



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Colorado Regional Conservation Partnership Projects

EXECUTIVE SUMMARY

A STORY OF NATURAL RESOURCE CONSERVATION SUCCESSES

APRIL 2024

Contents

Introduction	4
RCPP Farm Bill 2014	6
Colorado Rio Grande RCPP	6
CO Pressurized Irrigation Smally Hydropower Partnership Program	7
Modernizing Ag Water Management in the Lower Gunnison River Basin: A Cooperative Approach to Increased Water Use Efficiency and Water Quality Improvement	8
Agate Prairie Conservation Legacy	10
Colorado Dairy and Irrigation Efficiency Program	11
Greater Outcomes for the Greater Sage-Grouse	12
Colorado River Headwaters Project	12
The Acequia Initiative	14
RCPP Farm Bill 2018	16
The Acequia Conservation Initiative—Phase II	16
Montezuma Phreatophyte Project	18
Establishment of Grassland Strongholds Across the Southern High Plains	19
Upper Rio Grande Partnership to Preserve Agriculture and Restore Aquifer (PARA)	20
Upper Arkansas Forest Fund	22
RCPP Outcome Scorecard	23





EXECUTIVE SUMMARY

INTRODUCTION

The Regional Conservation Partnership Program (RCPP) is a partner-driven approach to conservation that funds solutions to natural resource challenges on agricultural land. By leveraging collective resources and collaborating on common goals, RCPP demonstrates the power of public-private partnerships in delivering results for agriculture and conservation.

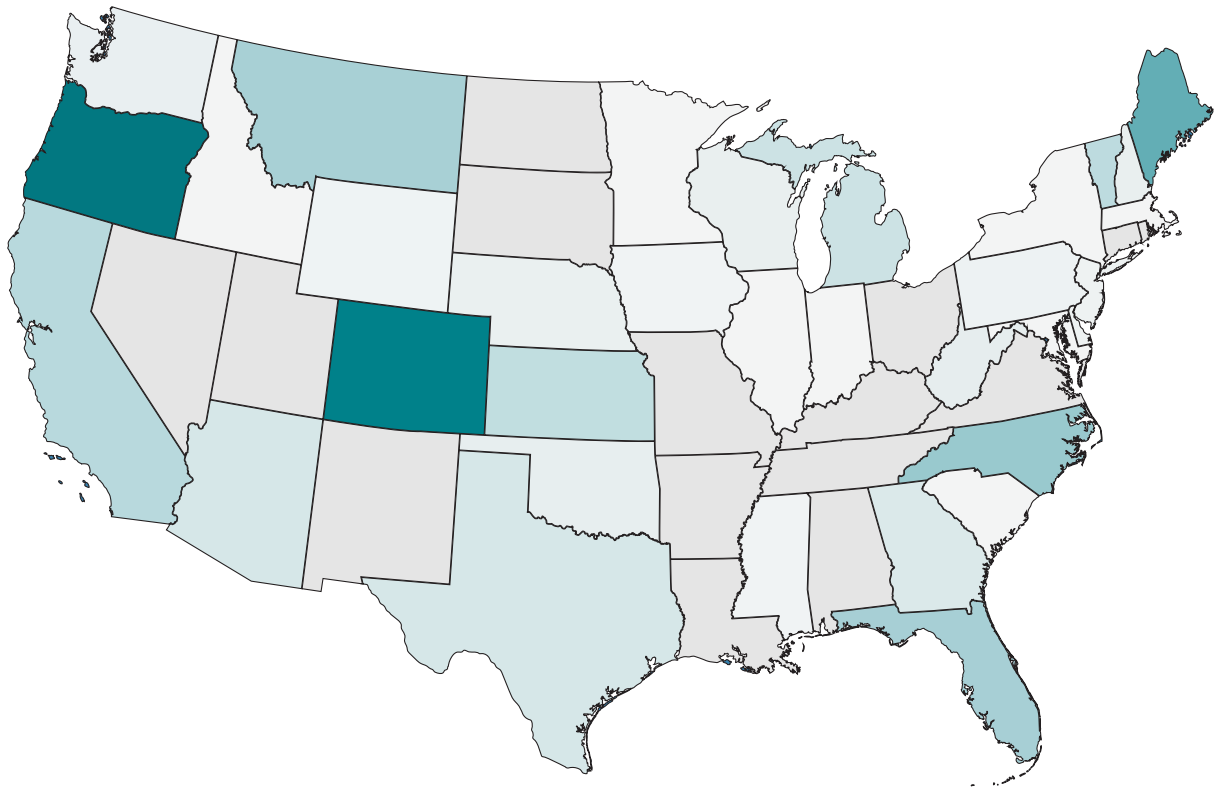
NRCS Colorado has been grateful to have sixteen (16) successful RCPP partnerships that have addressed resource concerns that range from permanent working land conservation through conservation easements, to irrigation system improvements to address diminishing water availability, to wildlife habitat enhancement, and more.

Easements

NRCS Colorado was awarded four RCPP projects that had funding to target conservation easement acquisition and with diligent work from our partners can successfully boast that Colorado is second only to the state of Oregon in the number of acres enrolled in the RCPP Agricultural Land Easements closed to date. There have been nearly 21,300 acres closed and an additional nearly 2,900 acres in process. All of these easements are permanent, perpetual Agricultural Land Easements (ALEs) that will forever ensure the agricultural working lands within key partner project areas.

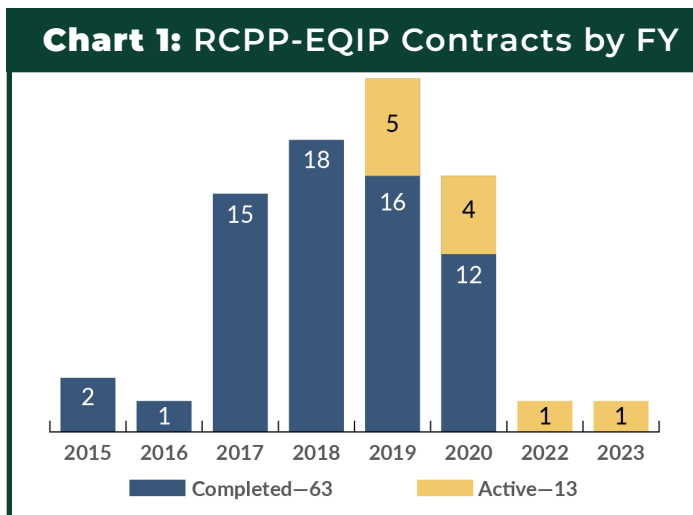
These projects have totaled nearly \$3 million dollars of payments to conserve properties valued at just under \$8.3 million dollars.

Map 1: Total Closed Easements Acres



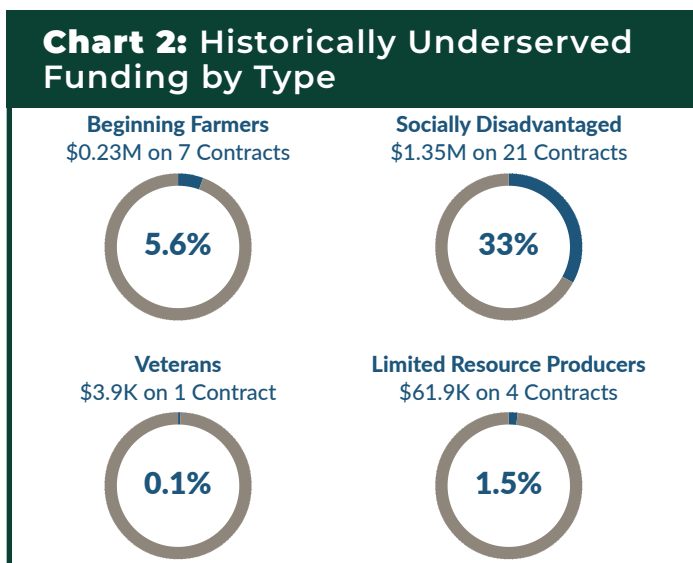
Conservation through Environmental Quality Incentives Program (EQIP)

As early as 2015, Colorado RCPP-EQIP contracts have been implemented to address resource concerns on around 18,000 acres across Colorado for over \$4 million dollars. Approximately \$2.7 million dollars in payments have been completed to date and many projects are still in process of seeking applications and obligating additional funding for future payments.



Helping Historically Underserved Participants

Colorado NRCS and our Partners remain dedicated to ensuring equity in financial assistance program implementation. Through RCPP-EQIP projects, 38.9% of the funding obligations have been awarded to historically underserved populations for a total of nearly \$1.6 million dollars.



Partnership Proposals

Colorado NRCS has seen huge interest in partnership requests through the RCPP proposal process. Since 2015, when the first opportunity was announced, there have been around 55 proposals for Colorado that were not awarded due to lack of funding and the high quality of proposals submitted for consideration. NRCS Colorado assists other states in an additional 5 RCPP projects in which those other states are leads. These projects are not accounted for in this report.

There are an additional 11 Colorado RCPP proposals submitted in August of 2023 requesting funding that have not been awarded, to date.

Building Success Through Challenges

Being a new financial assistance program with borrowed authority in the 2014 Farm Bill and through technology and tracking improvements in the administration of the 2018 Farm Bill, the programs has seen some growing pains. However, Colorado NRCS recognition of these concerns has implemented strategies to streamline and affectively address concerns as they are raised:

- ◆ Assignment of a RCPP Coordinator with additional collateral duties in 2018
- ◆ Reassignment of a full-time RCPP Coordinator in 2019
- ◆ Establishment of pre-application partner meetings to discuss proposals and projects
- ◆ RCPP outreach meetings and trainings
- ◆ Transition to an RCPP portal that allows partners to submit their own information
- ◆ Allow Certified Land Trust to use their certification to close 2014 Farm Bill RCPP Easements in an expedited, lower review process—streamlining
- ◆ Greater Authority extended to State NRCS Offices to streamline Agreement negotiations and project implementation.

Colorado NRCS values our conservation partners and RCPP has a huge value in leveraging funds to expand our ability to creatively treat conservation concerns that face our state's agriculture and forestry operations.

— Clint Evans, Colorado NRCS State Conservationist.

RCPP FARM BILL 2014

COLORADO RIO GRANDE RCPP

Subdistrict #1 of the Rio Grande Water Conservation District

This partnership project was initiated to address insufficient water concerns in the high mountain desert of the San Luis Valley of Colorado.

The Valley’s agricultural and natural systems have been greatly affected by consumptive use of the area’s unconfined aquifer. Subdistrict #1 of the Rio Grande Water Conservation District has fought to enhance and protect the water rights of citizens of the valley and through this, and other projects, hope to improve irrigation water conservation and improve soil characteristics that increase water storage and retention capabilities. This project’s main purpose is simple, conserve the Valley’s scarce water resources.

The project facilitated improved agricultural irrigation water management through implementation of weather station data collection and soil moisture monitoring systems that enabled the informed use of irrigation water management to achieve optimum water conservation benefits.

Table 1: RCPP Project Quick Summary	
Project Agreement Timeframe	2018 through 2022
Type of Project	Classic RCPP-EQIP (FB 2014)
Initial NRCS Project Allocation	\$345,000
Total Project Budget	\$691,000
Resources Addressed	Insufficient Water Soil Quality Degradation
Project Status	RCPP Agreement Complete 94% of Individual EQIP Projects Complete
MEASURABLE OUTCOMES	
# of Conservation Contracts	18
Acres Affected	5,707 acres
Reductions Water Consumption	18,000 ac-ft (5.9 billion gallons)
Returning Applicants Desiring to Expand the Conservation Footprint	50%

The project also aimed to address soil quality degradation concern through the application of soil health practices like conservation crop rotation, reduced tillage management, and cover crops. Addressing soils health issues is a key way to improve the soil’s natural ability to store water.

This project aimed to address insufficient water in the very targeted project area in the San Luis Valley. Funding for Irrigated Water Management Practices such as weather stations, soil moisture monitoring systems and other practices identified in NRCS Conservation Practice Code 449 will achieve optimum water conservation benefits. Soil quality degradation will be addressed through the application of soil health practices. NRCS Conservation Practice Codes 328, 329, and 340 will be applied on irrigated cropland to reduce water consumption, reduce soil erosion, enhance soil health, and improve soil moisture retention qualities. The application of these practices will reduce energy consumption and contribute to increased stream flows and improved riparian habitat. The success of the project will be measured by the level of participation, acres enrolled, and the measured reduction of water applied. Baseline data will be used to compare previous use to current year pumping. The Colorado Division of Water Resources will monitor stream depletions through ground water modeling. Data will be tabulated annually to monitor pumping reductions. Ocular estimates, photo points, and soil health modeling will be used as a measurement toward meeting the soil health objectives. Annual reports will include the NRCS and partner FA and TA expenditures.

Colorado NRCS values our conservation partners. Water levels of the unconfined aquifer within Special Improvement District No. 1 (Subdistrict No. 1) were rapidly declining in the early 2000s and groundwater withdrawals were exceeding the total amount of recharge from natural sources and from diversions of the Rio Grande. This decline in the water table is a direct result of a prolonged drought and increased groundwater consumption. The decline in the water table will only worsen unless the total consumption of groundwater is reduced.

– Subdistrict No. 1 - Rio Grande Water Conservation District (rgwcd.org).

Contributing Partners

Colorado Division of Water Resources • San Luis Valley Conservation District • Rio Grande Headwaters Land Trust • Rio Grande Water Conservation District

CO PRESSURIZED IRRIGATION SMALLY HYDROPOWER PARTNERSHIP PROGRAM

Colorado Department of Agriculture

The RCPP Pressurized Irrigation Small Hydropower Partnership Project provided financial and technical assistance to help agricultural producers upgrade their irrigation systems to more efficiently use water and save energy. This project promoted the conversion of flood-irrigated fields to sprinkler irrigation with integrated hydropower to promote efficient water-use and energy conservation while preserving the irrigator’s full water rights. The project provided financial assistance through the Environmental Quality Incentives Program (EQIP), CDA’s ACRE3 program and funding from 3644 the Rural Energy for America Program (REAP).

Table 2: RCPP Project Quick Summary

Project Agreement Timeframe	2015 through 2019
Type of Project	Classic RCPP-EQIP (FB 2014)
Initial NRCS Project Allocation	\$1,746,000
Total Project Budget	\$3,192,000
Resources Addressed	Water Quantity Energy In-efficiencies Water Quality
Project Status	RCPP Agreement Complete 66% of Individual EQIP Projects Complete

MEASURABLE OUTCOMES

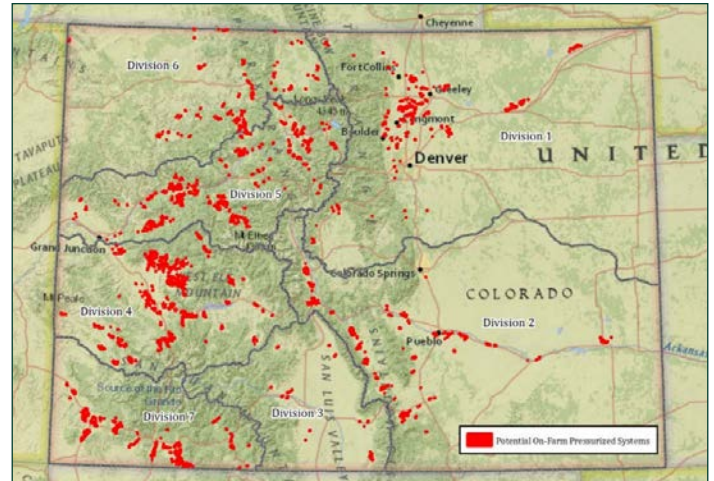
# of Conservation Contracts	9
Acres Affected	1,908 acres
Historically Underserved (HU) Participation	44% of Project Participants were from HU groups
Expand and Enhance Hydropower Technology Transfer	Agricultural Hydropower Technical Manual published 69 Engineers Trained
Reduced On-farm Energy* Costs	\$164,131 per year
Saved Energy*	1,274,312 kWh per year
Reduced CO2 Emissions*	1,215 tons per year

* Implemented practices function well past the project lifespan, in some cases over 20 years, and continue to provide annual benefits.

Project Details

This project focused on water quantity, water quality and energy resource concerns by facilitating the conversion of flood irrigation systems to more resource-efficient pressurized irrigation systems with integrated hydropower. In addition to the new, hydro-powered irrigation systems, this project facilitated retrofits on existing pressurized

irrigation systems to add a hydropower component. Lastly, this project facilitated technology transfer by providing technical training to NRCS staff, existing Technical Service Providers (TSPs), and TSP candidates to grow the capacity in planning hydropower practices in Colorado. To supplement the training, this project developed an Agricultural Hydropower Technical Manual with a toolbox of assessment tools, checklists, forms, procedures, standards, and tracking documents to streamline the implementation process.



This project sought to convert at least 20 flood irrigation systems to center pivot systems with integrated hydropower and retrofit at least 10 existing pressurized irrigation systems to add a hydropower component. However, CDA was not able to achieve the target of 30 new energy-recovery hydropower systems, but they were able to secure funding and proceed with 21 hydropower systems, including four hydro-mechanical systems, and 17 hydroelectric systems. The installation of eight of the 17 hydroelectric systems is still pending in 2023, with significant delays caused by COVID and the inability to find a qualified supplier of control systems for 3-phase induction turbine-generators. One other hydroelectric system is installed but waiting for the irrigation pipeline to the turbine to be completed before it can operate.

Through this project, 118 sites on 86 farms received some level of hydropower screening and assessment, and 36 feasibility studies were completed. Of these, NRCS awarded contracts to 30 hydropower systems, renovation of 20 center pivots, and new construction of four center pivots. CDA awarded contracts to 25 hydropower systems, including three hydro-mechanical systems, and 22 hydroelectric systems, as well as technical services to renovate 18 center pivots and install five new center pivots.

Together, the hydroelectric systems are reducing annual on-farm energy costs by \$164,131 and saving 1,274,312 kWh per year of energy, as well as 1,215 tons of CO2-equivalent reductions per year, according to the COMET-Farm energy tool.

“We are being more innovative and scientific in our water use. This is an investment for our farm and a credit to staff who have worked so hard day and night to make it a reality.”

– Tribal Chairman Manuel Heart (Ute Mountain Ute Tribe installs hydroelectric generators for farm operation – The Journal (the-journal.com).

Contributing Partners

Colorado Association of Conservation Districts • Hydro Research Foundation • Colorado State Conservation Board • Colorado Rural Electric Association • Colorado Energy Office • Colorado State University—Center of Agriculture Efficiency

MODERNIZING AG WATER MANAGEMENT IN THE LOWER GUNNISON RIVER BASIN: A Cooperative Approach to Increased Water Use Efficiency and Water Quality Improvement

Colorado River Water Conservation District

This RCPP-funded project was implemented to address insufficient water, enhance water quality, address degraded fish and wildlife habitat, and improve soil health by addressing soil quality degradation. These objectives were accomplished through the development and implementation of an integrated program to improve off- and on-farm irrigation efficiency by modernizing and optimizing irrigation water conveyance and application systems in four focus areas within the Lower Gunnison Basin.

In 2015, the Colorado River District received \$8 million of funding from the NRCS in an Alternative Funding Arrangement (AFA) through Watershed Authority (PL-566) and Environmental Quality Incentives Program (EQIP) funding.

Now completed, the LGP supported a total of seven (7) off-farm delivery projects and 28 on-farm construction projects.

Off-farm lateral piping projects within the were targeted to improve water quality conditions based on their ability to control and reduce excessive selenium and salinity loading, along with ancillary benefits including nitrate and sediment load reduction (all are from natural geological and anthropomorphic sources).

Consistent with USGS studies and USBR’s SMP, it is anticipated that LGP associated reductions in selenium (and to a lesser extent salinity) concentrations and loading

Table 3: RCPP Project Quick Summary

Project Timeframe	2015 through 2021
Type of Project	Alternative Funding Arrangement with EQIP and PL-566 (FB 2014)
Initial NRCS Project Allocation	\$8,000,000
Total Project Budget	\$16,811,896.70
Resources Addressed	Insufficient Water Water Quality Degradation Inadequate Habitat for Fish & Wildlife Soil Quality Degradation
Project Status	100% Complete

MEASURABLE OUTCOMES

# of Conservation Contracts	7 Off-Farm Delivery Systems 28 On-Farm Projects
Acres Affected	1,072 acres directly affected
Water Quality Improvements Include Reductions of Harmful Salinity & Selenium Leached into Water*	8,395 tons of salt per year; 241 to 482 pounds of selenium per year
Contributed to the Selenium Impairment Delisting in 2021	66 Miles of Gunnison River
Estimated Average Cost Benefit of Off-Farm Project*	\$1,287,743

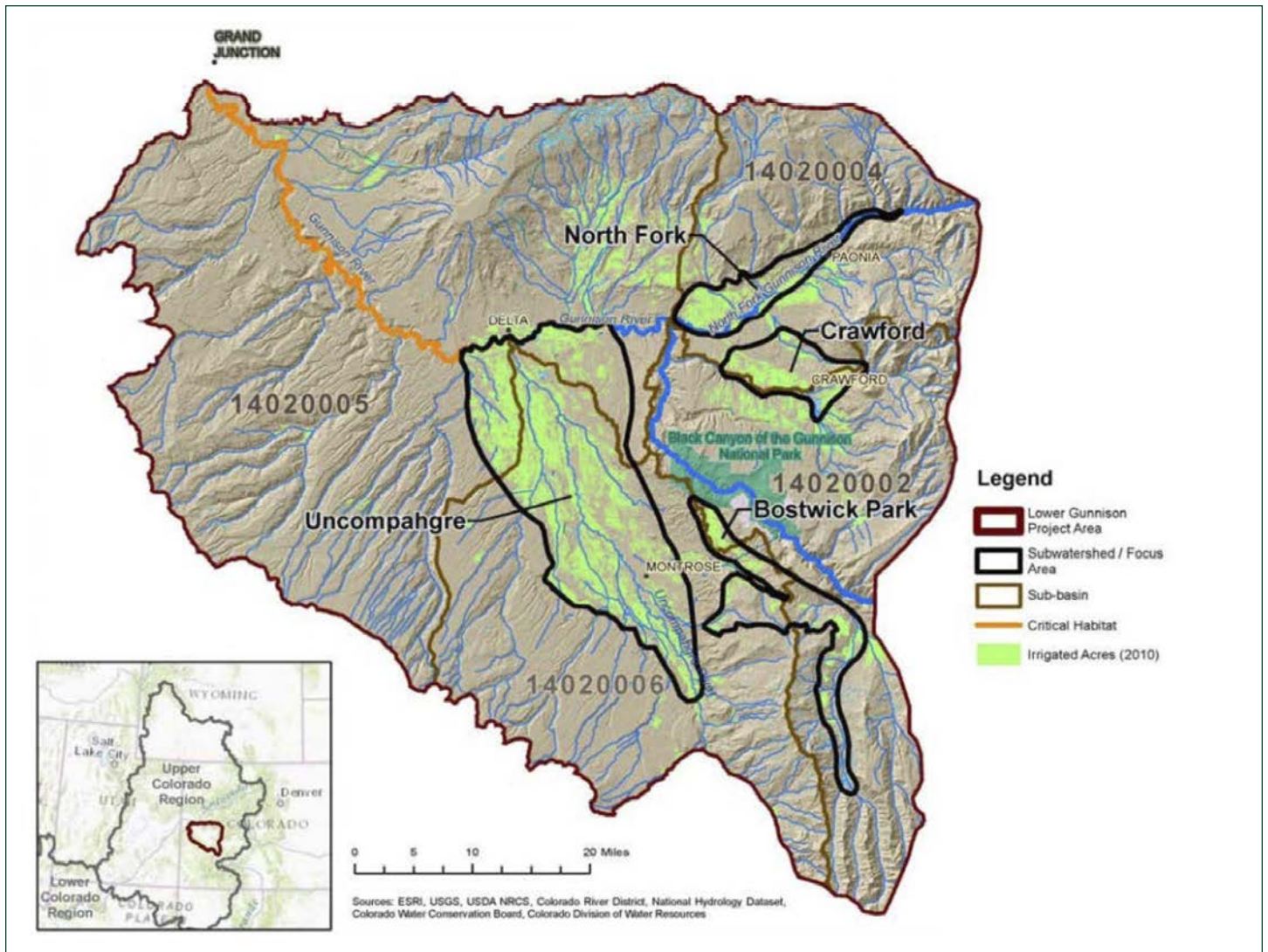
* Implemented practices function well past the project lifespan, in some cases over 20 years, and continue to provide annual benefits.

provide significant benefits to sensitive, threatened, and endangered river fishes that occupy designated critical habitat in the Lower Gunnison and Colorado Rivers. The USFWS continues to document habitat improvements via annual sufficient progress determinations, enabling water development to continue pursuant to the 2011 Gunnison Basin Programmatic Opinion and thereby providing regulatory certainty to LGP water users.

A total of \$16,811,896.70 of combined federal NRCS and partnership funds were expended to bring this project to completion.

Beginning in 2014, this group worked tirelessly to overcome a host of overlapping challenges to ensure that the Lower Gunnison Project met and even exceeded its original goals and objectives.

– Lower Gunnison Project (2015 NRCS RCPP) Final Summary Report.



Contributing Partners

West Slope Conservation Center • Montrose County • Crawford Water Conservancy District • Delta County • Colorado Department of Agriculture • LeHi Water • Trout Unlimited • No Chico Brush • Delta Conservation District • Shavano Conservation District • The Nature Conservancy • Colorado River Water Conservancy District • PepsiCo • Bostwick Park Water Conservancy District • Walton Family Foundation • Colorado State University • Selenium Task Force • North Fork Water Conservancy District • Colorado Water Conservation Board • Uncompahgre Valley Water Users Association

AGATE PRAIRIE CONSERVATION LEGACY

Colorado Cattlemen’s Agricultural Land Trust

The Colorado Cattlemen’s Agricultural Land Trust (CCALT), along with additional partners including The Nature Conservancy (TNC), Bird Conservancy of the Rockies (BCR), and the Trust for Public Land (TPL), implemented this project for the proposed preservation of more than 30,000 acres located in northwestern Elbert County, Colorado through the acquisition of three conservation easements. Grasslands have been identified as one of the most imperiled ecosystems in the world. Preventing grassland conversion promotes biodiversity of grassland-dependent species, reduces the need for species to be listed on the Endangered Species List and sustains rural ranching communities.



E Bar Ranch in Agate, Colorado

Table 4: RCPP Project Quick Summary	
Project Timeframe	2016 through 2020
Type of Project	Alternative Funding Arrangement with ACEP (FB 2014)
Initial NRCS Project Allocation	\$2,450,000
Total Project Budget	\$4,525,200
Resources Addressed	
Project Status	100% Complete
MEASURABLE OUTCOMES	
# of Conservation Easements	4 Ranches
Acres Permanently Protected from Development	28,025 acres
Rural Families Directly Supported Through this Project	4

The Agate Prairie Conservation Legacy represented a unique opportunity to build upon previous conservation investments in a dynamic landscape located less than 45 minutes from Denver, Colorado. At the time of the proposal, approximately 60,000 acres of private land had been permanently protected in and around the Town of Agate. A majority of this protected land was comprised of native prairie grasslands and this project worked to expand their conservation.

Native prairie grasslands are considered to be one of the most imperiled ecosystems in North America and worldwide. The prairie grasslands of eastern Colorado provide essential habitat for several threatened species and species of special significance including the burrowing owl, swift fox, and mountain plover. Prairie grasslands are also critical to the overall health and functionality of watersheds.

The four conservation easements, located in the Bijou Creek watershed, had multiple riparian areas along streams and playas. The Agate Prairie Conservation Legacy permanently protected a total of 28,025 acres of grassland prairie – 19,450 acres with ACEP easements directly, and an additional 8,575 acres through other partner easement programs as a non-federal match.

The partners’ investment in each of the properties does not end once the conservation easements are closed. CCALT will be responsible for the annual monitoring of each of the conservation easements. In addition, the partners will work with the Bird Conservancy of the Rockies to conduct bird surveys on the properties as an indication of rangeland health. The surveys will be used to direct future habitat and rangeland improvement projects.

“For nearly a decade, CCALT has dedicated time and resources to expanding our conservation efforts in Eastern Colorado, with the overall goal of protecting vital grassland prairie habitat and sustaining small rural communities. The E Bar Ranch conservation project builds on CCALT’s Agate Prairie Conservation Legacy Program, which has already protected more than 43,965 acres in the region, and conserves another important family operation on Colorado’s Eastern Plains”

– Erik Glenn, CCALT Executive Director

Contributing Partners

The Nature Conservancy • Great Outdoors Colorado • Trust Public Land • Bird Conservancy of the Rockies

COLORADO DAIRY AND IRRIGATION EFFICIENCY PROGRAM

Colorado Energy Office (CEO)

Agricultural operations in Colorado are highly energy intensive, costing the industry over \$400 million annually. Colorado Energy Office's (CEO's) statewide program brought existing resources and partners together to leverage new funding and a turnkey approach that make achieving energy efficiency easy for producers.

Table 5: RCPP Project Quick Summary

Project Timeframe	2016 through 2021
Type of Project	Classic RCPP-EQIP (FB 2014)
Initial NRCS Project Allocation	\$1,152,000
Total Project Budget	\$1,911,518
Resources Addressed	Air Quality Water Quantity Energy Efficiency
Project Status	100% Complete

MEASURABLE OUTCOMES

# of Conservation Contracts	28
Acres Affected	4,158 acres
Estimated Energy Savings*	2.625 million kWh annually
Reductions Water Consumption*	262,500 gallons annually
Reduced CO2 Emissions*	1450 tons annually
Estimated On-Farm Energy Cost Savings*	\$356,000 annually

* Implemented practices function well past the project lifespan, in some cases over 20 years, and continue to provide annual benefits.

In 2013, CEO began its agricultural sustainability focus with the conduction of a market study. As a result of that study, CEO was able to work with key agricultural stakeholders to develop a no-cost program offering for producers that would bridge the technical service gap that previously existed which prevented many producers from discovering and capitalizing on resource efficiency opportunities on their farms.

Since its statewide RCPP project rollout in 2015, the program has provided over 295 energy audits to producers across Colorado. These 295 audits have led to the implementation of nearly 200 energy conservation measures, resulting in huge energy, water, and greenhouse gas production saving. In addition to the resource conservation, CEO estimates that annual on-farm energy cost savings totals approximately \$356,000 per year, which can be extrapolated to only a 5-year 100% project payback of the total budget.

NRCS has played an integral role in the success of the program by providing energy and water conservation measure financing through this RCPP agreement as well as through its regular EQIP funding opportunities. This integral role is clearly demonstrated in the programs ability to achieve resource conservation in these partnership projects.

Though the program did not achieve all the goals it had set out in the initial RCPP Project proposal, the ample evidence provides above supports the large impact that this RCPP agreement had on the program's ability to reach agricultural producers and get projects implemented.

Thanks to all of its partners and its successful relationship with NRCS, CEO was able to demonstrate that dedicated technical resources are needed and will be accessed by agricultural producers if provided.

– CEO's Final RCPP Project Report

Colorado's \$7.3 billion agriculture industry expends more than \$400 million annually on energy, which accounts for seven percent of the industry's overall expenses. The report further states that the dairy and irrigation sectors represent the greatest potential for savings. Irrigation was responsible for 50% of the total electric expenses in 2008 for Colorado's agricultural sector. And dairies, while fewer in number, are very energy intensive and operate 24 hours per day, seven days per week, 365 days per year.

– CEO's commissioned 2013 Agricultural Energy Market Research Report

Contributing Partners

Western Dairy Association • Rocky Mountain Farmers Union
• Colorado Department of Agriculture • Colorado Potato Administrative Committee • GDS Associates, Inc.

GREATER OUTCOMES FOR GREATER SAGE-GROUSE

Partners for Western Conservation

Western States are gripped by a common need to improve sagebrush habitat and protect against its future loss. This regional partnership brought together partners from Nevada and Colorado who are actively investing in habitat improvements on private lands.

Table 6: RCPP Project Quick Summary	
Project Timeframe	2016 through 2019
Type of Project	Classic RCPP-EQIP (FB 2014)
Initial NRCS Project Allocation	\$1,901,906
Total Project Budget	\$4,239,289
Resources Addressed	Terrestrial Habitat Degradation Soil Health Water Quality
Project Status	RCPP Agreement Complete 60% of Individual EQIP Projects Complete
MEASURABLE OUTCOMES	
# of Conservation Contracts	5
Acres Affected	5,126 acres

The RCPP funds requested were used to leverage state and private funds to enabled:

1. Enhancement and protection of rangeland for greater sage-grouse by increasing conservation outcomes generated by incorporating a habitat quantification approach into project selection. This included building capacity of project support partners to implement habitat quantification approach.
2. Increasing outcomes over time by adaptively managing habitat quantification tools.
3. Increasing transparency and demand for results from public investments by reporting outcomes generated by partner and RCPP funds invested online.



The project partners used habitat quantification methods to select conservation projects in high quality habitat areas for Greater Sage-Grouse. Conservation activities included:

- ◆ Improvement of wet meadows and wet meadow interface to address brood rearing habitat bottlenecks
- ◆ Removal of pinyon and juniper trees encroaching into sagebrush landscapes
- ◆ Development of fuel breaks to reduce catastrophic landscape- scape habitat loss
- ◆ Removal of predator subsidies or other man-made habitat degradations that create a significant indirect effect to sage-grouse.

The project proposed to use State, EQIP and CSP funds to create “credit-ready” projects per the specifications of the Nevada Conservation Credit System and Colorado Habitat Exchange. Private funds were leveraged to cover long-term stewardship of the improved project sites. This project addresses the issue of stacking credit payments to ensure that EQIP and CSP funds are not be used to offset impacts that require compensatory mitigation and investigates innovative mechanisms for partnering public and private funds to create revolving funds.

With the support this, the project pushed greater-sage grouse habitat recovery through target means.

Contributing Partners

Nevada Conservation Districts • Nevada Department of Conservation and Natural Resources • Colorado Department of Natural Resources • Colorado Cattlemen’s Association • Environmental Incentives

COLORADO RIVER HEADWATERS PROJECT

Trout Unlimited

Trans-mountain diversions that supply agricultural and municipal water to Northern Colorado and the Denver Metro Area have had a significant impact on agriculture and aquatic resources in the headwaters of the Colorado River. After years of dispute, an array of partners representing local agriculture, local government, water providers, state agencies, conservation groups and landowners came together to implement the Colorado River Headwaters Project.

The Project consists of three parts:

1. A bypass channel to reconnect the Colorado River;
2. Channel and habitat improvement downstream of the bypass (Habitat Project); and
3. Projects to improve irrigation, soil quality, water quality, and aquatic habitat downstream of the

Habitat Project (Irrigators of Lands in the Vicinity of Kremmling (ILVK) projects).

When fully implemented, the Headwaters Project will directly benefit over 30 miles of the Colorado River and 4,500 acres of irrigated lands that provide sage grouse habitat. Up to 11,000 acre-feet of water will be available to improve the river during low flow conditions. The benefits of the Project will extend from the headwaters to the state line and beyond. Communities, farms and ranches in Northern Colorado will also benefit as implementation of the Project will secure trans-mountain diversions to firm up their water supplies.

This collaborative, multi-dimensional effort addresses all four identified priorities for the Colorado River Basin. The Project will help local communities, demonstrate innovative solutions benefiting working lands and rivers, and leverage funding to restore the headwaters of America's hardest working river.

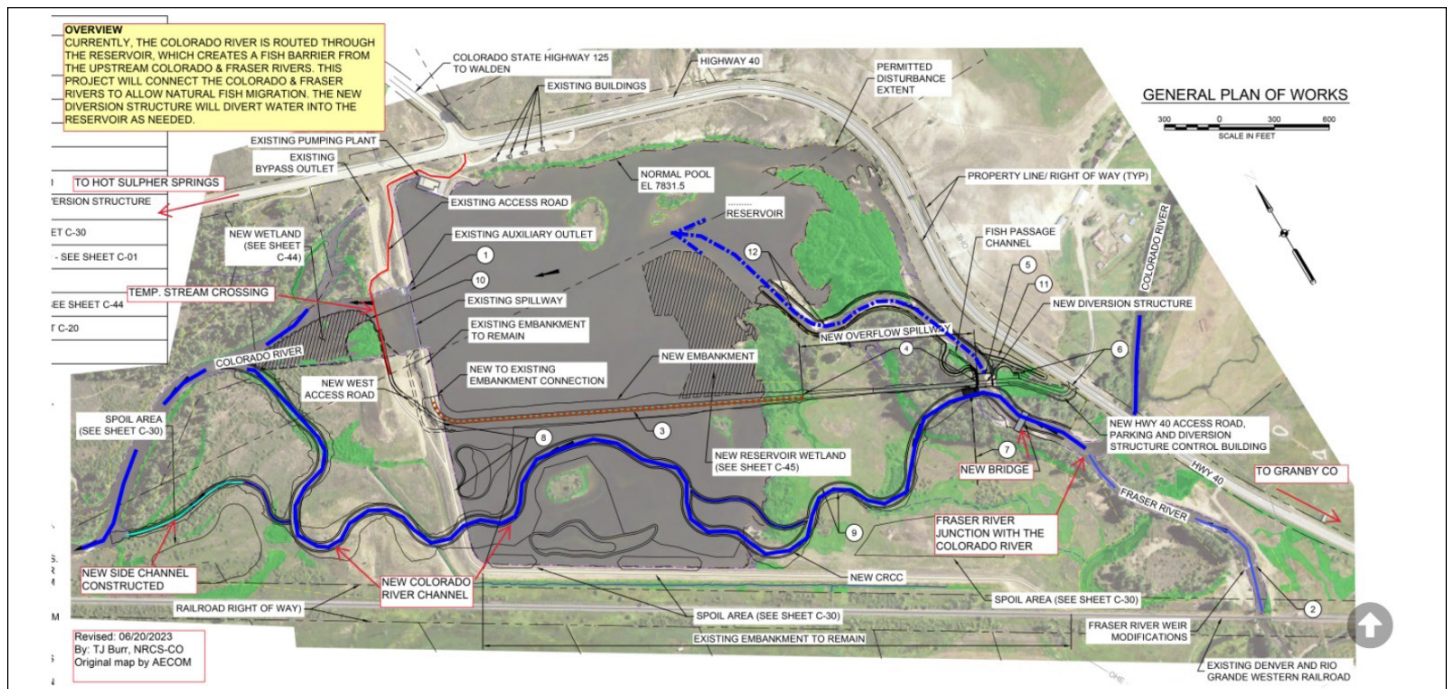
Together, the partners will bring an estimated \$12,651,355 million in cash and in-kind contributions and water valued at approximately \$386 million. In an era of divisive water battles in the arid West, the Colorado River Headwaters Project stands as a shining example of what can be achieved with cooperation and some creativity among water users.

Table 7: RCPP Project Quick Summary	
Project Timeframe	2017 through 2023
Type of Project	Classic RCPP with EQIP and PL-566 (FB 2014)
Initial NRCS Project Allocation	\$9,698,549 \$4,411,600 added 2022
Total Project Budget	\$12,651,355 (cash match) \$386M (in kind match)
Funding to Historically Underserved Groups	
Resources Addressed	
Project Status	XX% of Projects Complete
MEASURABLE OUTCOMES	
Water Available to Improve River Low-Flow Conditions	11,000 acre-feet
Acres Affected	4,500 acres
Aquatic Habitat Benefited	30 miles

“The Headwaters Project will directly benefit over 30 miles of the Colorado River and 4,500 acres of irrigated lands that provide sage grouse habitat.”
– TU’s RCPP Application

Contributing Partners

Colorado River Water Conservation District • Colorado Water Conservation Board • Northern Colorado Water Conservancy District • Grand County • Upper Colorado River Alliance



THE ACEQUIA INITIATIVE

Colorado Open Lands

The purpose of the Acequia Conservation Initiative RCPP was to help historically underserved acequia landowners create stability and sustainability in their agriculture operations. Colorado Open Lands, NRCS and a variety of resource partners came together to place conservation easements on acequia properties to protect and secure senior water rights, prime soils, native wildlife habitat and the area’s agricultural heritage. The project employed a suite of conservation practices through the EQIP program and offered Conservation Easements that targeted acequia farmers specifically.

Table 8: RCPP Project Quick Summary

Project Timeframe	2018 through 2024—ACTIVE
Initial NRCS Project Allocation	\$ 1,200,000 ACEP-ALE \$ 350,000 EQIP \$ 142,500 Tech Assistance
Total Project Budget	\$6,186,000
Resources Addressed	
Funding to Historically Underserved Groups	100 % of Participants
Project Status	XX% of Projects Complete
MEASURABLE OUTCOMES	
# of Conservation Contracts	16
# of Conservation Easements	8 Proposed 5 Closed to date
Acres Affected	EQIP: 378.1 ac ACEP: 1,025.2 ac Closed; 1,102.8 ac in-process

The partners took a multi-faceted approach to reach a historically underserved population by building on local outreach efforts to execute projects that implemented irrigation, soil health, habitat, and economic improvement projects at an appropriate scale. At the same time, the project permanently protected critical land and water rights.

The USDA has long recognized the relationship between water quality, quantity and irrigation. The NRCS standard practice code #443 cites a critical tenet, “Efficiently convey and distribute irrigation water to the soil surface point of application without causing excessive water loss, erosion, or water quality impairment.” The Colorado Water Research Institute, reaffirmed these assertions through the research of Whitney M. Borland. His work showed that “the use of irrigation structures greatly enhances the both water quality and water distribution, and by using basic techniques that incorporate water structures and delivery mechanisms, producers enhance the viability of the water course

and sustainability operation” (Borland W, 1986). In this project, water quality and quantity issues were addressed through the implementation of the best management practices prescribed by NRCS through the RCPP-EQIP program. This included installation of water management structures specifically designed to meet the need of these smaller acreages. Installation of livestock tanks and fencing addressed water quality issues by reducing livestock impacts on riparian areas. These projects reduced soil erosion from un-stabilized banks. The prime soil found in the watershed will benefit from cross-fencing for rotational grazing and limited land leveling to reduce the ponding, nutrient leaching and erosion.

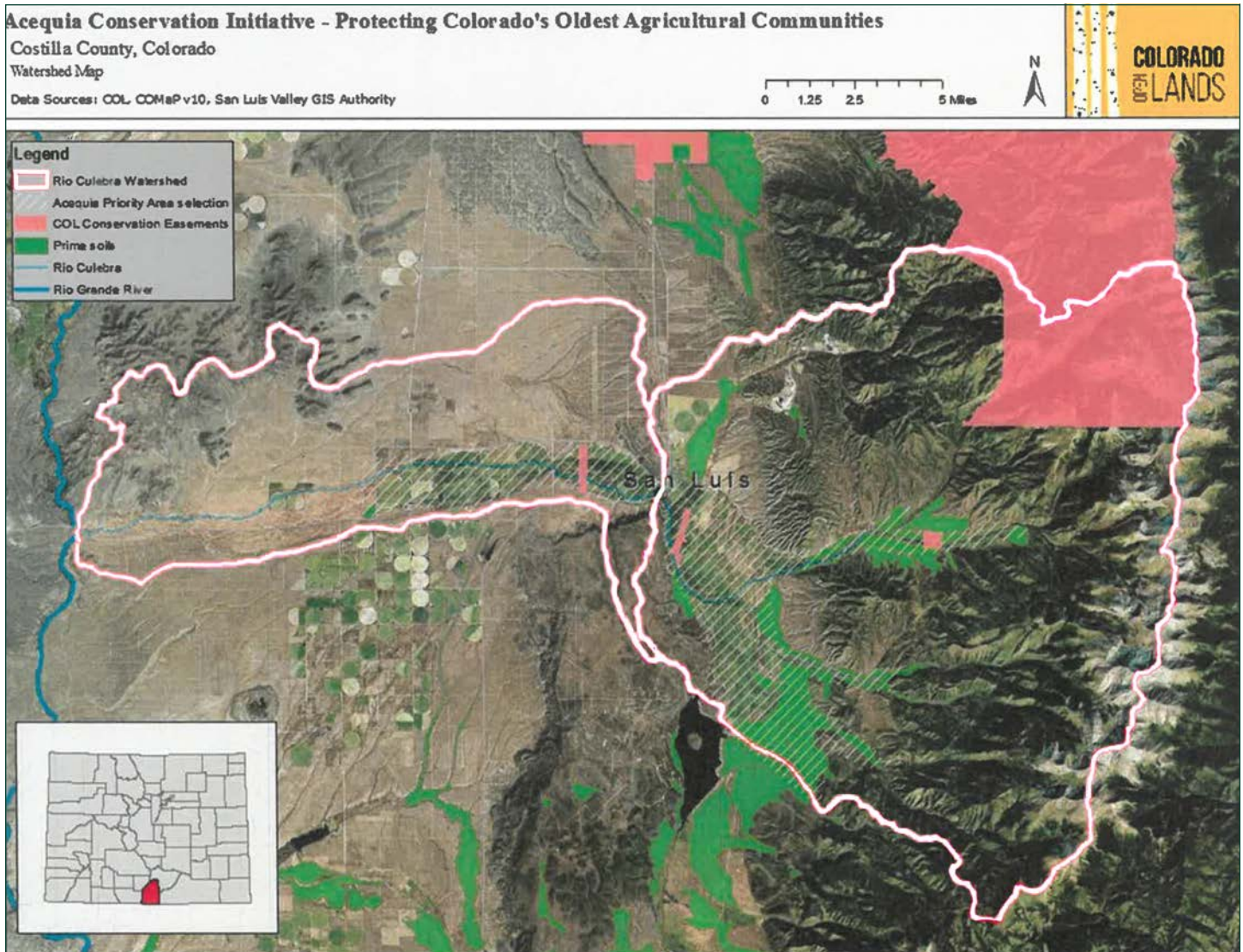
The project offered landowners the chance to utilize season-extending high tunnel systems to enable more diverse cropping systems. This opportunity allowed for improved soil stabilization and additional income streams to support these low-income landowners.

Furthermore, project partners worked to improve riparian and stream health, through a variety of mechanisms instituted by partners and landowners. The Species Status Assessment Report for the Rio Grande Cutthroat Trout (RGCT) noted that 43% of the RGCT population inhabit the Headwaters of the Rio Grande, of those 44% are in the Culebra watershed (USFWS, CPW, et.al., 2014). The study noted the species originally inhabited 3272 miles of stream reach and now exist in only 119 miles of streams throughout the Culebra. Culebra streams such as, Torceido, Jim, Upper and Lower Quates and Jaroso contain 5 aboriginal strains, that exist in conditions that are under increasing pressure. Trout Unlimited will bring locally resourced materials and volunteers to install and maintain structures that will improve and increase RGCT habitat, maintain and bolster existing wetland function and create proper watering decks for cattle.

Finally, Agricultural Land Easements were used to protect the long-term viability of the area’s food supply and local acequia economy by preventing conversion of productive working lands to non-agricultural uses. The USDA notes, “land protected by agricultural easements provides additional public benefits, including environmental quality, historic preservation, wildlife habitat and protection of open space.” (USDA, 2017) COL has secured support funding for the placement of up to 8 conservation easements- several that are still in process. The conservation easements will give landowners in this land rich and cash poor area a critical cash injection that will bolster farm efficiencies through equipment purchase, water structure placement, fencing and seed/animal purchases.

Protecting Colorado's Oldest Agricultural Communities RCPP is a nexus of innovation. Since project participation is open only to acequia farm/ranch producers in the Rio Culebra watershed, it is very focused on preserving the cultural integrity of this rural farming region. This area has been recognized by the US Department of Interior's Great Outdoors Initiative; named by US Fish and Wildlife Service as the Sangre de Cristo Heritage Area, Sangre de Cristo National Heritage Area has named it one of the last surviving representations of the Hispano culture. The National Park Service and History Colorado recognize the area as a unique representation of the culture that settled Colorado and New Mexico. The innovation of this RCPP proposal enables partners and local stakeholder who have all been independently doing successful work in the target area to come together and approach the resource issues in the target area in a holistic manner and at a greater scale than could be achieved by any of the groups independently.

– COL's RCPP Application



Contributing Partners

Landowners in the Culebra Watershed • Costilla Conservation District • Trinchera-Blanca Foundation • Sangre de Cristo National Heritage Area • Colorado Conservation Partnership • LOR Foundation • Gates Family Foundation • Great Outdoors Colorado • Trout Unlimited • Sangre de Cristo Acequia Association • Rio Grande Basin Roundtable

RCPP FARM BILL 2018

THE ACEQUIA CONSERVATION INITIATIVE—PHASE II

Colorado Open Lands

Phase two of the Acequia Initiative strategically protected additional conservation properties irrigated by the San Luis Valley’s historic acequias within the Culebra watershed in Costilla County. The Acequia Conservation Initiative RCPP has brought acequia landowners and a variety of partners together to place conservation easements on acequia properties that protect and secure senior water rights, prime farmland soils, native wildlife habitat and the area’s agricultural heritage.

Table 9: RCPP Project Quick Summary	
Project Timeframe	2022 through 2025—ACTIVE
Initial NRCS Project Allocation	\$ 1,200,000 ACEP-ALE \$ 300,000 EQIP \$ 448,052 Tech Assistance
Total Project Budget	\$4,481,052
Resources Addressed	
Project Status	XX% of Projects Complete
MEASURABLE OUTCOMES	
# of Conservation Contracts	None
Acres Affected	2,900 acres+

This project will facilitate the acquisition of six additional conservation easements, totaling an estimated 2,900 acres within the acequia community.

Like Phase I, the Phase II of this project is highly leveraged, with NRCS’s contribution limited to 38% of the project costs which has been matched by both public and private funding.

Concurrently, the project will employ a suite of conservation practices through the EQIP program targeting acequia farmers. The goal is to implement conservation projects to facilitate on an additional 2,900 acres and deploy over \$500,000 in additional EQIP projects and technical assistance.

Project Details

The acequia communities were identified as critical part of the Sangre de Cristo priority landscape by the Colorado Conservation Partnership, which sought to identify those places that give Colorado its unique natural heritage and character. This region is recognized for its unique cultural history, high ratio of private to public lands, tremendous

opportunities for landscape-scale conservation, and outstanding scenic, agricultural, and wildlife resources. The Hispano land grant communities are a critical piece of Colorado’s land settlement and water rights history. Acequias are only found in the southern portion of the San Luis Valley within Colorado.

This project seeks to protect historic agricultural lands, both their water resources and their prime farmland soils, by placing conservation easements on 2,900 acres of land in the Culebra Basin. These easements will maintain the viability of the wet meadow complex that exists along the Culebra and provide for rich wildlife corridors and habitat.

Permanent conservation of these properties, along with the implementation of EQIP conservation projects, will provide assistance to the area’s agricultural producers and will deliver environmental benefits such as improved water and air quality, conserved ground and surface water use, reduced soil erosion and ensure these agricultural lands remain economically viable and resilient.

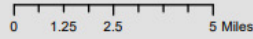
Acequia properties are a Colorado treasure - the oldest agricultural settlements, fed by the state’s first adjudicated water rights. These properties have been owned by the families for over 150 years and their importance cannot be overstated. They are a communal system of irrigation canals and ditches, that serve as the agricultural, social, and ecological foundation of the community. These acequias still function in their original form making them a nationally unique treasure and a key part of Colorado’s living history. This project and its programs ensure that the social fabric of these acequia communities remain relevant.

Contributing Partners

Great Outdoors Colorado • LOR Foundation • Sangre de Cristo Acequia Association • Costilla County Conservation District • Sangre de Cristo National Heritage Area • Trinchera Blanca Foundation • Colorado Water Conservation Board

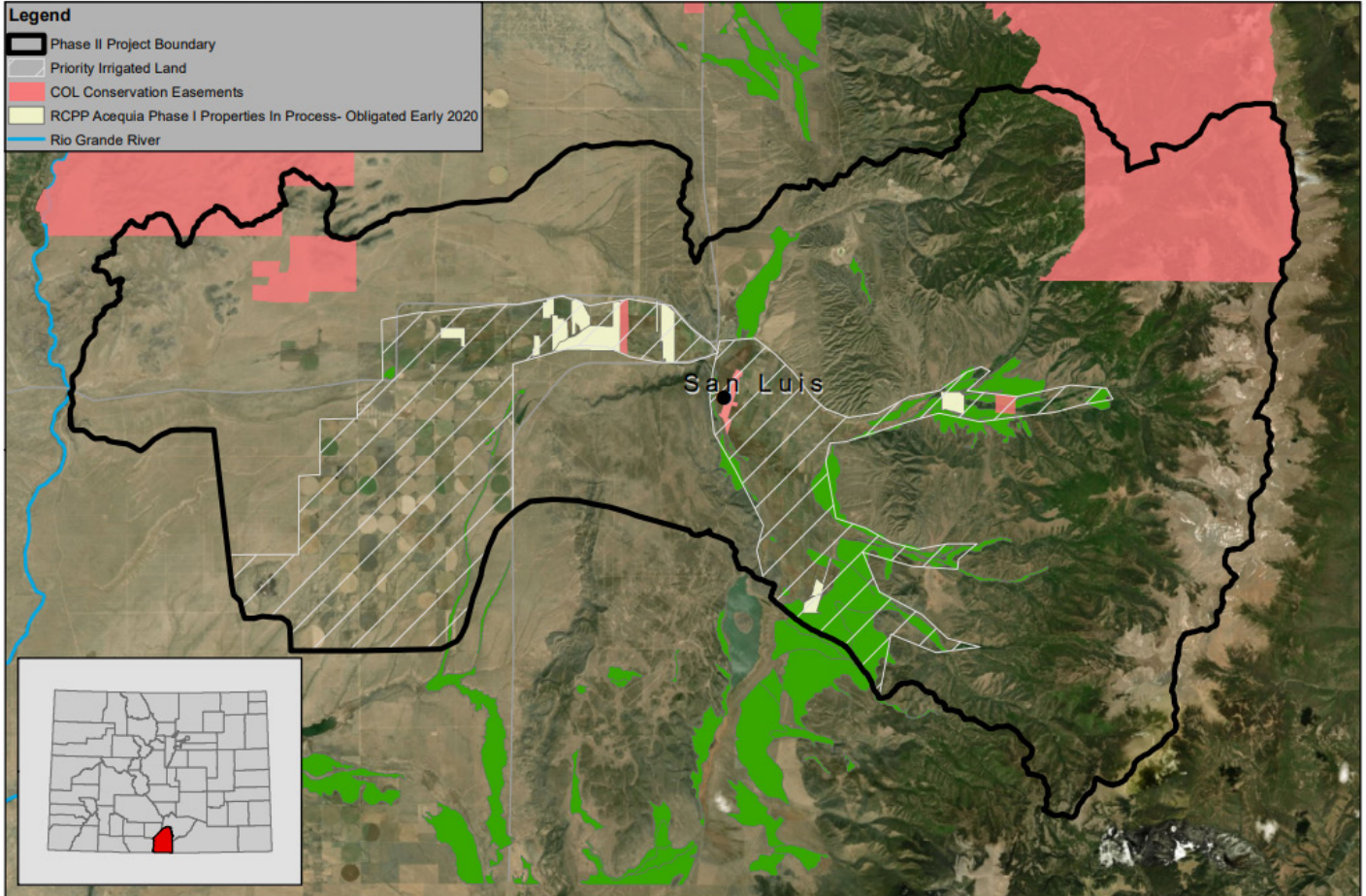
Acequia Conservation Initiative Phase II - Protecting Colorado's Oldest Agricultural Communities

Data Sources: COL, COMaP v10, San Luis Valley GIS Authority



Legend

- Phase II Project Boundary
- Priority Irrigated Land
- COL Conservation Easements
- RCCP Acequia Phase I Properties In Process- Obligated Early 2020
- Rio Grande River



MONTEZUMA PHREATOPHYTE PROJECT

Montezuma County

Montezuma County in southwest Colorado is a high, arid desert only receiving around 14 inches of precipitation a year. This precious moisture feeds the ribbons of green along waterways and in the floodplains providing for quality habitat and stream stabilization. However, native woody species are slowly being replaced by invasive, water consumptive species like the Russian Olive and Salt Cedar—both List B Noxious Species as designated by Colorado Department of Agriculture.

Table 10: RCPP Project Quick Summary

Project Timeframe	2021 through 2025
Initial NRCS Project Allocation	\$342,675
Total Project Budget	\$649,615
Resources Addressed	Pest Pressure Aquatic Habitat Terrestrial Habitat
Project Status	ACTIVE 0 % of Projects Complete 97% of EQIP Funding Obligated to participants 2 years ahead of schedule

MEASURABLE OUTCOMES

# of Conservation Contracts	16
Acres Affected	625 acres
Total Russian Olive Stems Removed	125,000
Water Conserved Due to Phreatophyte Removal for the 5 year project	Approximately 1,122 acre- feet left in waterways

Montezuma County Noxious Weed Department (MCNWD) has mapped 482 miles of waterways and an additional 3,421 acres of pasture and wetlands infested with Russian Olive and Salt Cedar (invasive phreatophytes) totaling of 6,098 acres of infested land. MCNWD estimates that this infestation equates to 4,800 acre-feet (1.6M gallons/year) of water lost each year to evapotranspiration. On top of direct water loss, research also show these invasive phreatophytes increase nitrogen levels in water, increase salt accumulation to the soil surface, increase mosquito breeding ground, affect bird species diversity, impede access to waterways for larger mammals, and aggressively outcompete native vegetation.

Water in southwest Colorado is one of the top scarce resources and reducing water losses due to phreatophytes is a key conservation project. The heart of the county is in agriculture and continued water loss jeopardizes farming.

On top of water loss to evapotranspiration, published studies document other negative aspects of invasive phreatophytes that include:

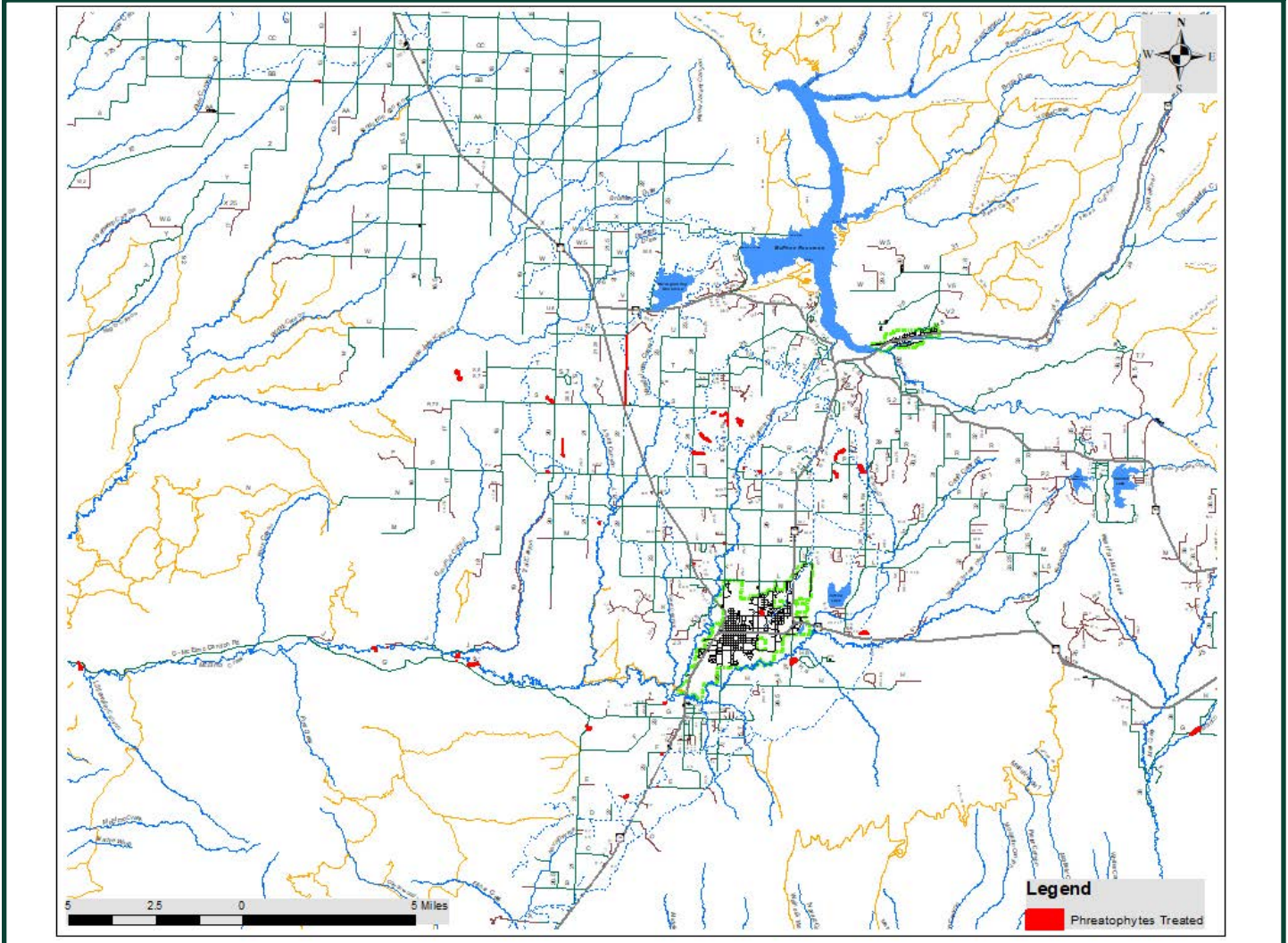
- ◆ Russian olives increase Nitrogen levels in the water and decreasing water quality which can lead to increased algae.
- ◆ Carp fish have been noted to prefer Russian Olive thickets as their habitat. Carp are non-native fish that push out our native fish populations.
- ◆ Russian Olive thickets have an increase in mosquito populations versus native trees.
- ◆ Salt Cedars can redeposit salt in the soil profile from deep underground to the soil surface. The increase in surface salinity can kill off other species of vegetation and is more susceptible to surface water loading—impeding water quality.
- ◆ Bird diversity has been noted to be less in habitats dominated by Russian Olive and Salt Cedar. There are some bird breeds that use these phreatophytes as habitat, but overall the diversity of species is lower compared to that of native trees/shrubs.



Contributing Partners

Montezuma County Noxious Weed Department •
Montelores Habitat Partnership Program • Colorado Water Board Conservation

RCPP Montezuma County Phreatophyte Project Map



ESTABLISHMENT OF GRASSLAND STRONGHOLDS ACROSS THE SOUTHERN HIGH PLAINS

The Nature Conservancy

The Nature Conservancy and over 10 partners have spent years developing the Grassland Strongholds strategy, designed to create large areas of conserved and preserved grasslands within the Prairie Grasslands Critical Conservation Area (CCA). This RCPP Classic project will use a three-pronged approach that will meet landowners where they are for grassland protection.

First, for those landowners that are ready for permanent conservation in perpetuity, the project will aim to place conservation easements (CE) on more than 40,000 acres, kickstarting the effort with a substantial investment that is matched by over \$10 million in partner contributions.

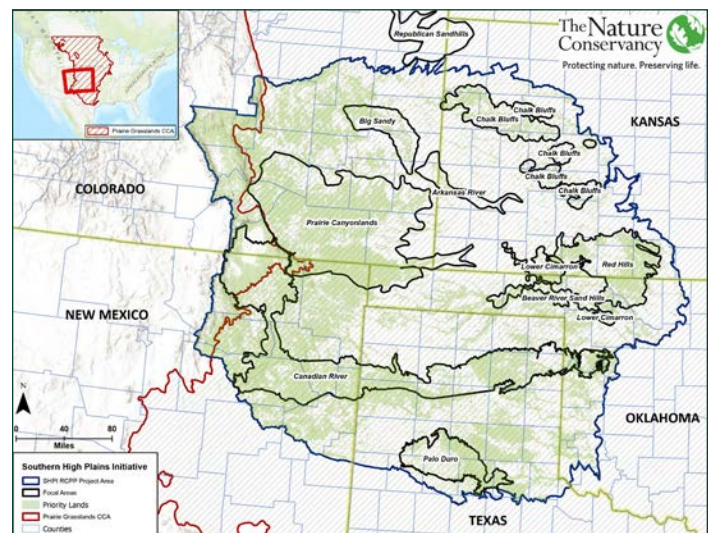


Table 11: RCPP Project Quick Summary

Project Timeframe	ACTIVE 2022 through 2028
Initial NRCS Project Allocation	Total \$10,000,000
Total Project Budget	\$20,200,000
Resources Addressed	Terrestrial Habitat Long-term Protection of Land Degraded Plant Condition
Project Status	0% of Projects Complete
Funding to Historically Underserved Groups	Prioritized

MEASURABLE OUTCOMES

# of Conservation Contracts	Signups anticipated to start in early FY2024
Acres Affected	40,000 Acres in Conservation Easement 3,000 to 16,000 Acres with conservation practices
Outcomes	Synergistic conservation contributing to grassland stronghold development in the shortgrass and midgrass steppe.

Secondly, for those agricultural producers with an interest in long-term land protection, but that are not ready for a permanent conservation easement, short-term land rental

(LR) agreements covering 3,000–16,000 acres will be used to advance conservation and help build relationships with these landowners in hopes of future permanent conservation.

Lastly, for conservation-minded agricultural producers within the targeted areas, land management projects that prioritize grassland health will be implemented. Land management activities to reduce grassland vulnerability and increase habitat quality.

In addition to these three conservation approaches, the partnership will explore the use of carbon emission reduction projects, specifically those preventing the conversion of native grassland to cropland, as a method of matching NRCS investments in long-term conservation practices, and further increase the amount of economic stimulus that can be deployed into rural communities.

Contributing Partners

Pheasants Forever, Inc. • North American Grouse Partnership • Common Ground Capital • Kansas State University • Kansas Grazing Coalition • Colorado Cattlemen’s Agricultural Land Trust • Texas Agricultural Land Trust • New Mexico Land Conservancy • Rangeland Trust of Kansas • Bird Conservancy of the Rockies • Palmer Land Conservancy • Partnership of Rangeland Trust

UPPER RIO GRANDE PARTNERSHIP TO PRESERVE AGRICULTURE AND RESTORE AQUIFER (PARA)

Colorado Open Lands

Colorado Open Lands and twelve partners will protect key surface and groundwater resources, enhance critical wetland habitat, and increase the climate resiliency of this agricultural region. Innovative conservation easement deeds with groundwater pumping restrictions, negotiated with landowners, have been vetted by the Colorado Division of Water Resources and will help improve the long-term resiliency of the region. It is anticipated the easements entered into through this project will restore 8,000 acre-feet of water to the aquifer.

As the Rio Grande River journeys from its headwaters within the San Juan Mountains, it flows through Colorado’s San Luis Valley, the largest alpine valley on earth. The valley floor is approximately 7,500’ above sea level and the mountain peaks are approximately 14,000’ above sea level making it the highest valley in the world capable of sustaining large scale crop production. While the San Luis Valley is unique in many ways, it shares a common resource challenge with many places around the United States — a declining groundwater aquifer.

While the Rio Grande River plays a critical role in agricultural production, the majority of farmers rely on underground aquifers within the San Luis Valley to supply their irrigation needs. Groundwater in the San Luis Valley is drawn from two stacked aquifers, with the upper aquifer known as the “unconfined aquifer” ranging from 30 to 100 feet in depth. The larger, deeper “confined aquifer” is separated from the unconfined aquifer by clay and basalt layers.

A historic drought in 2002 revealed the unsustainable nature of the current level of groundwater withdrawals, leading the state of Colorado to impose a deadline for the community to come to a solution or face a shutdown of groundwater wells. If the state’s mandate to replace injurious well pumping and to bring the aquifers back to sustainable production levels cannot be met, there is a serious risk of that thousands of wells will be shutdown. A sudden shutdown of wells will have a catastrophic socioeconomic ripple as agriculture is the Valley’s largest supplier of basic income and the largest source of basic employment.

Table 12: RCPP Project Quick Summary

Project Timeframe	2021 to 2026
Initial NRCS Project Allocation	\$7,890,000
Total Project Budget	\$18,603,000
Resources Addressed	Long-term Protection of Land Aquatic & Terrestrial Habitat Source Water Depletion Weather Resilience
Project Status	0% of Projects Complete
Funding to Historically Underserved Groups	100% of 1 EQIP Contract
MEASURABLE OUTCOMES	
# of Conservation Contracts	ACTIVE 1 EQIP Contract 14.7% Of EQIP \$ Obligated 0% Of Easement \$ Obligated
Acres Affected	

In 2018, two land trusts with long-term investment in the San Luis Valley came together with the water districts to create a new tool for irrigators informed by stakeholder outreach, together with legal and valuation research. The result of this collaboration is a groundwater conservation easement model focused on permanently restricting groundwater pumping volume while providing flexibility to the irrigator to choose how to transition their operation to achieve that reduction. Rather than forcing dry-up, this model achieves measurable long-term savings for the aquifer while allowing producers to stay in operation. The partners will use Regional Conservation Partnership Program to purchase conservation easements that will focus on groundwater pumping restrictions to keep 8,000 acre-feet of water in the aquifers. Agricultural Land Easement deed terms focused on groundwater depletion and associated management plans will allow for thoughtful farm transition to reduced irrigation. These terms and plans complement and are informed by existing Conserve Reserve Enhancement Program investments and will be specific to the needs and remaining irrigation capacity of each operation while protecting landcover.

“The Upper Rio Grande Basin is vital to our regional economy and provides important wildlife habitat,” said Colorado Senator Micheal Bennet. **“I’m delighted that the Colorado Open Lands Rio Grande Project will receive over \$6 million in funding from the Regional Conservation Partnership Program. This will unlock an innovative and locally-developed new approach to groundwater management in an effort to sustain the local agricultural economy and maintain wildlife habitat.”** — *WesternSlopeNow.com*

Additionally, an EQIP funding will provide a cost-share program to allow irrigators to install surface capture irrigation systems to remain viable as they reduce or discontinue groundwater pumping.

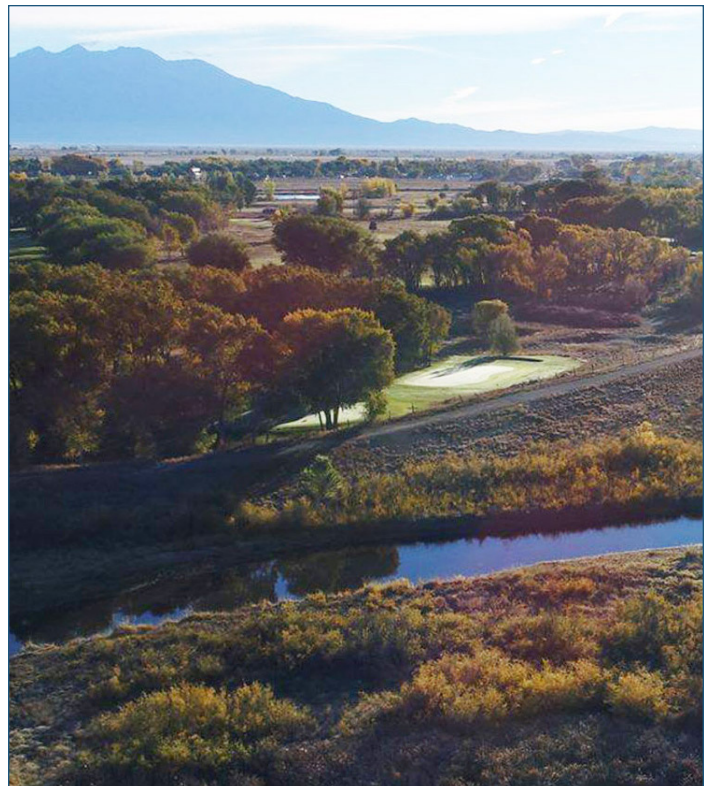
Funding from the Regional Conservation Partnership Program will allow a holistic, voluntary, and incentive-based approach to limit water use, instead of an inflexible regulatory response that would devastate both economy and wildlife habitat.

“As a long-time resident of the San Luis Valley, I have seen this community come together time and time again to address water challenges and this RCPP award is a testament to that longstanding collaborative culture.”

— Judy Lopez, Colorado Open Lands Conservation Project Manager

Contributing Partners

- Rio Grande Water Conservation District • San Luis Valley Water Conservation District • Conejos Conservation District • Rio Grande Conservation District • Center Conservation District • Trout Unlimited • Colorado Division of Water Resources • Colorado Department of Natural Resources • Colorado Department of Agriculture • Sangre de Cristo Acequia Association • Senator Michael Bennet • Rio Grande Headwaters Land Trust • Colorado Water Conservation District



UPPER ARKANSAS FOREST FUND

National Forest Foundation

The Upper Arkansas Forest Fund (UAFF) project intends to reduce the risk of severe fires in the Upper Arkansas River Watershed (in central Colorado) by treating forest health concerns on a total of 13,500 high-priority acres through RCPP’s Alternative Funding Arrangement (AFA) project type. The National Forest Foundation and partners will implement forest planning and restoration treatments on 300 private landowner parcels, covering more than 3,500 acres over five years. At the same time, project partners will treat 10,000 acres on adjacent public lands.

Remote sensing and fire modeling tools will help partners report on project outcomes, measured by reduced fire risk and retained carbon storage capacity.

The UAFF is an assembly of local partners led by the National Forest Foundation (NFF), specifically designed to implement forestland conservation project treatments recommend by the Chaffee Wildfire Protection Plan (CWPP). The partner-led efforts engage local communities throughout the watershed to develop support for forest restoration, prioritize treatment areas and enroll private landowners for implementation of forestry conservation work. The objectives of the UAFF are:

1. implement forest restoration treatments on 300 private landowner parcels, covering more than 3,500 acres over five years; and
2. support implementation of 10,000 acres on adjacent public lands over five years.

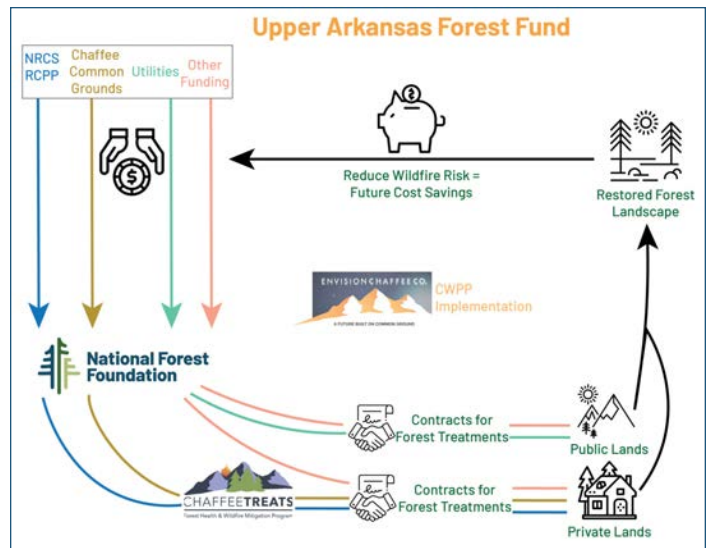
The RCPP-AFA project will support technical assistance and implementation activities necessary to achieve the afore-listed objective. The project will deliver Environmental Quality Incentives Program (EQIP)-like forest restoration projects to reduce fuel loads and restore forest health at no cost to the landowners. All public lands treatments will be supported through in-kind partner contributions or cash contributions to the project. Holistic cross-boundary forest restoration is essential to achieving this goal and specifically benefits private landowner and agricultural producers by protecting homes and outbuildings; infrastructure like irrigation ditches and access roads; and natural resources like water, air and soils.

Contributing Partners

Colorado State Forest Service • BlueTriton • Colorado Spring Utilities • Sangre de Cristo Electric Association • Town of Bueno Vista • Chaffee County • National Fish and Wildlife Foundation • Partnership of Rangeland Trust

Table 13: RCPP Project Quick Summary

Project Timeframe	2021 through 2026
Initial NRCS Project Allocation	\$5,714,286
Total Project Budget	\$15,274,310
Resources Addressed	Water Quality Degradation Degraded Plant Condition Soil Quality Degradation
Project Status	ACTIVE 0% of Project Complete
Funding to Historically Underserved Groups	
MEASURABLE OUTCOMES	
Anticipated # of Landowners Participating	300
Anticipated Acres Affected	3,500 acres private land (directly) 10,000 acres public land through partners
Anticipated OUTCOME	50 to 70% Reduction of wildfire risk within Chaffee County



RCPD OUTCOME SCORECARD

A 10 YEAR STORY OF 16 PROJECTS

Reductions Water Consumption	5.9 billion gallons
Expand and Enhance Hydropower Technology Transfer	<ul style="list-style-type: none">◆ Agricultural Hydropower Technical Manual published;◆ 69 Engineers Trained
Reduced On-farm Energy costs	\$520,131per year
Saved Energy	1,274,312 kWh per year
Reduced CO ² Emissions	2,665 tons annually
Water Quality Improvements	<ul style="list-style-type: none">◆ 8,395 tons of salt per year reduced;◆ 241 to 482 pounds of selenium per year reduced
Acres Permanently Protected from Development	70,125 acres
Anticipated Water Available to Improve River Low-Flow Conditions	12,122 acre-feet
Anticipated Colorado River Aquatic Habitat Improved	30 miles
Anticipated Total Russian Olive Stems Removed	125,000 Stems





USDA is an equal opportunity provider, employer, and lender.