

## 2019 Drought Resiliency Grants

### California

#### **Pala Band of Mission Indians, Pala Tribe Water Management Tool**

**Reclamation Funding: \$298,380**

**Total Project Cost: \$598,855**

The Pala Band of Mission Indians, a Federally-recognized tribe located in San Diego County, California, will implement a suite of projects to provide drought resiliency in the future. In March 2019, the Tribe experienced abnormally dry conditions, and in the 2011-2017 statewide drought much of the area experienced extreme drought conditions. The Tribe will develop a Water Management Web-GIS online decision support tool that will combine historical and current information on climate, groundwater levels, and water consumption data to help evaluate potential drought scenarios. The Tribe will also install groundwater monitoring equipment for ten wells, streamflow gages in three creeks, and municipal water meters to accurately track water supply conditions within the tool. Combined, these projects will enable the Tribe to better manage their water resources. These activities will support the implementation of the Tribe's 2016 Drought Contingency Plan.

#### **Stanislaus Regional Water Authority, Regional Surface Water Supply Project Phase II**

**Reclamation Funding: \$750,000**

**Total Project Cost: \$127,749,729**

The Stanislaus Regional Water Authority, a joint powers authority comprised of the City of Turlock and the City of Ceres, in cooperation with Turlock Irrigation District, will complete Phase II of its Regional Surface Water Supply Project. The project, located in the San Joaquin Valley of California, will construct a new water treatment plant and transmission main line to the City of Ceres. Once completed, an additional 5,600 acre-feet of water per year will be immediately available for the City of Ceres from the Tuolumne River, with additional capacity for the future. Currently, the City of Ceres receives all its water from groundwater wells. This project will help the City of Ceres diversify their water supply and provide relief to an over-extracted groundwater basin. The project is specifically identified in the 2015 Ceres Urban Water Management Plan and in the East Stanislaus Integrated Regional Water Management Plan as a high priority.

#### **City of Fullerton, Well 7A Project**

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

**Total Project Cost: \$2,960,077**

The City of Fullerton, located in Orange County, California, will drill and construct a new potable, municipal water well with high-capacity pumps, motors, piping and facilities to supplement local drinking water supplies and replace a non-operating well with known contaminants. The City experienced severe and exceptional drought conditions during the 2011-2017 statewide drought. The project is estimated to produce an average of 4,850 acre-feet per year of potable water for resilience against future drought conditions. This project is identified in the North and Central Orange County Watershed Management Area Integrated Regional Water Management Plan.

**Santa Margarita Water District, Las Flores Enhanced Water Reliability Project**

**Reclamation Funding: \$749,999**

**Total Project Cost: \$4,851,967**

Santa Margarita Water District, in Orange County, California, will install 3,800 feet of 16-inch pipe, and 5,200 feet of 8-inch pipe in residential streets and easements. The project will also upgrade an existing District pump station, repurpose an existing force main, and upgrade 35 existing water meters. The project will allow recycled water to be used in lieu of potable supplies on a permanent basis to meet 1,209 acre-feet per year in irrigation demands. By replacing potable water with recycled water for irrigation, the Santa Margarita Water District will enhance its water reliability and flexibility in times of drought. The project supports goals identified in the District's 2015 Urban Water Management Plan. The project also supports the implementation of an adaptation strategy identified in the WaterSMART Santa Ana Watershed Basin Study.

**San Bernardino Valley Municipal Water District, Central-Feeder East Branch Extension (EBX)**

**Intertie Project**

**Reclamation Funding: \$750,000**

**Total Project Cost: \$1,796,796**

San Bernardino Valley Municipal Water District, located in San Bernardino, California, will construct the Central-Feeder East Branch Extension Intertie Project, a component of the larger Bunker Hill Conjunctive Use Program. The project consists of 500 linear feet of 24-inch to 60-inch diameter pipeline that will connect the Central-Feeder water transmission pipeline to the east branch extension of the California Aqueduct. The purpose of this intertie is to facilitate delivery of dry-year supplies stored in the Bunker Hill Basin in the amount of 3,750 acre-feet per year. Over the last five years, starting in 2014, San Bernardino County experienced severe and extreme drought conditions; this project will ensure access to additional supplies during future drought conditions. The project is referenced in the District's 2015 Regional Urban Water Management Plan.

**Rancho California Water District, Upper Valle De Los Caballos Optimization Project**

**Reclamation Funding: \$750,000**

**Total Project Cost: \$6,400,932**

The Rancho California Water District in southern California is proposing to make enhancements to its Upper Valle De Los Caballos groundwater recharge and recovery project. This project will implement disinfection improvements and new groundwater wells. Upon completion of this project, the District will be able to extract an additional 3,000 acre-feet per year of groundwater. The project meets a need identified in the Upper Santa Margarita Watershed Region Integrated Regional Water Management Plan.

**Cachuma Operation and Maintenance Board, Lake Cachuma Emergency Pumping Facility -**

**Secured Pipeline Project**

**Reclamation Funding: \$750,000**

**Total Project Cost: \$1,525,270**

The Cachuma Operation and Maintenance Board, near Santa Barbara, California, will add pumping and piping infrastructure to Lake Cachuma to provide access to lower reservoir levels. The project will allow the Board to access an additional 20,500 acre-feet of water for delivery to approximately 200,000 residents on the south coast of Santa Barbara County. Lake Cachuma was recently impacted by seven consecutive years of record drought, reaching a low of 7.2% reservoir capacity in October 2016. When reservoir levels drop below the inlet gates, the gravity system is rendered difficult to use without temporary pumps and pipes. This project provides a permanent pipeline that can be used when supplies are required from lower reservoir levels.

**Long Beach Water Department, West Coast Basin Well 1 Project****Reclamation Funding: \$750,000****Total Project Cost: \$2,890,000**

The Long Beach Water Department (LBWD) in Los Angeles County, California, will drill an 800-foot deep well to pump approximately 1,250 acre-feet per year, in a manner consistent with state water law requirements. Along with the well, a water treatment facility and a booster pump station will be constructed. The additional water supply will provide local, backup supplies for the southern California community. The project is supported by a goal in the LBWD Urban Water Management Plan.

**Colorado****Tri-County Water Conservancy District, Pipeline Intertie with Dallas Creek Water Company****Reclamation Funding: \$106,000****Total Project Cost: \$551,674**

The Tri-County Water Conservancy District and the Dallas Creek Water Company in Ouray County, Colorado, will install an intertie pipeline to connect their water delivery systems, improving the resilience of both water purveyors. The intertie will allow water to be transferred in both directions. In 2018, the project area experienced exceptional drought, as evidenced by runoff in Dallas Creek registering at its lowest level since a gaging station was installed in 1992 and the average flowrate of the creek reaching only 31% of average. Along with a 5,500-foot long, 6-inch pipeline, six pump stations will be upgraded with two new pumps needed to lift the new water supply to the Company's facilities improving backup water supplies during times of drought for the region. The District operates Reclamation's Dallas Creek Project.

**Idaho****A&B Irrigation District, Mid-Snake Recharge Injection Wells Project****Reclamation Funding: \$250,000****Total Project Cost: \$630,000**

The A&B Irrigation District and the Twin Falls Canal Company will implement the Mid-Snake Recharge Injection Wells Project near the cities of Paul and Murtaugh, Idaho, by constructing 6 deep injection wells to recharge the Eastern Snake Plain Aquifer. The project will protect against drought for groundwater and surface water users and will enhance availability for storage in Reclamation's Minidoka and Palisades projects. The project is expected to recharge 14,800 acre-feet per year. The project is supported by the Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan. The District operates the North Side Pumping Division of Reclamation's Minidoka Project.

**Snake River Valley Irrigation District, Oxbow Incentivized Managed Aquifer Recharge Project****Reclamation Funding: \$299,910****Total Project Cost: \$643,210**

The Snake River Valley Irrigation District, located in Basalt, Idaho, will improve water delivery and monitoring infrastructure to recharge the Eastern Snake Plain Aquifer by an average of 7,000 acre-feet per year. The project will bank surface water in the aquifer, storing water in wet years and making it available during drought years. Implementation of this project should eliminate the need for additional equipment to reduce phosphorus loading in the Snake River. The project is supported by the Eastern Snake Plain Aquifer Comprehensive Aquifer Management Plan.

## **Nebraska**

### **Lower Loup Natural Resources District, Columbus Area Recharge Project**

**Reclamation Funding: \$750,000**

**Total Project Cost: \$2,789,800**

Lower Loup Natural Resources District, in cooperation with the City of Columbus, in eastern Nebraska, will mitigate groundwater declines and increase the resiliency of water supplies by constructing the Columbus Recharge Project. While groundwater pumping has resulted in aquifer depletions, this project includes the construction of infrastructure to facilitate 3,585 acre-feet per year of aquifer recharge and restore groundwater levels - providing a resilient water supply in times of drought. The project meets goals of the District's Integrated Management Plan and the Columbus Area Water Resources Assessment.

## **New Mexico**

### **Pueblo of Zia, Zia Flume Upgrades**

**Reclamation Funding: \$750,000**

**Total Project Cost: \$1,973,391**

The Pueblo of Zia, located in Sandoval County, New Mexico, will modernize the Zia Flume over the Jemez River and install associated buried PVC pipe. Zia Lake is the Pueblo's sole reservoir used for irrigation of agricultural lands and the Zia Flume, which connects the lake with agricultural lands, is critical infrastructure for the Pueblo. Erosion and damage to the flume was exacerbated in 2016 by an extreme flood event. The Tribe has experienced moderate to severe drought conditions over the past five years. This project is supported by the Tribe's Drought Contingency Plan.

### **Santa Fe County, Aquifer Storage and Recovery in Rancho Viejo, Santa Fe County**

**Reclamation Funding: \$291,520**

**Total Project Cost: \$2,082,283**

Santa Fe County in New Mexico will construct 900 linear feet of pipeline, an injection well, and a recovery well to inject 240 acre-feet per year of treated water into the local aquifer. The purpose of this aquifer storage and recovery project is to capture and treat surplus spring flows and inject the water into the aquifer and recover it during summer dry months. This project will increase available water supply and increases reusable supplies as a water source for the County. A pilot study has been conducted confirming the anticipated yield. The project aligns with goals in the Santa Fe County Strategic Plan and implements an adaption strategy identified in the WaterSMART Santa Fe Basin Study.

### **City of Las Cruces, Better Managing Water Supplies with Neutral Output Discharge Elimination System (NO-DES)**

**Reclamation Funding: \$262,453**

**Total Project Cost: \$524,907**

The City of Las Cruces seeks to purchase a portable water filtration system called NO-DES (Neutral Output Discharge Elimination System) to eliminate wasted water associated with necessary distribution system flushing. The City's distribution system suffers from a condition referred to as "red water" – the result of metal oxidation, which can cause tap water with objectionable tastes, odors, and staining. Periodic flushing from fire hydrants and other outlets is part of the City's management of this condition. The NO-DES system cleans the "flush water" on-site and returns it to the distribution system via another connection point, thereby eliminating losses to maintain supplies that become especially important during drought conditions.

## **Oregon**

### **North Unit Irrigation District, Optimized Diversion Precision at the Crooked River Pump Station** **Reclamation Funding: \$122,485** **Total Project Cost: \$244,970**

North Unit Irrigation District, in Jefferson County, Oregon, will install a Variable Frequency Drive on one of nine pumps that divert water from the Crooked River into the District's main canal. This project will allow for the better management and capture of District supplies. This project will improve the operational flexibility of the District by matching the pump intake rate with the flow rate of the Crooked River, ultimately allowing the District to access an additional 3,500 acre-feet per year, in a manner consistent with state water law requirements.

## **Texas**

### **City of Celina, Celina Road Ground Water Storage Tank** **Reclamation Funding: \$750,000** **Total Project Cost: \$7,253,000**

The City of Celina in north Texas will build a 6-million-gallon ground storage tank at the Celina Road Pump Station. This tank will more than double the City's capacity to retain water for drought and emergency water shortages. North Texas has suffered from ten years of drought conditions in the last 18 years, and currently, if the City's sole-source water supply is interrupted, Celina will have barely one day of stored water supply under normal use. The project also includes piping and SCADA improvements. This project is specifically identified as a priority in the City's 2019 Drought Contingency Plan.

### **Texas Water Development Board, Enhancing Surface Water Evaporation Monitoring in Texas to Improve Reservoir Evaporative Loss Estimates** **Reclamation Funding: \$360,631** **Total Project Cost: \$721,263**

The Texas Water Development Board, located in Austin, Texas, will implement a multi-pronged approach to enhance surface water evaporation monitoring. The project includes making improvements at existing evaporation stations and deriving computed evaporations for unmonitored regions as applicable. By providing daily estimates of reservoir evaporation loss, the project will provide water managers with critical information for decisions related to the implementation of drought contingency triggers. This real-time evaporation data will help water managers quantify the impact of developing droughts in a state that had its most recent and severe drought from 2010 to 2015.