COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Colorado Master Irrigator	
Name of Water Project	COMI Statewide Expansion	
Grant Request Amount		**$1,226,363.00**
Primary Category		$1,226,363.00
Agricultural Projects		
Total Applicant Match		**$287,000.00**
Applicant Cash Match		$48,000.00
Applicant In-Kind Match		$239,000.00
Total Other Sources of Funding		**$221,487.00**
Climate Smart Advances in Ag Performance Team (IIC)		$156,890.00
Platinum Partner Sponsorships		$14,600.00
Community Funding Partnership		$49,997.00
Total Project Cost		**$1,734,850.00**

Applicant & Grantee Information

Name of Grantee: Colorado Master Irrigator
Mailing Address: 21502 County Road 47 Burlington CO 80807

Organization Contact: Brandi Baquera
Position/Title:
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Grant Management Contact: Brandi Baquera
Position/Title:
Phone: (719) 343-0099
Email: coloradomasterirrigator@gmail.com

Description of Grantee/Applicant

We are a non-profit organization working towards water conservation and efficiency for irrigators in Colorado.

Type of Eligible Entity

- ☐ Public (Government)
- ☐ Public (District)
- ☐ Public (Municipality)
- ☐ Ditch Company
- ☐ Private Incorporated
- ☐ Private Individual, Partnership, or Sole Proprietor
- ■ Non-governmental Organization
- ☐ Covered Entity

☐ Other

Category of Water Project

■ Agricultural Projects
Developing communications materials that specifically work with and educate the agricultural community on headwater restoration, identifying the state of the science of this type of work to assist agricultural users among others.

☐ Conservation & Land Use Planning
Activities and projects that implement long-term strategies for conservation, land use, and drought planning.

☐ Engagement & Innovation Activities
Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website.

☐ Watershed Restoration & Recreation
Projects that promote watershed health, environmental health, and recreation.

☐ Water Storage & Supply
Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap.

Location of Water Project

Latitude	39.302500
Longitude	-102.267800
Lat Long Flag	Default/Proponent headquarters: If the location cannot be defined with flags above, use location of project proponent headquarters
Water Source	
Basins	Arkansas; Colorado; South Platte; Rio Grande; Gunnison; Southwest; Republican
Counties	Alamosa; Baca; Bent; Boulder; Chaffee; Clear Creek; Archuleta; Adams; Arapahoe; Broomfield; Cheyenne
Districts	

Water Project Overview

Major Water Use Type	Agricultural
Type of Water Project	Education
Scheduled Start Date - Design	1/1/2025
Scheduled Start Date - Construction	

Description

Colorado faces rising water demand due to population growth and climate change. The Colorado Master Irrigator Program (COMI), which has already positively impacted over 200,000 irrigated acres across the state, is a non-profit organization that focuses on helping producers maintain profitability while integrating tools and strategies to improve energy-use efficiency and water conservation. Beginning in 2025, COMI will be expanding its efforts to offer programs in the Colorado and Gunnison Basins, specifically the Mesa and Delta Conservation districts, as well as the Arkansas and South Platte Basins in addition to programs already offered in the San Luis Valley and Republican River Basin. Courses will be offered annually for three years, tailored to each unique region with producer and expert input. Our programs will focus on advanced conservation and irrigation practices, regional hydrology, and technical advancements and will support a cohort of 25 participants per program each year, providing financial support for graduates to implement practices learned. Participants will share water-use data and set goals to enhance efficiency and contracted program staff will track and analyze

progress over three growing seasons while offering support and insight into water management, efficiency, and profitability.

Measurable Results

New Storage Created (acre-feet)
New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
Existing Storage Preserved or Enhanced (acre-feet)
New Storage Created (acre-feet)
Length of Stream Restored or Protected (linear feet)
Length of Pipe, Canal Built or Improved (linear feet)
Efficiency Savings (dollars/year)
Efficiency Savings (acre-feet/year)
Area of Restored or Preserved Habitat (acres)
Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
450 Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
450 Number of Coloradans Impacted by Engagement Activity
Other
Although specific numbers of AF saved each year isn't available, 50% of the 2020 graduating COMI class reported a reduction in their water usage following program participation.

Water Project Justification

According to the Colorado Department of Agriculture, irrigated agriculture contributes $47 billion to Colorado's economy each year through irrigated agriculture (2020, p. 2), boosting yields, buffering crops from drought, and bringing ancillary value to the state's rural communities through related business and investment. To protect and manage challenges related to irrigated agriculture, such as water quantity and quantity declines, increasing salinity and nitrate loading issues, navigating compact compliance and other regulatory requirements, and more, improving conservation outcomes through adaptive and precision management of irrigation in Colorado is imperative and fiscally a wise move in the near and longer term for farmers, communities and the state.

To that end, Colorado Master Irrigator (COMI) has been answering the call for action to Colorado's need for "collaborative and creative solutions for balancing competing water demands for a finite resource" (Colorado Water Plan, 2023, p. v) since the program launched in 2020. Through 32-hour annual courses, originally offered in the Republican River Basin and later expanded to the Rio Grande and Southwest basins, to date, over 200 participants - mostly producers, as well as some crop consultants, seed dealers, and NRCS staff graduates have successfully completed the COMI program. Irrigated land managed by COMI graduates who are working to implement conservation-oriented strategies and tools has a footprint of more than 200,000 acres statewide. The success of the program's replication and adaptation from the Republican River Basin to the San Luis Valley and Four Corners region has prompted exploration of and planning for further expansion of new chapters of the program in areas in the Colorado, Gunnison, Arkansas, and South Platte Basins in 2025.,

Funding for the proposed project "COMI Statewide Expansion" will support expansion into the Arkansas, Colorado, Gunnison, Rio Grande, South Platte, and Southwest Basin areas. This investment in the program will support COMI in becoming a truly statewide program, capable of serving producers and water managers within a footprint that spans 94% of Colorado's irrigated acres (CWP, 2023, p. 46). Further COMI expansion will:

Offer a high-quality, in-person, 4-day (32-hour) interactive educational course once a year using a common format that is locally adaptable to encourage irrigators' understanding and use of profitable,

conservation-oriented and water- and energy-use efficient management tools and strategies (CWP, 2023, p. 9)

engage a diverse wide range of water-management connected partners and program sponsors from across the state and beyond. COMI fosters such collaborative capacity and the social and cultural trust required for change through dialogue, spurring wider and faster adoption of conservation actions including water- and energy-use efficient practices. Transitions to using more adaptive, dynamic, and precision management approaches to applying irrigation, capturing and retaining more precipitation through careful soil and residue management, and investing in even small improvements in irrigation system performance can translate into significant savings of water. These savings can slow aquifer level declines and maintain well capacity, potentially helping to limit permanent dry-up of some irrigated acres (SP BIP, 2022, pg 30) and addressing the gap between “future water needs and available water provisions” identified for the Arkansas, Colorado, Gunnison, Rio Grande, South Platte, and Southwest basins (CWP, 2023, p. 81,90,99,114,122,131). Maintaining irrigated agriculture where water can be managed in a way that does not contribute to rapid and ongoing water quantity and quality declines is a critical part of sustaining productive agricultural economies and viable rural communities in this semi-arid region(A BIP, 2022, p. 18; C BIP, 2022, p. 16-17; RG BIP, 2022, p. 2; SP BIP, 2022, p. 30-31; SW BIP, 2022, p. 22).

Related Studies

In 2020, Colorado Master Irrigator launched its inaugural 32-hour course covering a range (simple to advanced, low to higher cost) of conservation- and irrigation efficiency-related management tools and techniques, such as but not limited to: irrigation scheduling, deficit irrigation, the use of energy audits to optimize the function of irrigation and pumping systems, planting less water-demanding crops and crop varieties, learning to interpret and trust data from soil moisture probes, adding telemetry to pivots, and strategies for improving soil health.

The course curriculum is taught by highly knowledgeable, dynamic, and effective instructors from Colorado and adjacent states including farmers, university academic and Extension staff, state and Federal agency personnel, representatives from different ag industries, crop consultants, and others. Colorado Master Irrigator program developers, presenters, participants and graduates represent a highly diverse and important network that is aligned and engaged in a manner that supports Colorado Water Plan goals (CWP, 2023, pg 141).

The delivery of the COMI curriculum involves discussion of practical economics, where the experience of producers with different allocations or well capacities operating on different kinds of soils have the opportunity to showcase how they’ve been able to maintain profitable operations yields while reducing their water use. The course also covers regional hydrology--past, present, and anticipated future conditions accounting for climate change--to support participants in contextualizing and evaluating potential benefits and tradeoffs of participating in regional, state- and/or Federally-supported programs that aim to reduce consumptive water use. Overall, Colorado Master Irrigator aims to equip participants with information to support their understanding and proactive decision making and management shifts related to land and water use, to benefit their operations today and in the long term, facilitate addressing practical and critical challenges (dealing with salinity, labor shortages, energy costs, and more) that are connected to effective irrigation management and overall operational success and sustainability. Course content and related conversations, for example, assist producers in evaluating where and whether it makes sense to retire certain wells, and the short- and long-term return on investment potential of different water- and energy-use efficiency and conservation-focused practices for their operations.

COMI participants are asked to come prepared to share information on water use and target yield goals for the operations on which they work, and to reflect on their current management practices in light of the material

covered during the course. The course format encourages peer-to-peer exchange among classmates and with farmer instructors who share the insights they've gained through steps they've taken to increase water and energy-use efficiency and conserva

Taxpayer Bill of Rights
No Tax Bill of Rights provided