BUREAU OF RECLAMATION

COOPERATIVE WATERSHED MANAGEMENT PROGRAM

Developing Collaborative Watershed Management Solutions

U.S. Department of the Interior

Developing Collaborative Watershed Management Solutions

Reclamation's WaterSMART Cooperative Watershed Management Program (CWMP) provides funding to local watershed groups to encourage diverse stakeholders to develop collaborative solutions to address their water management needs. Watershed groups bring together a diverse group of stakeholders, some of which might otherwise be at odds, to provide a platform for collaborative, locally-led, and community-based water resource management. Stakeholders may initially unite around one issue that affects multiple stakeholder groups, for example flood control or wildfire mitigation. However, these groups often evolve to have a more holistic approach: aiming to address multiple issues within the watershed and benefit a wide range of stakeholders.

Funding is provided for the support of watershed groups on a competitive basis for the development of watershed groups and watershed restoration planning activities (Phase I) and the implementation of on-the-ground watershed management projects (Phase II).

Teton Range and Tractor.

PHOTO COURTESY OF FRIENDS OF THE TETON RIVER AND TAKEN BY ROBERT WARREN

BUREAU OF RECLAMATION

Cooperative Watershed Management Program Statistics

As of March 16, 2020

Total Number of Projects and Funding

Since 2012...

Phase I

PROJECTS: **85**

$7.7M FEDERAL FUNDING

Reclamation has provided $7.7 million in Federal funding to fund 85 Phase I projects to complete watershed group development, watershed restoration planning, and watershed management project design.

Since 2017...

Phase II

$900,000

9 WATERSHED GROUPS FUNDED

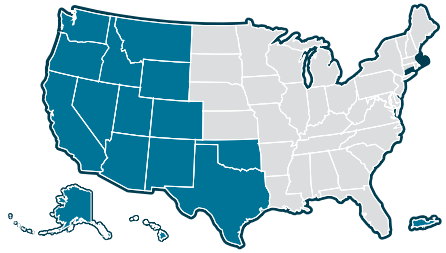
$2.4M ON-THE-GROUND SOLUTIONS

Reclamation has provided $900,000 to nine watershed groups for Phase II on-the-ground watershed manaagement projects. These projects accomplished $2.4 million in collaboratively developed on-the-ground watershed management solutions.

Projects by State

Reclamation has funded Cooperative Watershed Management Program projects in 15 states and one territory:

Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oklahoma
Oregon
Texas
Utah
Washington
Wyoming
The United States Virgin Islands



Watershed Area in which Reclamation has Funded Watershed Restoration Planning Activities

200,000 SQUARE MILES

Reclamation-funded Cooperative Watershed Management Phase I Projects cover 200,000* square miles of watershed area

Phase II Recipients that Received Funding under Phase I

Four of the nine watershed groups funded under Phase II of the program previously received Phase I funding to complete watershed group development and restoration planning.

Restoration Plans Completed

100%

100% of the 27 Phase I projects that included funding for restoration planning successfully produced collaboratively developed watershed restoration plans.

Bringing Together Diverse Stakeholder Interests and Watershed Needs

Recreation

Industry and Power

Agriculture

Wetlands

Fish and Wildlife

Municipal

Each watershed has a unique set of stakeholder interests and watershed needs. Locally driven watershed groups, supported by the Cooperative Watershed Management Program, can provide a venue for stakeholder collaboration, conflict resolution, and development of creative solutions to address water management needs within the watershed.

Conflict Prevention

Local watershed groups funded through CWMP bring together stakeholder groups that have a history of tension or conflict and provide a space to build common ground and find unique solutions to the multiple needs of the watershed.

RECIPIENT

Industrial Development Authority of Gila County

PROJECT NAME

Cobre Valley Watershed Partnership

The Cobre Valley Watershed, within the larger Salt River Basin in south-central Arizona, has water supply and quality concerns due to urban development, population growth, the local mining economy, and impacts of fires, floods, and drought. However, possibly the most pressing issue within the watershed is the historical lack of communication and conflicts among affected stakeholders over water issues. The distrust between communities within the region has hindered adequate planning and resource-sharing.

"The overarching goal of this program is to establish a mechanism for all affected watershed entities, especially those who do not have an existing means to work together, to come together as a group with common goals and objectives. Through this program, a collaborative, successful, and inclusive program can be established to help advance solutions to the significant water resource needs existing in the Cobre Valley"

– Industrial Development Authority of Gila County application for CWMP funding

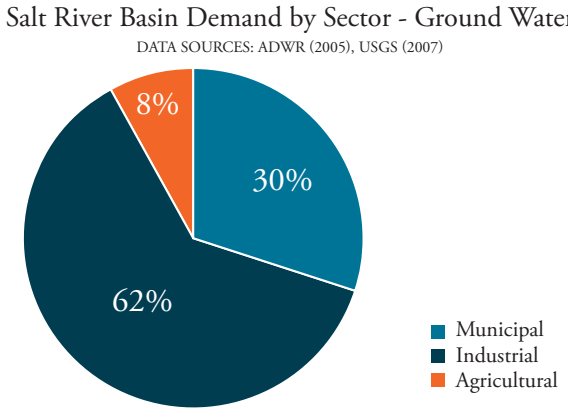
CONFLICT PREVENTION

Project: Cobre Valley Watershed Partnership

In 2018, Reclamation provided $100,000 through a CWMP Phase I grant to the Industrial Development Authority of Gila County, Arizona, to establish the Cobre Valley Watershed Partnership (Partnership). The Partnership will facilitate cooperation within a watershed with a diverse set of interests and a history of lack of communication and distrust. This effort will be the first of its kind in the watershed, as there has previously been little to no formal effort to gather affected stakeholders to develop collaborative solutions to address water management needs.

A diverse group of stakeholders are already engaged with the Partnership, including municipalities, state and Federal agencies, the San Carlos Apache Tribe, community organizations, and non-profit and industry groups. Additionally, the Partnership is bringing together entities that have historically been at odds. For example, the Resolution Copper Company and the San Carlos Apache Tribe, which opposes Resolution's mine, both support and are engaged with the Partnership.

The Partnership is using grant funds to identify and engage additional affected stakeholders; develop a collaborative process to identify water resource issues and needs; develop a consensus-based process to prioritize needs and issues; identify near-term and long-term watershed management solutions; and prepare a written action plan to address prioritized needs and associated solutions.



RECIPIENT

Trout Unlimited

PROJECT TITLE

The Wood River Collaborative

Like many western watersheds, the Big Wood Watershed, in central Idaho, is largely dependent on mountain snowpack to satisfy water demand in the watershed, with snowpack runoff impacting both surface water and groundwater levels. With a trend towards less snowpack, earlier spring runoff, and an increase in consumptive use, water rights are becoming increasingly contentious in the watershed. This tension in the watershed could ultimately lead to curtailments, which could negatively impact economies in areas with more junior water rights.

The Collaborative and its members have leveraged other WaterSMART funding opportunities as well. In 2017, Reclamation provided funding through the Small-Scale Water Efficiency Project funding opportunity for two projects in the watershed that will help address competing water demands. The City of Hailey, Idaho, used Reclamation funding to continue its turf replacement rebate program in order to reduce groundwater withdrawals for municipal irrigation in the upper watershed. The Galena Groundwater District, in south-central Idaho, installed real-time measuring devices on canal-headgates to allow quantification of diversions to surface water users in the lower watershed.

The Big Wood River.

PHOTO COURTESY OF KIRA FINKLER, DIRECTOR OF THE IDAHO WATER PROJECT, TROUT UNLIMITED

"The Collaborative provides an arena for water management solutions to be developed by water users and conservation groups, instead of being directed by the Idaho Dept. of Water Resources or through litigation. These solutions developed by the Collaborative address ground and surface water shortages, ensuring that water is available for agriculture, community uses, and fish and wildlife."

– Keri York, Big Wood River Project Manager, Trout Unlimited

In addition to the planning work they are completing through their CWMP Phase I grant, the Collaborative is actively implementing on-the-ground solutions to their water management needs. The Collaborative is currently completing the Silver Creek Highway 93 Project, which will deliver more surface water to downstream users by restructuring water conveyance to a wetland.

PHOTO COURTESY OF KERI YORK, BIG WOOD RIVER PROJECT MANAGER, TROUT UNLIMITED

STAKEHOLDER COLLABORATION

Project: Cobre Valley Watershed Partnership

In 2018, Reclamation provided $100,000 for the formalization and further development of the Wood River Water Collaborative (Collaborative). The Collaborative provides a forum for conversations between stakeholders with competing needs and to develop a long-term water management framework to balance the needs of water users. With 75 members, the Collaborative typically hosts five to six meetings per year and includes stakeholders from both sides of a pending water call between surface water users in the lower watershed and groundwater users in the upper watershed. The Collaborative is working to achieve basin wide water objectives through strategies such as developing an adaptive water exchange to allow for voluntary implementation of water use changes, pursuing holistic land management strategies as water conservation and water use reductions are implemented, developing an adaptive groundwater management plan, and increasing water conservation through education and local awareness.

In 2019, the Collaborative completed the Bypass Canal Project. The purpose of the project is to ensure adequate irrigation water delivery to agricultural users in the Collaborative, while improving riparian conditions and instream habitat.

PHOTO COURTESY OF KERI YORK, BIG WOOD RIVER PROJECT MANAGER, TROUT UNLIMITED

Holistic Planning

Planning completed through the CWMP is holistic in nature and focuses on multiple needs within the watershed. Planning efforts typically take water quantity, water quality, and restoration needs of the watershed into consideration.

RECIPIENT

The Chickasaw Nation

PROJECT NAME

Establishment of the Lake of the Arbuckles Watershed Association

The Lake of the Arbuckles Watershed, located in the heart of the Chickasaw Nation in south central Oklahoma, is the primary water supply source for municipalities and agricultural operations in the area. The Chickasaw National Recreation Area surrounds the Lake and nearby springs and attracts many visitors each year. This recreational tourism provides important benefits to the economy of south-central Oklahoma.

Project: Establishment of the Lake of the Arbuckles Watershed Association

In 2019, the Association was selected to receive $100,000 in CWMP Phase II funding to work with landowners to implement site specific BMPs outlined in the Plan. The BMPs will focus on removal of invasive cedar trees through prescribed burns and mechanical removal. The Association anticipates that removal of invasive cedar will lead to recovery of native grasses, improved water quality through decreased sedimentation, decreased strain on the Arbuckle-Simpson Aquifer, and reduced flood risk.

In recent years, both water quality and water quantity issues in the Lake have presented challenges for those who rely on it. The Oklahoma Department of Environmental Quality has determined that the lake is impaired for failing to meet dissolved oxygen standards and the Lake is on the U.S. Environmental Protection Agency (EPA's) list of 303(d) impaired waters. Blue-green algae (Cyanobacteria) blooms have also occurred in the lake over the last couple of years, raising concerns about nutrient loading and the lake's trophic status. These issues have impacted both potable water supplies and the ecological health of the watershed. The area also experienced an extended drought from 2011 to 2014, which impacted water supplies and recreation.

The Chickasaw Nation used CWMP funding to collaborate with the Oka' Institute at East Central University to galvanized community leaders and stakeholders to form the Lake of the Arbuckles Watershed Association (Association). Rather than creating rules, the grassroots group focuses on identifying and communicating how implementation of best management practices (BMPs) can benefit the landowners and agricultural operations, in addition to water quality, recreation, and wildlife.

The Association also developed the Lake of the Arbuckles Watershed Restoration Plan (Plan). The Plan explores projects and ideas that ensure the sustainable management of the watershed's water resources, improve soil health, and enhance economic and recreational activities. The Plan also outlines a process for working with stakeholders to implement (BMPs) and other watershed improvement strategies.

HOLISTIC PLANNING

Project: Establishment of the Lake of the Arbuckles Watershed Association

"We are grateful for this opportunity from the Bureau of Reclamation's WaterSMART program to develop the watershed restoration plan for the Lake of the Arbuckles. I believe we are in a position to have the greatest conservation impact on the watershed that Murray County has ever seen and it is an honor to work side-by-side with fellow landowners as well as local, state, tribal, and Federal partners to create and provide local stakeholder-driven solutions for our water quality issues."

– Mr. Larry Keenan, President of the Lake of the Arbuckles Watershed Association and local landowner in Sulphur, OK

Approximately 90 stakeholders attended the Association's Pasture & Habitat Workshop on January 24, 2019.

PHOTO COURTESY OF KRIS PATTEN, THE CHICKASAW NATION.

Background Photo: **Abrams Creek near the JPO Ditch Diversion.**
Inset Photo: **An Abrams Creek cutthroat trout.**
PHOTOS COURTESY OF TROUT UNLIMITED

Stakeholder Collaboration

Collaboration among a diverse group of stakeholders in the watershed is a key pillar of the CWMP. Watershed groups funded through the program bring together stakeholders to build water management solutions that benefit many stakeholder groups.

RECIPIENT

Eagle River Watershed Council, Inc, Eagle, Colorado

PROJECT TITLE

Abrams Creek Cutthroat Trout Habitat Flow Restoration and Irrigation Efficiency Project

In 2017, Reclamation provided $90,000 of CWMP Phase II funding to the Eagle River Watershed Council (Council) to help the Council and numerous collaborators, including Trout Unlimited, Buckhorn Valley Metropolitan District, the Colorado Water Conservation Board, Colorado Parks and Wildlife, the U.S. Fish and Wildlife Service, and the U.S. Bureau of Land Management, converted the entire length of the JPO ditch to 18,900 linear feet of pipe. The project is anticipated to reduce water loss from seepage and evaporation by 40%. Buckhorn Valley Metropolitan District, the water rights holder, has formally agreed to leave a corresponding 40% of flows they are entitled to divert in stream and to stop

Conversion of the JPO ditch to a pipeline.
PHOTO COURTESY OF TROUT UNLIMITED

diversions when flows in Abrams Creek are at or below 1.25 cfs – the flow required to maintain the Abrams Creek cutthroat trout population. This groundbreaking agreement, negotiated between Trout Unlimited and Buckhorn Valley Metropolitan District, was filed with the Eagle County Clerk and Recorder and is directly tied the water right.

Abrams Creek, a small, perennial stream, is home to the only known aboriginal cutthroat trout population in the Eagle River Watershed and one of only a few indigenous populations remaining in the Upper Colorado River Basin. The Abrams Creek population is a genetically distinct population of Green-Lineage cutthroat trout that resides in a relatively low elevation environment compared to most populations of cutthroat trout. These characteristics make the Abrams Creek population a core conservation population of cutthroat, with the potential to benefit reintroduction efforts in the face of increasing temperatures and drought conditions. Preservation and strengthening of the Abrams Creek cutthroat population is a high priority for cutthroat conservation in Western Colorado.

Colorado Parks and Wildlife and U.S. Bureau of Land Management biologists have determined that low flows in Abrams Creek are the largest threat to the Abrams Creek cutthroat population. Approximately halfway down the trout habitat in Abrams Creek, the JPO ditch diverts a significant amount of the stream flows for irrigation of small land parcels. Although a relatively small diversion of just 3.0 cfs, it can leave the downstream portion of Abrams Creek completely dry in some years.

In the early 2000s, as Colorado Parks and Wildlife watched the trout habitat dry up in Abrams Creek, they identified the need to reduce water losses in JPO ditch in order to reduce diversions and increase instream flows in the creek. Over a decade later, the Abrams Creek cutthroat habitat flow restoration and irrigation efficiency project, a collaborative effort between the Council, Trout Unlimited, Buckhorn Valley Metropolitan District, the Colorado Water Conservation Board, Colorado Parks and Wildlife, the U.S. Fish and Wildlife Service, and the U.S. Bureau of Land Management, came to fruition.

Teton River and Teton Range.
PHOTO COURTESY OF FRIENDS OF THE TETON RIVER AND TAKEN BY FRIENDS OF THE TETON RIVER STAFF.

RECIPIENT

Friends of the Teton River, Driggs, Idaho

PROJECT TITLE

Improving Ecological Resilience through Water Management Activities in the Teton River Watershed

In the Teton River Watershed, in eastern Idaho, water plays a key role in a robust agricultural and recreational economy. However, climatic changes, such as prolonged drought, decreased snowpack, and earlier spring runoff, and population growth and conversion of farmland to subdivisions are placing pressure on water quantity, water quality, and habitat conditions. These changes are ultimately causing a decline of Idaho's aquifer and river levels threaten this economy.

In 2013, Friends of the Teton River in Teton Valley, Idaho, which has over 800 members, received approximately $79,000 through CWMP Phase I to develop a watershed restoration plan for the Teton River Watershed.

"The work developed through this grant has been wildly successful. It has forged new and unlikely partnerships, it has opened constructive dialog between traditionally feuding interests, it has provided a vehicle by which to develop a water resource plan that will join, not divide a community. It has afforded Teton Valley's water users – irrigators, cities, county, and conservation interests – a means by which to plan for the future and generate solutions that address the goals of all individuals".

– Friends of the Teton River, CWMP Phase I grant final report

Friends of the Teton River members measuring streamflows.

PHOTO COURTESY OF FRIENDS OF THE TETON RIVER AND TAKEN BY CAMRIN DENGEL.

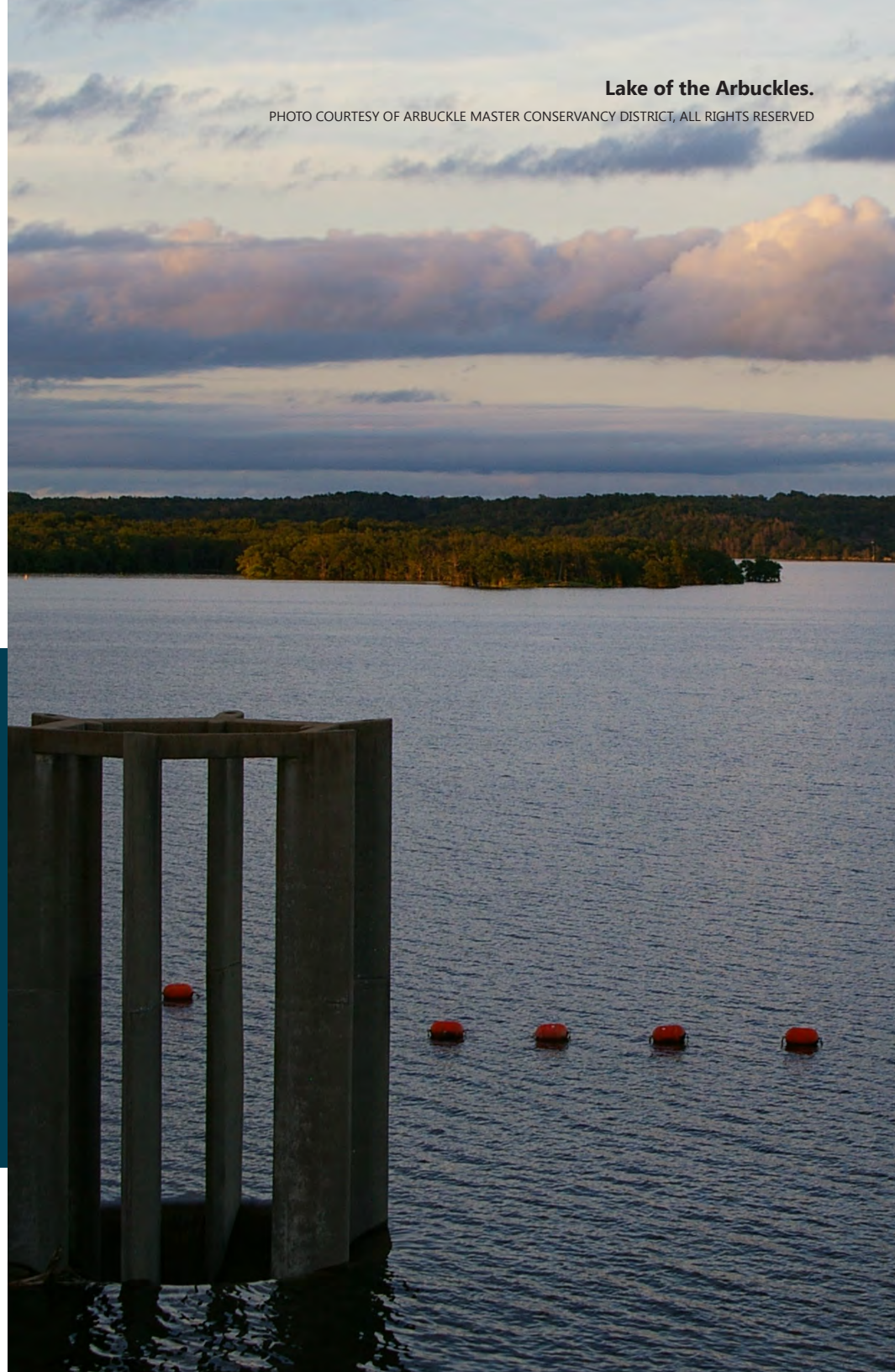
STAKEHOLDER COLLABORATION

Project: Improving Ecological Resilience through Water Management Activities in the Teton River Watershed

The resulting plan prioritized a voluntary, incidental recharge program to stabilize the Teton Valley Aquifer and increase base flows downstream in the Teton River, benefitting municipal, agricultural and environmental water uses. Funding for the implementation of the recharge program was provided, in 2017, though a CWMP Phase II grant of approximately $99,000. The group worked with irrigators to divert water through canals early in the irrigation season, potentially increasing recharge to the aquifer by 10,000 acre-feet annually, benefitting municipal water users affected by declining aquifer levels. The recharged water will gradually discharge into the Teton River downstream, increasing base flows by 10-15 cubic feet per second during critical summer months. The project will help reduce calls by downstream water users with senior water rights and providing cooler, cleaner flows benefitting fish, including native Yellowstone cutthroat trout which is a species of special concern in Idaho.

The Teton Water Users Association is a diverse collaborative, including representatives from the following organizations and entities:

- **Teton County Farm Bureau**
- **NRCS**
- **Idaho Water District 01**
- **Teton Soil Conservation District**
- **Water right holders and canal companies that utilize water from the following areas:**
  - **Trail Creek**
  - **Teton Creek**
  - **Fox Creek**
  - **Darby Creek**
  - **Mahogany Creek**
  - **Spring Creek**
  - **South Leigh Creek**
- **Friends of the Teton River**
- **Teton Regional Land Trust**
- **Henrys Fork Foundation**
- **City of Victor, Idaho**
- **City of Driggs, Idaho**
- **City of Tetonia, Idaho**
- **Teton County, Idaho**
- **Idaho Fish and Game**
- **Wyoming Game and Fish**
- **US Wildlife Service**
- **US Forest Service**
- **Idaho Department of Environmental Quality**



Lake of the Arbuckles.

U.S. Department of the Interior
March 2020

Avra Morgan
Email: aomorgan@usbr.gov
Phone: 303-445-2906

Robin Graber
Email: rgraber@usbr.gov
Phone: 303-445-2764