



## FY 2022 Environmental Water Resources Projects

### Arizona

#### **Salt River Project Agricultural Improvement and Power District, Roosevelt Watershed Protection and Forest Thinning Project**

**Reclamation Funding: \$560,250**

**Total Project Cost: \$747,000**

The Salt River Project Agricultural Improvement and Power District will work with partners to reduce risk of extreme fire events and protect municipal water supplies by mechanically harvesting timber and restoring forest function to over 370 acres of overgrown forest in the Roosevelt project, within the East Clear Creek Watershed of Coconino National Forest in northern Arizona. Forest in this area is at high risk of a catastrophic wildfire that could impact the habitat of the endangered Mexican Spotted Owl, lead to erosion and harm water quality downstream, damage Reclamation-owned infrastructure, and impair the Salt River Project's ability to reliably provide water to municipal consumers. This project will reduce the risk to water supplies, restore forest resiliency, and increase habitat protection for the Mexican Spotted Owl. This work is part of the Cragin Watershed Protection Project, a collaborative effort by the Bureau of Reclamation, United States Forest Service, Salt River Project, National Forest Foundation, and the City of Payson, AZ.

### California

#### **Marin Municipal Water District, Lagunitas Creek Stream Channel Restoration Project**

**Reclamation Funding: \$1,400,000**

**Total Project Cost: \$1,900,045**

The Marin Municipal Water District will restore stream habitat supporting endangered and threatened salmonids in two sections of Lagunitas Creek, located in western Marin County, California. This project includes installation of 15-20 large woody debris structures and 850 tons of gravel for coho and steelhead spawning to improve riffle-pool habitat, creating and improving salmonid spawning and fry rearing habitat. The wood structures will also provide additional shelter and create scour pools, providing winter velocity refugia and summer thermal refugia. The District implements minimum instream flow schedules in Lagunitas Creek and due to the current drought in California, water supply is being significantly strained. This project will help mitigate the impacts that upstream water supply infrastructure has on downstream habitat for state and federally threatened and endangered species, as well as reduce drought impacts and increase water management flexibility in. The Lagunitas Creek Stewardship Plan

identifies this project as a stewardship goal to support the enhancement and protection of aquatic resources. The District will work closely with the Lagunitas Technical Advisory Group, comprised of county, state, and Federal agencies, NGOs, and land trusts.

### **San Bernardino Valley Municipal Water District, Anza Creek Aquatic and Riparian Habitat Restoration Project**

**Reclamation Funding: \$2,000,000**

**Total Project Cost: \$3,554,224**

The San Bernadino Municipal Water District will create and restore habitat for the threatened Santa Ana sucker in Anza Creek, a tributary to the Santa Ana River, in Riverside County, California. This project is one of the first habitat restoration components to be implemented as part of the broader Santa Ana River Conservation and Conjunctive Use Program, a multi-agency, watershed-wide collaborative program designed to improve the Santa Ana River watershed's water supply resiliency and reliability. The project addresses potential implications of climate change and decreases in riparian habitat, leading to isolated and fragmented habitat for threatened and endangered species. The project sponsors will create an additional 3,429 linear feet of stream channel to support suitable native fish habitat in Anza Creek with gravel and habitat structures, build 1.1 acres of new flood plain habitat to support riparian bird species, rehabilitate approximately 114 acres of riparian habitat through removal and replacement of non-native plant species, and restore hydraulic connection between Anza Creek and the Santa Ana River to reduce the impacts of drought.

### **Resource Conservation District of Monterey County, Salinas River Arundo Eradication Project Phase V**

**Reclamation Funding: \$1,479,262**

**Total Project Cost: \$1,975,049**

The Resource Conservation District of Monterey County will eradicate invasive Arundo donax (arundo) from 150 acres within a five-mile stretch of the Salinas River between the cities of Soledad and Gonzales in Monterey County, California. Arundo infestations degrade fish and wildlife habitat, alter hydrologic processes, increase fire risk, and increase flood risk to neighboring lands. Arundo control has been identified as a priority project in all the Groundwater Sustainability Plans developed by the Salinas Valley Basin Groundwater Sustainability Agency and its stakeholders. Arundo will be removed through mechanical and chemical means, and native riparian plants will be seeded into control areas. This project is part of an effort to treat approximately 1,500 riparian acres in the Salinas River and is supported by the Greater Monterey County Integrated Regional Water Management Plan and the Salinas River Long-Term Management Plan. The District will partner with the Salinas Valley Basin Groundwater Sustainability Agency, the Monterey County Agricultural Commissioner's Office, the California Wildlife Conservation Board, and private landowners along the Salinas River.

**El Dorado County Water Agency, Post-Caldor Fire Watershed Restoration for Securing Water Supply for the Grizzly Flats Community**

**Reclamation Funding: \$1,875,000**

**Total Project Cost: \$2,500,000**

The El Dorado County Water Agency, in partnership with the El Dorado and Georgetown Divide Resource Conservation Districts, will implement post-wildfire reforestation of approximately 280 acres of burned land in the North Canyon Creek and Big Canyon Creek Watersheds affected by the 2021 Caldor Fire near El Dorado County, California. The Caldor Fire burned these watersheds which provide the sole water supply for the community of Grizzly Flats. The fire left behind debris and resulted in loss of habitat and vegetation cover, and water quality impairments. This project will improve water quality and reduce the cost of maintaining the water supply system by salvaging merchantable timber and clearing dead trees. Reforestation will include planting native coniferous tree species such as ponderosa pine, sugar pine, incensed cedar, and Douglas fir, within the 280-acre project area, reducing non-native plant invasion and creating wildlife habitat. The project is supported by the El Dorado County Water Agency's 2019 Water Resources Development and Management Plan.

## **Colorado**

**The Nature Conservancy, Modernization of the Maybell Irrigation District's Diversion from the Yampa River in Colorado**

**Reclamation Funding: \$1,920,900**

**Total Project Cost: \$2,627,575**

The Nature Conservancy, in partnership with the Maybell Irrigation District, will improve the instream Maybell diversion on the Yampa River and restore endangered fish habitat in Moffat County, located in northwest Colorado. The existing diversion structure impedes the safe passage of three endangered fish species and one threatened fish species, and is a danger to recreational watercraft. The project partners will install a series of boulder grade control structures to maintain water depth, improve fish passage, and reduce boating hazards. The partners will also improve the current diversion structure by filling in large holes that require push-up dams to be annually constructed during low-flows, restructuring the stream bed, and installing supervisory control and data acquisition infrastructure to better manage water flow. This project will improve fish passage across the diversion while preserving water rights to agricultural stakeholders. This project is aligned with the Upper Colorado River Endangered Fish Recovery Program and Maybell Improvement Plan, which involve collaboration by federal, regional, water district, recreational group, and other stakeholders.

**Trout Unlimited, Pagosa Gateway Project**

**Reclamation Funding: \$375,000**

**Total Project Cost: \$2,042,795**

Trout Unlimited, in partnership with the Town of Pagosa Springs and the Upper San Juan Watershed Enhancement Partnership, will improve a 2.5-mile stretch of the San Juan River in Archuleta County, Colorado. Prolonged drought in the area has changed stream hydrology

resulting in low flows affecting water temperature and available fish habitat, especially for native fish such as the Flannel mouth sucker and the Bluehead sucker, as well as reducing recreational river use. The project includes low-flow channel shaping, placement of grade-control structures and habitat structures, approximately 1,295 linear feet of riparian revegetation, and stabilization and regrading of streambank along the 2.5-mile project area. The re-shaping of the channel and addition of grade-control structures will increase water supply reliability and availability at low flows during the late summer and fall seasons. Riparian revegetation will provide shaded areas and habitat diversity, cooling water temperatures critical to the viability and quality of the sport fishery through the Town of Pagosa Springs. Recreational use of the river is an important economic driver for the local community and modifications to the stream channel will also make the channel more passable by watercraft during low flow conditions, extending the period of time when people can utilize the river. Streambank stabilization work to remove old cars and debris and replace it with rock, woody materials and vegetation will provide ecologic benefits and it will also improve safety. This project is supported by the Partnership's Upper San Juan Integrated Water Management Plan. The Partnership includes a variety of stakeholders, including Federal and state agencies, agricultural entities, water districts, universities, and environmental entities.

## Hawaii

### **State of Hawai'i DLNR Division of Forestry and Wildlife, Protecting Forests for Water Supply Sustainability in Kohala, Hawaii Phase 1**

**Reclamation Funding: \$996,487**

**Total Project Cost: \$1,411,192**

The State of Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife, in partnership with the Kohala Watershed Partnership, will protect 1,900 acres of forested and wetland habitat from invasive species and disease and will replant native trees in riparian corridors in Central Kohala Mountains, County of Hawai'i, in the State of Hawai'i. Invasive feral pig populations are responsible for the loss of over half of Hawai'i's original forests, negatively impacting water supply, increasing flood risk and land erosion, and threatening several listed species. The project partners will remove all feral pigs from the identified region and construct a fence to prevent any return of invasive feral pig populations in the future. The partnership will also replant native species and remove invasive plants. Preserving these 1,900 acres will provide projection for seven federally endangered plant species, improve the timing and quantity of available water, and improve stream and riparian conditions along with forested ecosystems. The Kohala Watershed Partnership is an innovative partnership consisting of 11 major landowners and the County of Hawai'i Department of Water Supply. The partnership's approved management plan identifies feral pigs as a top threat to the forests of Kohala.

## **State of Hawai'i DLNR Division of Forestry and Wildlife, Protecting Forests for Water Supply Sustainability in Kohala, Hawaii Phase 2**

**Reclamation Funding: \$931,783**

**Total Project Cost: \$1,259,166**

The State of Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife, in partnership with the Kohala Watershed Partnership, will protect an additional 800 acres of forested and wetland habitat from invasive feral pigs in Central Kohala Mountains, County of Hawai'i, in the State of Hawai'i. Invasive feral pig populations are responsible for the loss of over half of Hawai'i's original forests, negatively impacting water supplies and threatening the population of several listed species. This project will remove all feral pigs from the identified region and construct a fence to prevent any return of invasive feral pig populations in the future. Preserving these 800 acres will provide protection for several federally endangered plant species and improve both timing and quantity of available water. The Kohala Watershed Partnership is an innovative partnership consisting of 11 major landowners and the County of Hawai'i Department of Water Supply. The partnership's approved management plan identifies feral pigs as a top threat to the forests of Kohala.

## **Idaho**

### **Friends of the Teton River, Inc, Reconnecting Canyon Creek**

**Reclamation Funding: \$2,000,000**

**Total Project Cost: \$3,271,302**

Friends of the Teton River, located in Teton County, Idaho, in collaboration with the Canyon Creek Canal Company, will improve agricultural water reliability and restore instream flows to Canyon Creek by relocating diversions from the creek to the larger Teton River. Canyon Creek supports a core conservation population of Yellowstone Cutthroat Trout and is a high-priority for restoration due to its significance as a productive spawning tributary with 35 miles of high-elevation habitat. The lower 10 miles of stream to the confluence with the Teton River has been seasonally dewatered at the Canyon Creek Canal, causing ecological and water quality issues. To discontinue diversion at the Canyon Creek Canal, the project partners will make infrastructure improvements and management changes at three irrigation systems, increasing their capacity and ability to deliver water from the main-stem of the Teton River, which is not flow-limited, resulting in a water savings of 4.73 cubic feet per second and improved water supply reliability for irrigation and downstream users. Up to 10,680 acre-feet of water will be restored annually to Canyon Creek. Once the project is complete, the Company will close the canal, eliminating fish entrainment, habitat connectivity concerns, and water quality impairment. This project is supported by the Canyon Creek Water Management Plan, developed through a WaterSMART Cooperative Watershed Management Program Phase I grant, and is endorsed by a broad range of stakeholders including other irrigation delivery entities, conservation groups, government agencies, and water users.

## **Board Of Control for Triangle Irrigation and Wood River, Board of Control Diversion 45 Stabilization and Fish Passage Remediation**

**Reclamation Funding: \$629,000**

**Total Project Cost: \$839,000**

The Board of Control for Wood River Valley Regional Irrigation District No. 45 and Triangle Irrigation District will improve a diversion dam on the Big Wood River in Bellevue, Idaho. The current dam blocks upstream fish passage, leading to urgent and ongoing fish rescue operations to save over 10,000 salmonid fish. The dam also is causing upstream sedimentation and downstream erosion, damaging the river hydrology. The project partners add fish passage and sedimentation passage to the existing diversion dam by installing multiple large woody material structures, improving hydrologic connectivity to floodplains, and revegetating the area. This project will restore fish passage and improve sediment transport at the diversion dam while maintaining diversion functionality, stabilizing the existing diversion, and improving riverine and floodplain conditions. This project is part of the 2019 Bellevue Project Area Conceptual Restorations Designs Report, which was developed with collaboration of water users, dam operators, Trout Unlimited, Wood River Land Trust, Bellevue city and community, The Nature Conservancy, and Idaho Fish and Game.

## **The Northwestern Band of the Shoshone Nation, Battle Creek Ecological Restoration at Sowo Gahni**

**Reclamation Funding: \$1,999,711**

**Total Project Cost: \$3,002,168**

The Northwestern Band of the Shoshone Nation will conduct stream channel restoration along Battle Creek Tributary in Franklin County, Idaho. Battle Creek has been channelized into an open earthen ditch that carries significant sediment to the mainstem of the Bear River. Over the past 160 years, the riparian habitat along the Bear River and its tributaries have been degraded due to agricultural production resulting in impacts on local habitat, water supply, and water quality. This project will replace channelized sections of the creek with natural stream meanders, construct a concrete diversion structure with fish passage, install Beaver Dam Analogs, and remove invasive species and revegetate with native species. The project will restore fluvial and biological processes of the riverine ecosystem in lower Battle Creek, improving water quality and flood mitigation, and preserve culturally important habitats and species. Restoration will also enable the site to absorb more annual precipitation, increasing groundwater recharge and piping poorly maintained ditches will reduce water loss by an estimated 120 acre-feet per year. The project has been developed collaboratively with Trout Unlimited, Utah State University, Sageland Collaborative, Utah Nature Conservancy, Bonneville Environmental Foundation, PacifiCorp's Bear River Environmental Coordination Committee, The U.S. Fish and Wildlife Service, and Sagebrush Steppe Land Trust.

## Montana

### **Sun River Watershed, Muddy Creek Restoration and Resilience Project, Phase I**

**Reclamation Funding: \$1,769,323**

**Total Project Cost: \$2,320,033**

The Sun River Watershed Group, in partnership with Greenfields Irrigation District, will restore the flow regime and channel in a 3-mile stretch of Muddy Creek, a tributary to the Sun River in central Montana, to improve water quality, enhance fish and wildlife habitats, and restore hydrologic processes. Historic irrigation practices and unnatural high streamflow events due to irrigation returns have damaged stream banks, resulting in massive erosion that contributes sediment and nutrients into the creek. The project will expand the capacity of an existing re-regulation reservoir to restore hydrologic processes to the creek by allowing for attenuation and more efficient management of the excess irrigation water and conserve up to 8,000 acre-feet of water annually. Project partners will also restore the stream channel with riffle grade control, floodplain expansion, and low-impact bank treatments. These restoration activities will reduce erosion, improve water quality, enhance riparian and aquatic habitat, restore vegetation, and reconnect floodplains, restoring hydrologic processes and habitat. These combined projects were identified as the top priorities in a Master Plan for Muddy Creek, developed under a 2020 WaterSMART Cooperative Watershed Management Program Phase 1 grant, supported by diverse stakeholders.

## Nevada

### **Southern Nevada Water Authority, Las Vegas Wash Riparian Restoration Project**

**Reclamation Funding: \$900,500**

**Total Project Cost: \$1,214,772**

The Southern Nevada Water Authority (SNWA), located in southern Nevada, will revegetate and restore approximately 13 acres of riparian corridor in the Clark County Wetlands Park (CCWP). Millions of gallons of highly treated effluent, urban runoff, and shallow groundwater are channeled from the Las Vegas Wash through the CCWP to Lake Mead each day. The CCWP has been degraded due to erosion and water quality issues. SNWA will revegetate the area with native riparian plants stabilizing the sediment, providing wildlife habitat, managing flooding, and improving water quality for downstream wildlife and human uses. This project will improve habitat for two federally listed bird species, the endangered southwestern willow flycatcher and the threatened, yellow-billed cuckoo. The project is supported by the Wash Comprehensive Adaptive Management Plan and SNWA's Regional Water Quality Plan to enhance the environment for fish and wildlife and manage the watershed to help protect Lake Mead. This project has support from the Las Vegas Valley Watershed Advisory Committee and the Nevada Department of Conservation and Natural Resources.

## Oregon

### **Rogue Valley Council of Governments, Bear Creek Fish Passage Barriers Removal**

**Reclamation Funding: \$784,151**

**Total Project Cost: \$1,051,875**

Rogue Valley Council of Governments will restore natural channel hydrology and fish passage to a highly disturbed reach of Bear Creek within the City of Medford, Oregon. Bear Creek, a tributary to the Rogue River, provides important spawning and rearing habitat for Southern Oregon and Northern California Coasts coho salmon, which are impacted by poor water quality, low flow, and restrictions to fish passage and listed as threatened under the Endangered Species Act and are a culturally significant species for local tribes. This project will remove three existing barriers and install large wood and gravel to increase suitable habitat for salmon spawning. These actions will improve access to 8 miles of potential spawning and rearing habitat for several native fish species and improve water quality by reducing polluted sediment, increasing oxygenation and decreasing water temperatures. Other project benefits include reducing bank erosion, stream-bed improvements to improve stream functions, and improved aesthetic value of the recreational Bear Creek Greenway multi-use trail. The trail also follows an ancient travel route used by the Shasta and Takelma Indians and restoration of seasonal flow to the ancestral lands provides important benefits to culturally significant species. The project is supported by the Rogue Basin Action Plan and multiple partners, including the Oregon Department of Transportation, Oregon Department of Fish and Wildlife, the Rogue River Valley Irrigation District, the City of Medford, and the Rogue River Watershed Council.

### **East Fork Irrigation District, Oanna & Yasui Sublateral Efficiency Project**

**Reclamation Funding: \$2,000,000**

**Total Project Cost: \$3,400,000**

The East Fork Irrigation District will upgrade the Oanna and Yasui sublateral irrigation pipeline with 10,700 feet of high-density polyethylene pipe and install nine pressure-reducing stations along the new pipeline to improve water reliability and increase instream flows in the East Fork Hood River and mainstem Hood River in northwestern Oregon. The East Fork Hood River supports populations of spring Chinook salmon, winter and summer steelhead, and coho, which are federally listed under the Endangered Species Act. The District currently diverts over 80% of the streamflow for consumptive use during the peak of irrigation season. The pipeline upgrades will create an enclosed, pressure-rated system that will conserve water and decrease the District's water diversion, increasing streamflow and adequate fish habitat for native fish populations. This project is supported by the Hood River Conservation Strategy for the Hood River Watershed. The project has support from local irrigation districts, the Confederated Tribes of the Warm Springs Reservation, Oregon Water Resources Department, Oregon Department of Fish and Wildlife, local governments, and the Hood River Watershed Group.

**Curry Watersheds Nonprofit, Sixes Riverbank Restoration and Estuary Enhancement Reclamation Funding: \$268,789** **Total Project Cost: \$358,558**

The Curry Watersheds Nonprofit, in conjunction with Oregon Parks and Recreation Department and the privately-owned Sweet Ranch, will stabilize and protect the bank and riparian habitat and improve water quality along the Sixes River estuary on the southern Oregon coast, as well as protect working agricultural lands and irrigation structures along the project reach. Severe erosion along the Sixes River delivers excess sediment and pollution into the estuary and has threatened pasture irrigation systems. A lack of riparian vegetation leads to higher water temperatures and reduces complexity of instream habitat, affecting the threatened Oregon Coast coho salmon's spawning and rearing. The partners will regrade the bank slope and install lateral log structures for 2,300 feet of the Sixes riverbank to redirect the channel away from the bank, and will also plant willow, bare root shrubs, hardwood, and coniferous trees to create three acres of riparian habitat along the river. These efforts will slow or stop the erosion, stabilize the riverbank, improve water quality, and create complex instream habitat for summer and winter juvenile fish rearing in and around the estuary. Reducing erosion supports working lands efforts to exclude livestock from the river and establish a riparian reserve, increases valuable pastureland and protects existing irrigation practices, which support ranches that are an asset to the local economy and agricultural community. Restoration of ancestral lands for The Confederated Tribes of the Siletz Indians also supports federal Tribal trust responsibilities. The Strategic Action Plan prioritizes this project for the Sixes River Watershed, developed by the South Coast Watershed Council and Curry Watersheds Partnership. Other project partners include federal and state agencies, the Coquille Indian Tribe and Confederated Tribes of the Siletz Indians, land trusts, and environmental groups.

## **Puerto Rico**

**Protectores de Cuencas Inc., Accelerating Recovery and Increasing Resiliency of Coastal Wetlands in Punta Tuna Natural Reserve in Maunabo, Puerto Rico**  
**Reclamation Funding: \$509,694** **Total Project Cost: \$1,059,842**

Protectores de Cuencas, Inc., in collaboration with the Puerto Rico Department of Natural and Environmental Resources, will restore 107 acres of coastal wetlands in the Punta Tuna Natural Reserve in southeastern Puerto Rico. In 2017, Hurricane Maria caused physical damage and deposited debris that blocked channels, prevented drainage, and drowned mangroves and other coastal tree species. The project will remove debris, reestablish hydrologic connections, provide habitat for threatened and endangered native species, restore coastal dunes, and improve water quality. Land-based sources of pollution will be prevented from reaching coastal ecosystems through construction of a natural vegetative buffer area. Construction of a permeable parking lot will also improve recreational opportunities. The Reserve is one of the most visited sites in the area and improvement of infrastructure and restoration will improve visitor conditions, increasing economic opportunities for the local community. This collaborative coastal

restoration project will restore intertidal connectivity to create a more resilient ecosystem to the potential effects of climate change. The Department of Natural and Environmental Resources led the development of the Wetlands Course of Action for the Federal Emergency Management Agency Recovery Plan, which prioritized interventions to restore and enhance wetland functions at various wetlands around the country and specifically recommended active management of the Punta Tuna wetlands.

## Texas

### **Cameron County Water Improvement District No. 10, Pipeline Improvements and Laguna Atascosa National Wildlife Refuge Water Management Improvements** **Reclamation Funding: \$1,500,000**                      **Total Project Cost: \$2,000,000**

The Cameron County Water Improvement District No. 10, located in Cameron County in south Texas, in partnership with the Cameron County Irrigation District No. 6 and Bayview Irrigation No.11 will improve efficiency within the District and provide a more consistent water supply to the Laguna Atascosa National Wildlife Refuge. The Laguna Atascosa National Wildlife Refuge consists of over 1,500 acres of wetlands and is home to a rich and diverse population of plants, insects, and animals; including Federally endangered and threatened species, like the Ocelot, providing habitat for one of the last breeding populations in the United States. The project will pipe 5,100 linear feet of the open Tract 43 Road Canal with polyvinyl chloride pipeline and improve 1,100 linear feet of the Pump 7 pipeline. The conserved water will be utilized to offset transmission losses through the District's Resaca de Los Cuates system, while delivering Rio Grande water to the Laguna Atascosa National Wildlife Refuge. Delivery through the Resaca de Los Cuates via the three districts during periods of drought will reduce salinity in the Resaca system, benefitting agriculture through improved soil health and crop yields. The piping of canals is identified in the 2021 Rio Grande Regional Water Plan developed by the Rio Grande Regional Water Planning Group, a local watershed group.

## Utah

### **Cache Water District, Lower Logan River Trapper Park River Restoration Project** **Reclamation Funding: \$2,000,000**                      **Total Project Cost: \$2,894,000**

The Cache Water District, along with the Logan River Blacksmith Fork Irrigation Company and others, will restore approximately 11,000 feet of banks of the Logan River near Logan, Utah, just northeast of Salt Lake. Past land-use practices have impaired the reach of the river through years of agricultural encroachment, overgrazing, and encroachment by invasive plant species, which have prevented or eliminated mid-level and ground-level vegetation and other native species. The District will improve an irrigation diversion, pipe the delivery canal, remove debris, eliminate invasive plant species, and grade vertical banks. The project will improve channel-floodplain interaction, enhance instream habitat for aquatic species, and strategically limit bed

scour that creates water quality issues. The Logan River Blacksmith Fork Irrigation Company would receive water savings of 1,225 acre-feet of water annually, which is currently being lost to seepage. Conserved water would be used to supplement water needed to stabilize the agricultural production. Recreational users would also benefit from increased safe access to approximately 2 miles of river and two new access points planned by Logan City. This project aligns with the Logan River Conservation Action Plan. Project supporters include Logan River Blacksmith Fork Irrigation Company; private landowners; Trout Unlimited, Logan City; U.S. Army Corp of Engineers; and the Utah Division of Water Resources.

### **Trout Unlimited, Weber River Ecological Resiliency Project**

**Reclamation Funding: \$1,864,032**

**Total Project Cost: \$2,488,376**

Trout Unlimited, in partnership with the Weber Basin Water Conservation District, will improve the natural river system within the Weber River Basin in northern Utah by implementing key resilience activities. The condition of the Weber River has dramatically declined over the past 20 years due to widespread habitat fragmentation caused by the construction of water diversions, road and utility crossings, and habitat loss due to channelization, flood control, and channel downcutting. The river, which provides critical drinking and irrigation water for approximately 21% of Utah's population, is impacted by severe erosion, bank instability, and degraded water quality. The project will implement 17 Beaver Dam Analog projects along nine miles of degraded streams, modernize a diversion headgate, and conduct side-channel restoration and floodplain reconnection in 1.5 miles of the mainstem of the Weber River. These restoration efforts will help restore floodplain resiliency, improve distributed natural storage systems, create wider riparian corridors, and enhance aquatic and riparian habitats, particularly for native bluehead sucker and Bonneville cutthroat trout. Improving channel conditions and floodplain dynamics will also improve recreational access and reduce sedimentation entering Echo and Rockport reservoirs. Reconstruction of the diversion structure that supplies water to the Dinsdale Irrigation Company will provide additional access for water deliveries and improve local water security. The Weber River Watershed Plan supports the implementation of this project. The project has support from the Summit Conservation District, private landowners and ranchers, state agencies, and Non-Government Organizations.

### **Trout Unlimited, Paris Creek Hydropower Decommissioning and Instream Flow Restoration**

**Reclamation Funding: \$900,798**

**Total Project Cost: \$2,851,762**

Trout Unlimited, in partnership with PacifiCorp and the Bear River Environmental Coordination Committee, will restore stream flows to four miles of the headwaters of Paris Creek, located in south-east Idaho. The project will address the decline of the Bonneville Cutthroat Trout in a portion of the Bear River Watershed where base flows in the creek are currently being diverted for nine months of the year. The project partners will decommission and remove the Paris Hydropower Plant and associated features, restoring a normative hydrograph to this reach of

Paris Creek and improving fish passage and habitat. In addition, the partners will reduce water loss in a sink hole and construct a new irrigation diversion with a fish screen and two stock water systems to meet water delivery requirements. The project is a collaborative endeavor among PacifiCorp, the Bear River Environmental Coordinating Committee (comprised of federal, state, non-profit, and tribal representatives), canal companies, and stock-water interests and is outlined in the Paris Creek Restoration Agreement and a Memorandum of Understanding Regarding Paris Creek Project Decommissioning.

## Washington

### **Kittitas Reclamation District, South Branch Piping**

**Reclamation Funding: \$2,000,000**

**Total Project Cost: \$2,666,666**

The Kittitas Reclamation District will line 1,902 linear feet of the South Branch Canal in Kittitas County, in central Washington. The water in the canal that is currently lost through seepage and evaporation will be dedicated to instream flows in upper Yakima River tributaries. Instream flows will benefit designated critical habitat for Endangered Species Act listed steelhead and bull trout. A Memorandum of Agreement between the District, Reclamation, and the Washington Department of Ecology, ensures that conserved water will be delivered to tributaries for instream flows. The District will use a committee of local Yakima Basin fisheries and water professionals to identify tributaries most in need of instream flows on an annual basis. The implementation of the project is part of the Yakima Basin Integrated Plan that identifies elements needed to achieve a balanced and comprehensive approach to water resource management and ecosystem restoration in the Yakima River Basin. The project has support from the Yakama Nation, state and local governments, conservation districts, Non-Government Organizations, and the National Oceanic and Atmospheric Administration.

### **Clallam Conservation District, Irrigation Efficiency and Improvement Project**

**Reclamation Funding: \$1,535,937**

**Total Project Cost: \$2,368,558**

Clallam Conservation District, in partnership with the Sequim Prairie-Tri Irrigation Association and the Washington Department of Fish and Wildlife, will improve instream flows in the Dungeness River in northwest Washington by piping 11,500 feet of open irrigation ditches and improving the Sequim Prairie-Dungeness Irrigation District Diversion on the Dungeness River. The Dungeness River suffers from low flows, adversely affecting habitat for four Endangered Species Act listed salmonids. The diversion improvements include construction of a concrete irrigation diversion/spillway structure to replace an existing gravel push-up berm reducing irrigation water conveyance losses by approximately 533 acre-feet annually and eliminating the need for regular instream maintenance work that impacts high-value salmon spawning habitat and redds. This project is identified in the WRIA 18 Watershed Plan, Dungeness River Agricultural Water Users Association Comprehensive Water Conservation Plan, the North Olympic Peninsula Lead Entity for Salmon Workplan, and is supported by the Jamestown

S’Klallam Tribe, Washington State Conservation Commission, Washington State departments of Fish & Wildlife and Ecology, local government, numerous conservation groups, and irrigation water users.

**Clallam County, Dungeness Reservoir Irrigation Conveyance Improvement Project**  
**Reclamation Funding: \$1,813,275**                      **Total Project Cost: \$2,417,700**

Clallam County will implement a water conservation and diversion improvement project to improve flows in the Dungeness River near the City of Sequim in northwest Washington. The Dungeness River supports Endangered Species Act listed Puget Sound Chinook, Puget Sound Steelhead, Hood Canal/Strait of Juan de Fuca Summer Chum, and Bull Trout. However, populations have declined and drought conditions in the late summer have impacted migration and spawning habitat. The project will pipe 2,900 feet of an open canal, install an automated headgate at the intake and upgrade a flow control structure at an irrigation split, allowing for responsive management based on water demand. Water conserved through the project during the winter and spring will be held in an off-channel reservoir and released during summer months to help meet instream flow needs during peak irrigation season. The project will also upgrade existing fish screens to reduce fish mortality. This project stems from multiple planning efforts, including the Elwha Dungeness Watershed Plan and the comprehensive Irrigation District Management Plan. Project partners include Clallam Conservation District, Dungeness Water Users Association, Jamestown S’Klallam Tribe, Sequim, Washington Department of Ecology, Washington Department of Fish and Wildlife, and Washington Water Trust.

## **Wyoming**

**Wyoming Game and Fish Department, New Fork River Gas Wells River Restoration and Fish Habitat Improvement**  
**Reclamation Funding: \$100,000**                      **Total Project Cost: \$133,400**

The Wyoming Game and Fish Department will restore 1.4 miles of the New Fork River located in west-central Wyoming. This stretch of river is characterized by wide and shallow stream channels and high sediment inputs from multiple sources resulting in high sedimentation, streambank instability, poor water quality and reduced fish habitat. The project sponsors will complete habitat restoration, including installing engineered structures and riparian vegetation planting that will stabilize eroding banks, create habitat pools, and reduce sedimentation. The project sponsors will also narrow the channel and use bank re-sloping to stabilize streambanks and construct river channels to improve stream function and floodplain connectivity, store water during low flow events, and increase groundwater recharge. Improved water retention in the flood plain will boost forage productivity, benefitting livestock producers in addition to wildlife, and provide additional recreational benefit for boaters and anglers. This project supports the Department’s Lower New Fork Riverscape Restoration Plan developed collaboratively through

stakeholder input. This project will be completed in collaboration with Trout Unlimited and the Bureau of Land Management – Pinedale Field Office.

### **Deaver Irrigation District, D52 Lateral Piping and Shoshone River Sediment Reduction Project**

**Reclamation Funding: \$2,000,000**

**Total Project Cost: \$3,815,900**

The Deaver Irrigation District will install approximately 3.6 miles of pressurized pipe within the existing alignment of the D52 Lateral, fully enclosing the lateral to improve water delivery efficiency and water quality in Polecat Creek, in northern Wyoming. In addition, a new system meter will be installed at the head of the main lateral and individual meters at each user turnout. The lateral is currently an open earthen canal which loses water through seepage in the underlying soils and evaporation. The District currently has to over-deliver water to ensure all irrigators receive their entitlement of water and the resulting tailwater causes significant erosion and degrades water quality and aquatic habitats by contributing sediment, nitrogen, phosphorus, and bacteria through Polecat Creek to Sage Creek, a major Shoshone River tributary. This project will improve delivery system efficiencies, reducing water losses by 1,237 acre-feet per year, and significantly reduce sediment and bacteria contributions to Polecat Creek. Water conserved will remain in Buffalo Bill Reservoir and benefit recreation and ecological values for extended periods throughout the year, reducing impacts of drought and low-flow conditions. The implementation of this project is supported by the Lower Shoshone River Level I Watershed Study. The project has support from neighboring conservation districts, the Wyoming Department of Environmental Quality, and the Wyoming Water Development Commission.