COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Trout Unlimited_Denver
Name of Water Project	Innovative Irrigation Efficiency: Automated Gated Pipe Valve Field Trials
Grant Request Amount	**$34,500.00**
Primary Category	$34,500.00
Agricultural Projects	
Total Applicant Match	**$3,000.00**
Applicant Cash Match	
Applicant In-Kind Match	$3,000.00
Total Other Sources of Funding	**$32,500.00**
CRD Community Funding Partnership	$22,500.00
Automated Farming Solutions	$10,000.00
Total Project Cost	**$70,000.00**

Applicant & Grantee Information

Name of Grantee: Trout Unlimited_Denver
Mailing Address: 2032 Ivanhoe St. Denver CO 80207
FEIN: 381,612,715

Organization Contact: Luke Laurita
Position/Title:
Phone: 970-210-4997
Email: luke.laurita@tu.org

Organization Contact - Alternate: Jesse Kruthaupt
Position/Title: Upper Gunnison Project Manager
Phone: 9702090976
Email: jesse.kruthaupt@tu.org

Description of Grantee/Applicant

Trout Unlimited (TU) is the nation's largest cold-water conservation organization with approximately 150,000 volunteers and roughly 277 employees nationwide, working to protect, reconnect, restore and sustain America's fisheries. TU's volunteers and their local chapter groups work on a variety of initiatives that meet the unique needs of their watersheds.
TU's focus in the Gunnison Basin is to find win-win solutions to water supply and infrastructure issues by collaborating with water users and water managers. TU has completed numerous projects in the Gunnison basin similar to the project described herein

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	38.696760
Longitude	-108.085200
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	Uncompahgre River
Basins	Gunnison
Counties	Delta
Districts	41-Lower Uncompahgre River

Water Project Overview

Major Water Use Type	Agricultural
Type of Water Project	Construction / Implementation
Scheduled Start Date - Design	10/1/2023
Scheduled Start Date - Construction	10/1/2025

Description

Trout Unlimited and Automated Farming Solutions (AFS) will work with an agricultural producer to deploy and test programable gated pipe values on fields in the Gunnison Basin. This innovative irrigation technology has been developed by Delta County resident Kelly Cox (AFS owner) and uses blue tooth communication to program and schedule the opening and closing of each gated pipe valve thereby improving irrigation scheduling,

increasing irrigation water use efficiency, reducing edge of field-run off and reducing irrigation labor costs. Further, these automated valves provide an alternative to switching to sprinkler irrigation and are designed to be retrofitted onto existing gated pipe. AFS has over 500 valves ready for deployment and testing at scale.

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)
$500	Efficiency Savings (dollars/year)
100	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)
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
	Number of Coloradans Impacted by Engagement Activity

Other

This project will test and evaluate water, labor, and energy savings by irrigating with an automated system and compare it to historic irrigation practices.

Water Project Justification

This project will support Gunnison BIP Goal 1: Protect Existing Uses; Goal 2: Discourage the conversion of productive agricultural land to other uses within the context of private property rights; and Goal 8: Restore, maintain, and modernize critical water infrastructure. Investing in irrigation infrastructure and using technology to modernize management and improve production will allow farmers the opportunity to continue profitable enterprises and decrease the likelihood water rights and productive land will be converted to other uses.

The Colorado Water Plan Water Plan frequently references collaboration and multiple use projects. In section 6.6, page 6-157, the third goal listed is “Support the development of multipurpose projects and methods that benefit environmental and recreational water needs as well as water needs for communities or agriculture”. This project will involve coordination between NGO’s and private landowners. This project will improve agricultural production and late season stream flows by improving management of flood irrigation that recharges the alluvial aquifer. Improved irrigation efficiency can also offer water users the flexibility to effectively irrigate with less water diverted from the river.

As mentioned on page 15 of Chapter 5, Water Demands of the Water Plan, scientists predict that increasing temperatures, as a result of climate change, will reduce cold-water habitat for trout. Modifying the diversions through efficiency improvements provides an opportunity to maintain flows and temperatures suitable for a healthy fishery.

On page 1-6 of the Colorado Water plan cites three core water values. The second value is “Efficient and effective water infrastructure promoting smart land use.” This project will use technology and innovation to allow efficient water management.

Related Studies

CSU Extension: Fruita Research Station Trials-2018

Taxpayer Bill of Rights
None