



FY 2020 WaterSMART Grants: Water and Energy Efficiency Grants

California

Bard Water District, Construction of Five Gates Conveyance Improvements

Reclamation Funding: \$300,000

Total Project Cost: \$642,294

The Bard Water District, located in southern California near the Arizona border, along with the Quechan Indian Tribe, will construct conveyance improvements for the Five Gates structure, which is a series of gated culverts that act as a major chokepoint in the District's delivery system. The District will replace the existing Five Gates with new more advanced metal gates and 560 feet of pipeline to increase water use efficiency and reliability through optimal flow rates, reduced leakage, and reduced operational losses. The project is a top priority for the District and the Tribe and is expected to result in annual water savings of 1,452 acre-feet, which will remain in the Lower Colorado River System.

Beaumont-Cherry Valley Water District, Beaumont-Cherry Valley Water District Advanced Metering Infrastructure Project

Reclamation Funding: \$1,500,000

Total Project Cost: \$5,704,270

The Beaumont-Cherry Valley Water District, located in Riverside County in southern California, will install new meters and upgrade previously installed meters so that all 19,154 primarily residential water meters in the District have advanced metering infrastructure (AMI) capable technology. The District will also install repeater equipment to improve the District's leak detection program. The project is expected to result in annual water savings of 927 acre-feet by recovering losses currently caused by inaccurate metering and leaks. The area is vulnerable to drought conditions and is projected to have increasing demand due to population growth. The project will reduce the District's dependence on imported water and will offset groundwater pumping from the adjudicated Beaumont Basin.

Firebaugh Canal Water District, 2nd Lift Canal Lining Project

Reclamation Funding: \$1,000,000

Total Project Cost: \$2,303,300

The Firebaugh Canal Water District located near Mendota, California, will line 2.5 miles of the unlined 2nd Lift Canal with concrete. The District will also replace existing turnout structures with pre-cast concrete structures that can accommodate high-efficiency irrigation system upgrades. The District is located within the Grassland Drainage Area, which is underlain with a shallow, saline aquifer. As subsurface drain water generated within the region is discharged to the San Joaquin River, minerals enter the river and degrade water quality. Water that is currently lost to seepage from the 2nd Lift Canal becomes unusable when mixed with the saline sink. The project is expected to

result in annual water savings of 320 acre-feet by reducing seepage, which supports the Westside Regional Drainage Plan, a collaborative effort by local water districts to curtail discharge to the river. During normal water years, conserved water will be marketed to adjacent water districts to supplement their water supply and to offset reliance on local groundwater, which is often poor quality and contributes to subsidence. During critical years when the District's supply is curtailed, the water conserved will allow the District to make up for the reduced water allocation.

City of Needles, Needles Advanced Meter Infrastructure Project with Automated Meter Reading

Reclamation Funding: \$213,826

Total Project Cost: \$427,652

The City of Needles, located in San Bernardino County, California will install 1,944 meters with advanced metering infrastructure (AMI). The City currently relies on manual readings on a monthly basis, making it difficult to detect leaks. The project is expected to result in annual water savings of 160 acre-feet by reducing delays in leak identification and unusual consumption patterns. The water conserved will be used to meet increasing demand due to population growth, which will reduce the need for additional water rights or additional purchased water.

North Kern Water Storage District, Calloway Canal Lining and Water Delivery Improvements

Reclamation Funding: \$1,500,000

Total Project Cost: \$3,100,392

The North Kern Water Storage District, located in Bakersfield, California, will line 3,841 feet of an unlined portion of the Calloway Canal with 4-inch thick unreinforced concrete. The canal lining is expected to result in annual water savings of 1,349 acre-feet, which is currently seeping into the groundwater basin that has poor water quality. Additionally, the District will install flow meters, water level sensors, and telemetry at seven of the District's production wells. These additional improvements will provide real-time data and allow the District to better control well operations, resulting in an expected annual water savings of 289 acre-feet from reduced pumping. The groundwater basin in the San Joaquin Valley portion of Kern County is critically stressed, especially when pumping increases during dry years. Overall, the project is expected to result in 1,638 acre-feet of water savings, which will offset groundwater pumping.

City of Oceanside, City of Oceanside Advanced Metering Infrastructure Project (Phase II)

Reclamation Funding: \$1,500,000

Total Project Cost: \$4,497,429

The City of Oceanside, located in southern California, will upgrade approximately 11,429 existing primarily residential water meters to advanced metering infrastructure (AMI) smart meters. The project is expected to result in annual water savings of 784 acre-feet by providing real-time information to customers about leaks, breaks, and other unusual consumption patterns. The water savings from this project will have broad benefits in an area that has historically experienced water shortages and drought, relies on purchased water, and is projecting population and water demand increases. Currently, the City purchases approximately 90% of its potable water supply from the San Diego County Water Authority. The water conserved through this AMI project will help the City to use existing supplies more efficiently to meet demands.

Rancho California Water District, Compound Meter Upgrade Project

Reclamation Funding: \$454,784

Total Project Cost: \$1,008,242

The Rancho California Water District, located in Riverside County, California, will replace 134 existing standard compound meters with upgraded compound meters that can connect to the District's existing advance metering infrastructure system. The new meters will provide more accurate flow measurement and real-time water consumption data to customers. The project is expected to result in annual water savings of 271 acre-feet that is currently lost to leaks and customer overuse. The District and its water suppliers are susceptible to drought and face increased demand due to population growth. The water conserved will increase local water reliability and reduce imported water demand.

City of Santa Ana, Santa Ana Automated Metering Infrastructure Installation Project

Reclamation Funding: \$1,200,000

Total Project Cost: \$9,286,347

The City of Santa Ana, located in southern California, will replace 33,315 manual-read primarily residential water meters with updated advanced metering infrastructure (AMI) meters. AMI will provide real-time operational modeling information, establish a leak detection system, and provide water-consumption data to customers. The project is expected to result in annual water savings of 1,409 acre-feet that is currently lost to meter inaccuracies and leaks. The City is currently dependent on a combination of local groundwater and imported water for its supply. Water saved through the project will supplement the City's finite groundwater supply and reduce the need to purchase additional water.

City of Santa Ana, SA-1 Hydropower and Water Conservation Project

Reclamation Funding: \$300,000

Total Project Cost: \$1,303,413

The City of Santa Ana will also install a 132-kilowatt hydro turbine and generator at the Garthe Pumping station, which is expected to generate up to 877 megawatt-hours of power annually to offset existing electrical use. The project also includes the installation of smart irrigation controllers and high-efficiency nozzles on City property to reduce irrigation water use.

City of Santa Barbara, Santa Barbara Advanced Metering Infrastructure Project (Phase 2)

Reclamation Funding: \$1,500,000

Total Project Cost: \$7,149,346

The City of Santa Barbara, located in southern California, will install advanced metering infrastructure (AMI) equipment and implement a data management system, along with a customer portal that will support 27,000 primarily residential water meters that were installed in a previous phase of this overall AMI project. By providing real-time water use data about leaks and abnormal use patterns, the project is expected to result in annual water savings of 631 acre-feet and will better prepare the City for extended drought conditions. The water conserved will offset groundwater pumping and reduce the City's dependence on water imported through the State Water Project.

Sutter Mutual Water Company, Bohannon Dam Automation Project

Reclamation Funding: \$806,610

Total Project Cost: \$1,613,220

The Sutter Mutual Water Company, located near Sacramento, will install Supervisory Control and Data Acquisition (SCADA) components that allow for remote monitoring of irrigation delivery system conditions and for remote operation of delivery system control gates at Bohannon Dam weir. The project includes six Rubicon SlipGates with SCADA capability using software that allows real-time monitoring and remote access to the site. The project is expected to result in annual water savings of 20,000 acre-feet currently lost to operational spills. The water conserved as a result of the project will allow the Company to reduce diversions from the Sacramento River, eliminate surplus deliveries, and to store more water in Bohannon Dam.

Western Municipal Water District, Riverside Service Area Meter Replacement and Customer Portal (Phase 2)

Reclamation Funding: \$1,000,000

Total Project Cost: \$3,690,717

The Western Municipal Water District, located in Riverside, California, will replace 7,008 manually read residential meters with advanced metering infrastructure. The project is supported by multiple planning efforts in the region and is expected to result in annual water savings of 505 acre-feet, which is currently lost to leaks and over consumption. By completing the project, the District expects to reduce its reliance on groundwater and imports from Metropolitan Water District of Southern California.

Colorado

City of Aspen, Aspen Intelligent Metering and Meter Replacement Project

Reclamation Funding: \$500,000

Total Project Cost: \$1,259,697

The City of Aspen will convert 4,000 residential and commercial accounts to advanced metering infrastructure (AMI). The project includes the installation and implementation of all associated network hardware and software to support the AMI technology, along with a customer portal. By improving leak detection and reducing customer overuse, the project is expected to result in annual water savings of 273 acre-feet, which represents 9% of the City's current demands. The project will allow the City to reduce diversions and allow for the conserved water to remain in the Roaring Fork River for neighboring communities and the native ecosystem.

City of Grand Junction, City of Grand Junction Advanced Metering Infrastructure Project

Reclamation Funding: \$300,000

Total Project Cost: \$1,821,141

The City of Grand Junction, located in western Colorado, will upgrade 4,069 manual-read water meters with advanced metering infrastructure compatible meters. The City will also install a fixed network data collection system that will automatically collect and store hourly consumption data from its 9,867 customer meters. By providing customers with real-time data, the project is expected to result in annual water savings of 741 acre-feet, which is currently lost to customer overuse and leaks. As a result of the project, the City expects to reduce diversions from the Kannah Creek watershed, leaving water in the river system or otherwise making water available for other uses in the Upper Colorado River Basin.

City of Greeley, Greeley AMI Meter Installation Project

Reclamation Funding: \$1,486,538

Total Project Cost: \$6,059,617

The City of Greeley, located in northern Colorado, will convert 14,500 standard water meters to advanced metering infrastructure meters and integrate the smart meter software with Greeley Water's Supervisory Control and Data Acquisition system. The updated meters will benefit residential, commercial, and wholesale water purchaser accounts. The City owns surface water rights in four major river basins and operates six storage reservoirs in an area that faces drought, population growth, and overallocation of rivers. The project is expected to result in annual water savings of 1,129 acre-feet currently lost to seepage, leaks, and customer overuse. The water conserved will remain available in storage, supporting the City through multi-year droughts. Surface flow rights can also be sent downstream to meet return flow obligations or be made available for other uses.

City of Longmont, Longmont Automated Meter Reading Project

Reclamation Funding: \$800,000

Total Project Cost: \$2,642,605

The City of Longmont, located north of Denver, will upgrade 7,629 residential and 711 large analog water meters to meters with automated meter reading (AMR) technology. Once completed, the project will provide a continuous flow of data that will notify staff of customer leaks, backflow events, meter tampering, and no flow events. The AMR meters will be connected to a fixed base collector system and customer portal, which will also provide customers with real-time data on their water usage. The project is expected to result in annual water savings of 361 acre-feet, currently lost to leaks and customer overuse. The water conserved will remain instream and better prepare the City for population growth and prolonged periods of drought.

City of Thornton, City-Wide Advanced Metering Infrastructure and Residential Meter Conversion Project

Reclamation Funding: \$1,500,000

Total Project Cost: \$4,000,000

The City of Thornton located near Denver, Colorado, will install a city-wide advanced metering infrastructure system and replace 19,919 low resolution residential meters with high resolution meters. The project is expected to result in annual water savings of 1,665 acre-feet currently lost to inefficient customer water use and leaks. The project will support statewide goals to address water supply gaps in the state and South Platte Basin and to integrate water quantity and quality issues. The water conserved will remain in Thornton's storage reserves and reduce demands for treated water and diversions from the over-appropriated South Platte Basin.

Idaho

City of Ammon, City of Ammon Water Meter Installation Project

Reclamation Funding: \$300,000

Total Project Cost: \$2,593,371

The City of Ammon, located in southeastern Idaho, will install advanced metering infrastructure water meters in 916 residences that are currently unmetered. The City's population has more than doubled between 2000 and 2010 and the growth is expected to continue. The project is expected to

result in annual water savings of 258 acre-feet by allowing the City to better monitor water usage and identify leaks, fluctuations, and other inconsistencies in the system. The water conserved will remain in the Eastern Snake River Plain Aquifer, which will strengthen the reliability of the City's existing groundwater rights to adequately serve its growing population.

Big Wood Canal Company, Jim Knight and Sagebrush Hydroelectric Projects

Reclamation Funding: \$1,500,000

Total Project Cost: \$4,204,482

The Big Wood Canal Company located near Twin Falls, Idaho, along with the American Falls Reservoir District #2, will upgrade the Jim Knight and Sagebrush hydroelectric projects located on the Milner-Gooding Canal, including improved intake structures, mechanical equipment, and powerhouse electrical controls at both projects. Both projects will include new powerhouse structures and vertical Kaplan turbines connected to a new generator. At Sagebrush, the current concrete penstock has leaks and will be upgraded with a 10-foot diameter, 370-foot long steel penstock. The power plant rebuilds will increase the combined generation capacity of the plants from 604 kilowatts to 1050 kilowatts. The project is expected to result in annual water savings of 180 acre-feet due to leaks and seepage at Sagebrush's existing concrete penstock. The water conserved will remain in the American Falls Reservoir and Milner Lake and will allow for more efficient water deliveries to water users.

Boise Project Board of Control, New York Canal Lining (Phase 7)

Reclamation Funding: \$226,832

Total Project Cost: \$453,664

The Boise Project Board of Control, located in Boise, Idaho, will replace 600 feet of existing concrete and asphalt lining along the New York Canal with a multi-layer geocomposite liner with a concrete cap. Water supply has not been sufficient to meet demands, and in recent years, users within the Board's service area have had to purchase additional river water to help augment their irrigation water supply. The project is expected to result in an annual water savings of 367 acre-feet, which is currently lost to leaks and seepage. As a result of the project, the Board will be able to reduce reliance on purchased water from other sources and increase the amount of water available in Arrowrock, Anderson, and Lucky Peak Reservoirs to benefit fish and recreation.

Dixie Bench Ditch Lateral Association, Maple Creek Watershed Irrigation Efficiencies Improvement Project

Reclamation Funding: \$142,357

Total Project Cost: \$285,000

The Dixie Bench Ditch Lateral Association, located in southeastern Idaho, will decommission 8,000 feet of earthen canal and install 7,040 feet of high-density polyethylene pipeline and pressurized polyvinyl chloride pipeline, bypassing the original canal. The area is vulnerable to drought, and the Association experiences ongoing conflict among its residential and agricultural users. The project is expected to result in annual water savings of 90 acre-feet, which is currently lost to seepage and operational spills. As a result of the project, the Association will reduce diversions from Maple Creek and reduce the need for imported water to meet late-season allocations, allowing water to remain instream. Once completed, the pipeline will complement a current Natural Resources Conservation Service's Environmental Quality Incentives Program project to improve an existing irrigation system with pivots, wheel-line, pumping plants, and a Variable Frequency Drive.

Kansas

Kansas Bostwick Irrigation District, Converting Ridge 1.3 Right Open Lateral to a Buried Pipe System

Reclamation Funding: \$163,000

Total Project Cost: \$329,451

The Kansas Bostwick Irrigation District, located in northern Kansas, will convert 2.79 miles of open lateral canal into a buried pipeline system. The project is expected to conserve 623 acre-feet of water annually that is currently lost to evaporation, seepage, and operational spills. The area is dependent on the Republican River Basin which is over-drafted across multiple states. Groundwater depletions and overuse within the Republican River Basin have significantly impacted the District's available water supplies in recent years. The project will allow the District to more efficiently manage its current water supplies and reduce diversions from the Republican River and Harlan County Lake, the District's upstream supply reservoir. Reduced diversions from the Republican River will increase flows available for recreational activities and downstream tributaries, benefitting species including the endangered Topeka Shiner minnow.

Montana

Buffalo Rapids Irrigation Project—District 1, Lateral 1.7 Conversion Project

Reclamation Funding: \$132,472

Total Project Cost: \$291,869

The Buffalo Rapids Irrigation Project—District 1, located in eastern Montana, will convert 5,450 feet of open canal to a closed plastic irrigation pipeline. The District has experienced drought conditions over the last five years, and leakage and conveyance losses have contributed to water shortages and water scheduling issues. In response to system inefficiencies, the District has frequently had to divert and pump additional water from the Yellowstone River. By completing the project and increasing efficiency, the District will be able to reduce diversions. The project is expected to result in annual water savings of 248 acre-feet currently lost to seepage, which will remain in the Yellowstone River.

Buffalo Rapids Irrigation Project—District 2, Lateral 1.6 Conversion Project

Reclamation Funding: \$300,000

Total Project Cost: \$666,307

The Buffalo Rapids Irrigation Project—District 2, located in eastern Montana, will convert 8,660 feet of open canal to a closed plastic irrigation pipeline. The District has experienced drought conditions over the last five years, and leakage and conveyance losses have contributed to water shortages and water scheduling issues. In response to system inefficiencies, the District has frequently had to divert and pump additional water from the Yellowstone River. By completing the project and increasing efficiency, the District will be able to reduce diversions. The project is expected to result in annual water savings of 1,087 acre-feet currently lost to seepage, which will remain in the Yellowstone River.

Nebraska

Nebraska Bostwick Irrigation District, Enhancing Storage in Harlan Reservoir by Automating the Headgates of the Superior and Courtland Canals

Reclamation Funding: \$75,000

Total Project Cost: \$152,434

The Nebraska Bostwick Irrigation District, located in south-central Nebraska, will install canal automation technology to provide closed-loop flow control to the Superior and Courtland Canals. Precise actuation, level measurement, and flow controllers will be installed onto existing radial gates. The District has faced water scarcity over the past decade. Farmers have adjusted by changing crops, growing crops under stress, and augmenting their delivered surface water with well water. By completing this project, the District will be able to use real-time data to more precisely match supply with demand, thereby improving management of the Harlan County Reservoir and a portion of the Republican River system. Once complete, the project is expected to result in annual water savings of 1,006 acre-feet currently lost to operational spills, which will remain in Harlan County Reservoir. The project will allow the District to more efficiently deliver water, reduce the need for groundwater pumping from the Republican River system, and provide increased instream flows later in the season for stream augmentation.

Oklahoma

City of Eufaula, Eufaula Water System Improvements (Part B & C)

Reclamation Funding: \$1,500,000

Total Project Cost: \$4,032,571

The City of Eufaula, located in southeastern Oklahoma, will convert existing corrugated metal pipe, corrugated plastic pipe, cast iron pipe, and reinforced concrete pipe in its water delivery system to 38,242 feet of polyvinyl chloride pipe. The project also includes installation of new gate and pressure valves. The water system currently faces losses as high as 53 percent due to leaks and the lack of isolation valves. The project is expected to result in annual water savings of 198 acre-feet, which will remain in Lake Eufaula.

Oregon

Klamath Irrigation District, C-4-a Canal Lining/Piping Project

Reclamation Funding: \$210,650

Total Project Cost: \$421,301

The Klamath Irrigation District, located in Klamath County, Oregon, will convert 1.5 miles of the currently open C-4-a Canal to 3,000 feet of Ethylene Propylene Diene Monomer lining and 5,000 feet of high-density polyethylene pipe. The project is expected to result in an annual water savings of 664 acre-feet which is currently lost to seepage, evaporation, and operational spills. Once the project has been completed, the District will reduce diversions from Upper Klamath Lake. The project is expected to improve lake levels to benefit fish species such as the endangered Shortnose Sucker, and to provide a potential late season supply for other water users in times of shortage. In addition, conserved water may be available for the fall waterfowl migration at the Lower Klamath National Wildlife Refuge.

Klamath Irrigation District, F-4 Canal Lining/Piping Project

Reclamation Funding: \$219,704

Total Project Cost: \$439,409

The Klamath Irrigation District will also convert 1.4 miles of the currently open F-4 Canal to 300 feet of Ethylene Propylene Diene Monomer lining and 7,392 feet of high-density polyethylene pipe. The project is expected to result in an annual water savings of 664 acre-feet.

Middle Fork Irrigation District, Coe Branch Pipeline and Irrigation Efficiency Project

Reclamation Funding: \$266,600

Total Project Cost: \$1,460,400

The Middle Fork Irrigation District, located in northwest Oregon, will install a high-density polyethylene pipe from its existing diversion on Coe Creek to an existing settling pond to provide clean irrigation water to its users. Coe Creek is a glacier-fed tributary of the Middle Fork Hood River, and its high sediment load restricts the District's ability to fully utilize the water during the irrigation season. When sedimentation worsens in Coe Creek, the District must meet irrigation demand with water from Laurance Reservoir and its tributaries. The District will use the settling pond to remove glacial sediment from the water before it is delivered to irrigators, thereby avoiding diversions from Laurance Lake. By more efficiently and effectively removing sediment, the project will also allow water users to install high-efficiency micro-sprinklers.

Texas

Cameron County Irrigation District No.6, Bennett, Swan Nelson, 134, 139, and 196 Canals Piping Project

Reclamation Funding: \$300,000

Total Project Cost: \$857,143

The Cameron County Irrigation District No.6, located in southern Texas, will convert the earthen Bennett, Swan Nelson, 143, 139 and 196 Canals to 9,330 feet of polyvinyl chloride pipe. The project is expected to result in annual water savings of 1,040 acre-feet that is currently lost to seepage and evaporation. The Lower Rio Grande Reservoir System is over allocated and susceptible to long-term drought. The project will allow the District to reduce its diversions and allow for the conserved water to remain in the Lower Rio Grande Reservoir System.

El Paso County Water Improvement District No.1, Riverside Canal Concrete Lining Project (Phase III)

Reclamation Funding: \$1,000,000

Total Project Cost: \$2,039,504

The El Paso County Water Improvement District No.1 will line 6,600 feet of the currently earthen Riverside Canal with steel-panel reinforced concrete. The project is expected to result in annual water savings of 1,770 acre-feet that is currently lost to seepage. El Paso County has experienced prolonged and extreme drought conditions, and the population of El Paso County is projected to double to over 1.5 million people by 2070. The water conserved will allow for additional Rio Grande Project water to be stored in Elephant Butte and Caballo Reservoirs, which will provide critical water supplies to the area during drought years.

Harlingen Irrigation District Cameron County No.1, Piping of Wyrick Canal (Phase II)
Reclamation Funding: \$300,000 **Total Project Cost: \$655,331**

The Harlingen Irrigation District Cameron County No.1, located in southern Texas, will convert 3,730 feet of the concrete Wyrick Canal to a 48-inch pressurized polyvinyl chloride pipe. The project will increase system reliability and reduce the amount of power needed to lift water into the distribution system. The Harlingen area is dependent on surface water from the Rio Grande and experiences water conflict as a result of drought, over-appropriation of water rights, and population growth. The project makes progress toward water management goals identified in several Rio Grande Basin planning activities, including canal piping as a recommended water management strategy, increasing delivery system efficiencies to address drought, and conserving water to relieve tension for all groups in the basin. The project is expected to result in a 92 acre-feet of water savings, which will remain in the Rio Grande River Basin to benefit domestic, municipal, industrial, agricultural, ecological, and recreational uses.

City of Wilmer, Smart Meter Conversion and SCADA System Implementation Project
Reclamation Funding: \$198,802 **Total Project Cost: \$497,006**

The City of Wilmer located near Dallas, Texas, will retrofit 1,152 existing residential water meters to advanced metering infrastructure (AMI). The City will also install Supervisory Control and Data Acquisition equipment to allow for improved water management. The project will provide more accurate and detailed leakage and billing data and is expected to result in annual water savings of 53 acre-feet. The water conserved will remain in Dallas Water Utilities reservoirs.

Utah

American Fork City, American Fork City Pressurized Irrigation Metering Project
Reclamation Funding: \$1,500,000 **Total Project Cost: \$3,035,400**

American Fork City, located near Salt Lake City, will install 2,324 water meters with advanced metering infrastructure compatible with businesses and homeowners on the City's pressurized irrigation system. Through its pressurized irrigation system, the City delivers non-potable water for outdoor use. The City often has to pump water from its culinary wells to supplement the pressurized irrigation system during peak summer months. The project will enable the City to monitor real-time flows in the pressurized irrigation system and to accurately bill consumption. The project is expected to result in annual water savings of 597 acre-feet which is currently lost to customer overuse. The water conserved will offset the need for groundwater pumping and purchased water. Additional water would remain in the American Fork River system as instream flows or for aquifer recharge.

Bear River Canal Company, West Main Canal Liner Project
Reclamation Funding: \$1,500,000 **Total Project Cost: \$3,031,600**

The Bear River Canal Company, located in northern Utah, will line 3,200 feet of the earthen and partially lined West Main Canal with geotextile fiber covered by concrete. The Company will also install a ramp flume with telemetry and a 2-kilowatt crossfloat turbine along the Hammond Canal. The West Main Canal is the primary canal that provides water to other large canals within the Company's system, including the Hammond Canal. The project is expected to result in annual water savings of 4,903 acre-feet, which is currently lost to seepage. In dry years, the water conserved will

remain in the West Main Canal, allowing the Company to avoid reduced allocations. In wet years, conserved water will remain instream within the Bear River to benefit the Bear River Migratory Bird Refuge and the Great Salt Lake. Additionally, because seepage is eroding the hillside supporting the canal, the project addresses safety and reliability concerns.

Benchland Water District, Secondary Water Project (Phase I)

Reclamation Funding: \$300,000

Total Project Cost: \$675,150

The Benchland Water District located near Salt Lake City, Utah, will install 450 secondary water meters as part of an overall secondary metering program. The State of Utah has experienced drought conditions in twelve of the last fifteen years. The project will allow the District to utilize advanced metering infrastructure to better detect leaks and customer overuse, which is expected to result in water savings of 175 acre-feet per year. The water conserved will remain in the District's upper reservoirs or within the Weber Basin Water Conservancy District's system or remain as instream flows to benefit the Bonneville Cutthroat Trout and Bluehead Sucker.

Benchland Water District, Secondary Water Project (Phase II)

Reclamation Funding: \$300,000

Total Project Cost: \$675,150

The Benchland Water District will continue implementation of its secondary metering program with the installation of an additional 450 secondary water meters, which is expected to result in water savings of 175 acre-feet per year.

Davis and Weber Counties Canal Company, Canal Piping, Lining and Hydro Project

Reclamation Funding: \$1,100,000

Total Project Cost: \$2,714,000

The Davis and Weber Counties Canal Company, located near Salt Lake City, will convert 1,685 feet of existing concrete liner and 1,875 feet of existing steel pipe with 2,060 feet of an 8-foot by 6-foot precast concrete box culvert and 1,500 feet of 66-inch reinforced concrete pipe. Severe drought from 2012 through 2018 has strained the water system and the Company has had to respond with shortened irrigation seasons. The project is expected to result in annual water savings of 794 acre-feet that is currently lost to seepage and evaporation. The project will allow for more water to be saved and held in the Echo and East Canyon Reservoirs, therefore remaining in the river system for longer periods and providing benefits to native fish species. Additionally, the project includes the installation of a meter station and replacement of a meter to better manage water distribution, and the installation of a 2-kilowatt hydro turbine to help offset project energy consumption.

Nibley Blacksmith Fork Irrigation Company, Quarter Circle Drive Piping Project

Reclamation Funding: \$300,000

Total Project Cost: \$760,000

The Nibley Blacksmith Fork Irrigation Company, located in Cache County, Utah, will convert 2,220 feet of an earthen canal known as the Quarter Circle Drive Section to irrigation pipe. The Company will also upgrade the existing headworks of the canal at the diversion point on the Blacksmith Fork River to provide more accurate flow measurement. The system of canals and pipes services approximately 3,100 acres of irrigated residential and agricultural land. The Company has had to divert additional water for delivery due to system inefficiencies and seepage losses. The project is expected to result in annual water savings of 814 acre-feet, which is currently lost to seepage,

evaporation, and heavy vegetation growth. The project will allow the Company to reduce diversions from the Blacksmith Fork River and more efficiently deliver water to its shareholders.

City of Orem, City of Orem Advanced Metering Infrastructure Program

Reclamation Funding: \$1,500,000

Total Project Cost: \$7,298,424

The City of Orem located near Provo, Utah, will install 18,691 advanced metering infrastructure (AMI) meters to replace existing manually read primarily residential water meters. An additional 1,451 existing meters will be retrofitted for AMI capability. The project is expected to result in annual water savings of 3,133 acre-feet through the availability of consumption data, improved leak detection, and more accurate meter reading and billing. The City is in an area that is highly susceptible to severe drought, projected population growth, and increased water demands. The water conserved will remain in the Provo River.

Riverton City, Riverton City Secondary Water Metering Project

Reclamation Funding: \$1,500,000

Total Project Cost: \$15,376,745

Riverton City, located in Salt Lake County, Utah, will install 9,872 meters on its secondary water distribution system. The secondary meters will be integrated with the City's advanced metering infrastructure system, which includes a data portal for customer interaction. The project will improve the reliability of the City's secondary system, preparing it for projected future growth. The project will support water conservation efforts and provide accurate, real-time data for individual users. The project is expected to result in annual water savings of 3,000 acre-feet by identifying customer overuse. The water conserved will be stored and made available for projected future demands in the area.

South Jordan City, South Jordan City Secondary Water Metering Project

Reclamation Funding: \$300,000

Total Project Cost: \$635,200

South Jordan City, located in Salt Lake County, Utah, will install 443 secondary water meters on existing residential connections. Secondary water meters equipped with endpoints that allow continuous data collection will provide usage information to better quantify secondary water use and promote conservation. The project will help to prevent the use of potable water for lawn and garden watering, especially during times of drought, and is expected to result in annual water savings of 172 acre-feet. The project directly supports the State of Utah's goal to reduce residential water usage per capita per day by 25%. The water conserved will remain in the Jordan River, which drains into the Great Salt Lake.

Sunrise and Bench Creek Irrigation Company, Piping and Small Hydro Project

Reclamation Funding: \$538,000

Total Project Cost: \$1,196,500

The Sunrise and Bench Creek Irrigation Company, located in northern Utah, will replace 7,300 feet of existing corrugated metal pipe and 500 feet of open, unlined ditch with a 26-inch high-density polyethylene pipeline. The project also includes a new inlet structure, meter station, widening of a settling pond, and an underwater micro-hydro turbine to power the meter. The existing corrugated metal pipe experiences significant leaks, causing the Company to over-divert water from the Provo River to compensate for water losses. The project is expected to result in an annual water savings of 802 acre-feet, which will reduce diversions and enable Company shareholders to reduce their

reliance on the Central Utah Water Conservancy District. The water conserved will remain in the Provo River and eventually be stored in Jordanelle Reservoir.

Uintah Water Conservancy District, Steinaker Service Canal Enclosure Project (Reach III)

Reclamation Funding: \$1,500,000

Total Project Cost: \$15,500,000

The Uintah Water Conservancy District, located in northeastern Utah, will convert 13,100 feet of the unlined Steinaker Service Canal to 72-inch diameter fiberglass pipe with associated appurtenances, turnouts, and measurement devices. Drought is common in the project area, and the Steinaker Reservoir is an off-channel reservoir that does not get excess flows during large precipitation years. The project is expected to result in annual water savings of 900 acre-feet currently lost to seepage, which will be stored in Steinaker Reservoir. Conserved water will be used to address shortages during drought years, reduce the need for imported water, and maintain water levels necessary for recreation at Steinaker Reservoir. In addition, the project will provide a pressurized water supply, enabling the conversion from flood irrigation to sprinklers.

Ute Indian Tribe, Ute Indian Tribe Water Meter Replacement Project

Reclamation Funding: \$837,900

Total Project Cost: \$1,675,800

The Ute Indian Tribe, located in eastern Utah, will replace 1,021 existing meters with cellular LTE end point technology to detect water main breaks, service line breaks, and inaccurate metering. The project is expected to result in annual water savings of 381 acre-feet currently lost to metering inaccuracy. The water conserved will remain in the river system, improving water reliability for the tribe and multiple water districts and communities in the adjacent area.

Weber Basin Water Conservancy District, Upper Willard Canal Lining Construction Project (Phase 7)

Reclamation Funding: \$1,200,000

Total Project Cost: \$2,425,000

The Weber Basin Water Conservancy District, located in northern Utah, will line 2,000 feet of the currently unlined Willard Canal with 6-inch steel reinforced concrete. Canal lining has been identified as a priority in the District's System Optimization Review and water conservation plan. The District administers water contracts totaling 226,170 acre-feet, serves a geographic area over 2,500 square miles, and has regional water supply responsibility for cities, districts, and companies located in five Utah counties. The area is vulnerable to drought and continues to experience rising demand from population growth. The project is expected to result in annual water savings of 3,000 acre-feet currently lost to seepage, which will be marketed to wholesale customers, mostly cities, in order to meet rapidly growing demand. Further, conserved water will remain in the Weber River for longer periods of time, benefitting species in the area, including the Bonneville Cutthroat Trout.

Weber Basin Water Conservancy District, Woods Cross Secondary Water Metering Project (Phase III)

Reclamation Funding: \$300,000

Total Project Cost: \$827,500

The Weber Basin Water Conservancy District will also install 650 secondary water meters with advanced metering infrastructure (AMI) to provide the District with real-time data to detect leaks and end use inefficiencies. The data will also help customers better understand how they can reduce

water usage. The area has experienced rapid population growth and drought, resulting in declining groundwater levels. The project is expected to result in annual water savings of 247 acre-feet which is currently lost to leaks and customer overuse. The water conserved will be stored to meet rising municipal demand from population growth and to regulate flows in the Davis Aqueduct, which has reached maximum capacity.

Wellsville City Irrigation Company, Wellsville Pressurized Irrigation Project
Reclamation Funding: \$1,500,000 **Total Project Cost: \$5,895,000**

The Wellsville City Irrigation Company, located in northern Utah, will convert its existing open earthen ditch system to a pressurized irrigation system throughout the City of Wellsville to provide irrigation water to city residents who are currently using potable water for indoor and outdoor use. The project also includes constructing a small storage pond with a Supervisory Control and Data Acquisition system, pumping station, and two booster pump stations. The project is expected to result in annual water savings of 1,960 acre-feet that is currently lost to seepage, evaporation, and operational spills. The project will allow for more water to remain in the Hyrum Reservoir until later in the irrigation season, which will provide increased flows in the Bear River, primarily to benefit the Bear River Migratory Bird Refuge.

Washington

Kittitas Reclamation District, South Branch Canal Efficiency Project
Reclamation Funding: \$975,000 **Total Project Cost: \$1,950,000**

The Kittitas Reclamation District located near Yakima, Washington, will install 4,637 feet of double barrel 60-inch, steel reinforced polyethylene pipe on the existing earthen South Branch Canal. The project is expected to result in annual water savings of 515 acre-feet currently lost to seepage and operational spills. The water conserved through the project will be delivered to Manastash Creek for instream flows to benefit threatened species, including Coho and Chinook salmon. The project is consistent with a memorandum of agreement between Reclamation, the Washington Department of Ecology, and the District to address water management issues in over-appropriated or flow-impaired tributaries to the upper Yakima River.

City of Leavenworth, City of Leavenworth Advanced Metering Infrastructure Project
Reclamation Funding: \$300,000 **Total Project Cost: \$975,000**

The City of Leavenworth, located in central Washington, will upgrade 1,400 existing manual-read primarily residential water meters with an advanced metering infrastructure (AMI) system. The system will include meters, data collection stations, radio transmitters, meter data analysis, and billing hardware and software. The AMI system will provide the City with real-time data to detect distribution system losses and unusual or continuous usage patterns. By improving metering accuracy, the project is expected to result in annual water savings of 22 acre-feet, which will remain in Icicle Creek.

Quincy-Columbia Basin Irrigation District, West Canal Lining

Reclamation Funding: \$300,000

Total Project Cost: \$833,264

The Quincy-Columbia Basin Irrigation District, located in central Washington, will line 2,500 feet of the earthen West Canal with a geotextile liner covered with concrete to address seepage losses. The project advances the goals of a Memorandum of Understanding (MOU) between the three Columbia Basin Project irrigation districts, the Washington State Department of Ecology, the Washington State Department of Fish and Wildlife, and the Bureau of Reclamation, where the parties have agreed to address regional water reliability concerns including drought, groundwater issues, and improved stream flows to assist salmon recovery. The project is expected to result in annual water savings of 850 acre-feet that is currently lost to seepage. The water conserved will be used to meet actions identified in the MOU, including offsetting groundwater pumping and enhancing flows in the Columbia River.

Wyoming

Austin/Wall Irrigation District, Wall Reservoir Improvement Project

Reclamation Funding: \$300,000

Total Project Cost: \$900,000

The Austin/Wall Irrigation District, located in southwestern Wyoming, will install a clay liner on a portion of the Wall Reservoir to reduce seepage losses. During times of shortage, when water deliveries under existing water rights from the Blacks Fork River are curtailed, the Wall Reservoir serves as a critical source of water for many growers. By addressing seepage, the District expects to be able to fill the reservoir more quickly, allowing for reduced diversions from the Blacks Fork River. Once complete, the project is expected to result in annual water savings of 1,048 acre-feet. Water conserved as a result of the project will help to avoid reduced allocations in times of shortage and will otherwise remain in the Blacks Fork River.

Eden Valley Irrigation and Drainage District, Farson Lateral Phase III Piping and Hydro Project

Reclamation Funding: \$1,500,000

Total Project Cost: \$3,182,900

The Eden Valley Irrigation and Drainage District, located in western Wyoming, will convert 6,200 feet of the unlined Farson Lateral to a 63-inch high-density polyethylene pipeline. Water is currently lost to seepage to the sandy subsurface, which raises the water table and brings salts to the surface. In addition, the project area has a low water holding capacity, resulting in an inefficient delivery system in a region prone to drought. As a result, the District diverts more water from the reservoirs than users require in order to account for seepage loss. The project is expected to result in annual water savings of 666 acre-feet by improving delivery efficiency. The conserved water will be used to avoid reduced water allocations during dry years and will otherwise remain in the Big Sandy and Eden Reservoirs and in the river system, providing recreation and wildlife benefits. This project also positions farmers in the District to implement on-farm improvements through the Natural Resources Conservation Service's Environmental Quality Incentives Program by providing a pressurized system that can be used by farmers to convert to sprinkler irrigation. Lastly, the project includes the installation a 2-kilowatt hydro turbine to help offset project energy consumption.

Kirby Ditch Irrigation District, Kirby Ditch Lower Reach Piping Project

Reclamation Funding: \$737,966

Total Project Cost: \$2,236,260

The Kirby Ditch Irrigation District, located in central Wyoming, will convert 2.56 miles of the open Kirby Ditch to a buried polyvinyl chloride pipeline. The pipeline will service six landowners, totaling 704 acres, and enable improved water delivery. The project is expected to result in annual water savings of 1,008 acre-feet, which is currently lost to seepage. As a result of the project, the District will reduce its diversions from the Big Horn River and will also be able to avoid purchasing water from Boysen Reservoir. Once completed, the project will allow landowners to increase on-farm irrigation efficiency by converting to gated pipe and pivot irrigation.