of potable groundwater, reducing the demand on the stressed Mojave River Groundwater Basin, and adding 961 acre-feet of water per year during periods of drought.

## **Idaho**

**Shoshone-Bannock Tribes of the Fort Hall Reservation, Computational Modeling to Enhance the Drought Resiliency of Water Resources**

**Reclamation Funding: \$50,000** **Total Project Cost: \$100,000**

The Shoshone-Bannock Tribes of the Fort Hall Reservation, located in southeastern Idaho, will develop a regional RiverWare model to integrate tribal and non-tribal water rights information with regional water supply and demand information to support drought planning efforts. The Tribes will develop baseline hydrologic information and modeling capability, then perform predictive modeling of potential drought scenarios. The Tribes will use the tools and information developed through this project to simulate potential operational and infrastructure improvements to mitigate drought impacts, and to develop a set of best management practices for enhancing drought resiliency. The development of baseline hydrologic information and modeling tools was identified as the primary drought mitigation strategy in the Tribe's 2013 drought contingency plan.

**Consolidated Irrigation Company, Improving Drought Resilience by Building Water Transferring Infrastructure between Irrigation Companies**

**Reclamation Funding: \$54,100** **Total Project Cost: \$108,214**

The Consolidated Irrigation Company (CIC) in Preston, Idaho will build pipelines that will connect CIC with neighboring Cub River Irrigation Company (CRIC) in the Cub River Watershed. This project will build long-term resilience to drought by improving water management, and will facilitate the voluntary sale, transfer, or exchange of water. Long-term resilience will be achieved by allowing water to be transferred from CIC reservoir storage to service areas of CRIC that have no storage capacity, saving pumping costs. This project includes stream flow metering devices that will record real-time water levels and precise diversion amounts. Better managing 30,000 acre-feet annually for CIC and 18,260 acre-feet annually for CRIC will accomplish multiple goals, such as allowing for transferring of water between irrigation companies, more efficiently managing pressure and delivery to shareholders, and precise monitoring of the stream level and water available.

## Nebraska

### **Upper Republican Natural Resources District, Drought Mitigation and Groundwater Management Project**

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

**Total Project Cost: \$700,000**

The Upper Republican Natural Resources District in Imperial, Nebraska will develop a groundwater management system and modeling tools using water measurement and monitoring devices. The District, which regulates and limits groundwater usage in a three-county region of southwest Nebraska, will use the data to plan for adjustments in its regulations. Additionally, the modeling tools will aid in the analysis of groundwater responses and availability under pumping scenarios resulting from adjusted regulations. Near real-time data will be available on the District website for water users to assess whether they are over-irrigating. This project will help stabilize groundwater levels, making the project area more drought resilient. The most recent drought that began in 2012 was the driest ever recorded in Nebraska history. This project will assist the District to assess the management actions needed to mitigate impacts of groundwater pumping during drought, thereby preventing potential water conflicts.

## Nevada

### **Truckee Meadows Water Authority, Municipal Well Aquifer Storage and Recovery Retrofit Project for Drought Resiliency**

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

**Total Project Cost: \$790,240**

The Truckee Meadows Water Authority located in Reno, Nevada will retrofit three existing groundwater production wells to function as aquifer storage and recovery (ASR) wells so that the Authority can improve the conjunctive use of surface water and groundwater supplies in the basin, in order to be more drought resilient. Modifications to these existing wells will include high-tech metering and control valves to monitor and track recharge water deliveries and water level response via a SCADA (Supervisory Control and Data Acquisition) system. These modifications will allow the wells to be recharged remotely, thereby greatly reducing on-site management of this satellite system. This proposed project is expected to: (1) immediately benefit the groundwater aquifer by replenishing water removed during drought years; (2) decrease nitrate concentrations observed at each production well; (3) provide more drought-storage and operational flexibility in the system as a whole; (4) support long-term planning efforts and drought-mitigation strategies of the Authority; and (5) move the Authority closer to its goal of having a more automated ASR program.

## New Mexico

### **Middle Rio Grande Conservancy District, Socorro Main Canal South Distribution Hub**

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

**Total Project Cost: \$600,000**

The Middle Rio Grande Conservancy District in Albuquerque, New Mexico will install a dedicated pumping facility consisting of a concrete inlet structure, below grade concrete pump houses, and a discharge pipe to better manage water within their delivery system and increase flows in the Rio Grande River. The MRGCD currently delivers water to over 10,000 irrigators through a gravity fed system. In the last four years, MRGCD has experienced severe to exceptional drought conditions, leading to significant water shortages in the summer months. Installation of the pumping facility will increase the predictability of water supplies by moving supplies through gravity flow to a pump well, where it will be lifted, pressurized and directed to three or more discharge points that will distribute the water to currently underserved uses. This project will also allow water to be discharged back to the channel of the Rio Grande to augment flows for endangered species. This project will benefit the ESA listed Rio Grande silvery minnow by increasing streamflows and improving water quality through decreased temperatures and increased dissolved oxygen levels.

## Oklahoma

### **City of Altus, Altus City Reservoir East Basin Improvements for Drought Preparedness**

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

**Total Project Cost: \$646,529**

The City of Altus, located in southwest Oklahoma, will improve drought resiliency through improvements to the Altus City Reservoir to enable access to a backup water supply. The City, which recently experienced a five-year drought, will install sluice gates, weirs, and will modernize an 80-year old pump station in order to redirect available raw water from Tom Steed Reservoir, a Bureau of Reclamation project and the City's principal source of supply, to the Altus City Reservoir, a largely unused municipal supply. This will alleviate pressure on regional surface sources including Tom Steed Reservoir and provide at least 45 days of backup water supply, or 353 acre-feet per year, for Altus users.

## Texas

### **Town of Little Elm, Reuse Water System Storage Tank**

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

**Total Project Cost: \$400,000**

The Town of Little Elm, Texas, will construct a 100,000-gallon water reuse storage tank adjacent to their wastewater treatment plant. Little Elm is located near Dallas-Fort Worth and is one of the fastest growing municipalities in Texas. Coinciding with the high rate of population growth, North Texas suffered from extreme drought conditions from 2010 to 2015. This project will provide a consistent supply of treated wastewater available for irrigation and other uses during times of drought, saving the imported potable water supply for culinary purposes. This project is supported by the city's drought plan, which specifically identifies the expanded reuse of treated effluent as a drought mitigation action.

## Washington

### **County of Spokane, Little Spokane River Water Bank Modeling and Decision Support Tools**

**Reclamation Funding: \$275,000**

**Total Project Cost: \$550,000**

The County of Spokane, located in eastern Washington, will develop a coupled groundwater and surface water flow model for the entire Little Spokane River Basin. The Basin suffered from extreme drought in 2015, and routinely has moderate to severe drought during the summer months. The model will estimate changes in surface water flows and groundwater reservoirs resulting from the reallocation of existing water rights or the development of new supplies. It will also be able to simulate anthropogenic and climatic impacts on groundwater and surface water resources. The model will be the technical foundation for the Little Spokane Water Bank, allowing calculation of the mitigation values of new water supply projects. The development of the tools, and eventual Little Spokane Water Bank, will help prevent future water conflicts, particularly during times of drought.