COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Watershed Center	
Name of Water Project	Flow Monitoring at Gold Lake and Left Hand Park	
Grant Request Amount		**$66,885.00**
Primary Category		$66,885.00
Agricultural Projects		
Total Applicant Match		**$0.00**
Applicant Cash Match		$0.00
Applicant In-Kind Match		$0.00
Total Other Sources of Funding		**$68,125.00**
St. Vrain and Left Hand Water Conservancy District		$60,625.00
Left Hand Ditch Company		$7,500.00
Total Project Cost		**$135,010.00**

Applicant & Grantee Information

Name of Grantee: Watershed Center
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FEIN: 201,248,361

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Description of Grantee/Applicant

Since 2005, the Watershed Center has been working to protect and restore watersheds for people and the environment using a collaborative and science-based approach. We are a stakeholder driven, non-profit organization in Boulder County that uses the best available science to monitor, assess, and manage our watersheds. We plan and implement on-the-ground forest and river restoration projects. We strive to build a strong stewardship ethic in our community through place-based and participatory learning. Though our primary

focus is the St. Vrain Basin, we increase our impact by developing programs and projects to be scalable and repeatable across other Colorado watersheds.

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	40.068069
Longitude	-105.563461
Lat Long Flag	Reservoir location: Coordinates based on location of reservoir
Water Source	The water source for Gold Lake Reservoir is James Creek; Gold Lake Drains into Left Hand Creek via an overflow. Left Hand Park Reservoir drains directly into Left Hand Creek and is filled via snowmelt and rainfall.
Basins	South Platte
Counties	Boulder
Districts	5-St. Vrain Creek

Water Project Overview

Major Water Use Type	Agricultural
Type of Water Project	Construction / Implementation
Scheduled Start Date - Design	

Scheduled Start Date - Construction 7/3/2023

Description

Using water efficiently is becoming increasingly important as water demand is growing in Colorado and beyond. Water is needed for a variety of beneficial uses including support of the St. Vrain Watershed's ecological attributes. Yet lack of precise flow measurement in the St. Vrain Watershed limits quantitative tracking of water use accountability. This project will improve flow measurement through better stream gauging, measurement devices, and telemetry. These devices record flow and provide quantitative data about the amount of water available in ditch and stream systems. This project will install five measurement devices in three new headwaters locations to improve tracking of water flowing into ditch canals and Left Hand Creek. Multiple benefits of precise flow measurement include (1) protecting local water rights, (2) improving water administration for beneficial uses, and (3) optimizing water management to mitigate climate uncertainty. Notably, the headwaters location of these devices supports improved water accounting downstream. Further, this project will engage community members by developing and sharing project outreach materials that describe what information is gathered and how it relates to water management. Finally, this project is founded on collaboration with a partnership between the Watershed Center, a non-profit watershed collaborative, and the Left Hand Ditch Company.

Measurable Results

	New Storage Created (acre-feet)
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
1,953	Existing Storage Preserved or Enhanced (acre-feet)
	New Storage Created (acre-feet)
179,520	Length of Stream Restored or Protected (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)
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
500	Number of Coloradans Impacted by Engagement Activity

Other

No additional measurable results provided

Water Project Justification

This project supports multi-benefit goals within the Colorado Water Plan and South Platte Basin Implementation Plan related to water delivery efficiencies that aim to conserve source water, protect and support agricultural practices, sustain watershed health, and engage an inter-disciplinary group of stakeholders in collaborative planning.

This project will implement irrigation improvement and modernization with the addition of flow monitoring devices in three key headwaters locations in Left Hand Creek Watershed. These devices will provide information about water storage and delivery which is necessary to assess system-wide conservation efficiency opportunities and tradeoffs. Without the information, stakeholders are unable to accurately manage water resources to support multiple beneficial uses.

Further, this project provides public benefits with outreach to local community members about the information that is collected and how it is used.

Finally, this project leverages a collaborative partnership between the Watershed Center and the Left Hand Ditch

Company. The Watershed Center bring expertise managing more than eight Colorado Water Conservation Board Grants and leading extensive community and stakeholder outreach. The Left Hand Ditch Company brings a deep knowledge of the stream and ditch system, as well as experience installing more than 20 other flow monitoring devices in the watershed. Specific goals and citations in the Colorado Water Plan and South Platte Basin Implementation Plan are further discussed below.

Colorado Water Plan:

Section 6.3 Goals (pg 6-59): “Integrate water efficiency planning and projects into overall water resource management.”

Lack of flow monitoring locations in the St. Vrain Watershed currently limits the ability of stakeholders to accurately manage water resources or integrate water efficiency planning into the management of water resources. Increasing stream gauges, measurement devices, and telemetry for water administration is the first step towards overcoming these challenges. Therefore, this project will support Section 6.3 goals by providing flow information for three key locations in and near the headwaters of Left Hand Creek Watershed. These location are key because they contribute to understanding of how much water is flowing down Left Hand Creek and being stored in two headwaters reservoirs. The quantitative flow information provided by these devices will help stakeholders integrate efficiency planning into water resource management.

Section 6.6 Goals (pg 6-157): “Support development of multipurpose projects and methods that benefit environmental and recreational water needs as well as water needs for communities and agriculture.”

Water in Left Hand Creek is needed for a variety of beneficial uses including supporting the creek’s ecological attributes (e.g. aquatic and riparian habitat), providing 500 shareholders (16,800 shares) water to irrigate up to 30,000 acres, and providing raw water for the Left Hand Water District. By improving quantitative tracking of flows in Left Hand Creek, this project will provide information about where there may be opportunities to expand benefits (e.g. protect water rights or increase in-stream flows). Therefore, this project will support Section 6.3 goals by supporting the first step in ensuring benefits for diverse water needs – a quantitative understanding of flows in the stream and ditch system.

Section 10.3 Goals (pg. 10-10): “Maintain Agricultural Viability: Maintain Colorado’s agricultural productivity, support of rural economies…” and “Support Agricultural Conservation and Efficiency: Support Colorado’s agricultural industry to make it more efficient, resilient, and able to reduce water consumption without impacting agricultural productivity.”

The Left Hand Ditch Company has a deep agricultural roots, dating back to the 1800s when farmers settled in the lower parts of the Left Hand Creek Watershed and began diverting water from the creek to grow crops in the semi-arid environment. Today the Left Hand Ditch Company provides water to irrigate up to 30,000 farm acres which includes primarily grass, alfalfa, and corn farms. One of the multiple benefits achieved through quantitative flow monitoring is the protection of water rights for shareholders. Therefore, this project will support Section 10.3 Goals by supporting the ability of Left Hand Ditch Company to continue to provide water for shareholders while modernizing irrigation infrastructure for more quantitative water resource management.

Section 10.3 Additional Goals (pg. 10-14): “Prepare for Climate Change: Respond to, monitor, and prepare for climate change.”

Climate change poses many challenges for water management. One of the ways to mitigate these challenges is by optimizing water management and storage, especially as part of drought planning and preparedness.

Quantitative flow monitoring in stream and ditch systems is necessary to inform water management and water storage opportunities in dry years. Therefore, this project meets Section 10.3 by providing quantitative flow and storage information for stakeholders to prepare for, respond to, and monitor the impacts of climate change on water management.

South Platte Basin Implementation Plan, Volume 1

Section 4 Goals (pg. 30): “Maintain and improve irrigated agriculture”
Section 6 Actions (pg. 68): “Protect Irrigated Agriculture… Use Water More Efficiently in All Sectors”
Section 6 Actions (pg. 72): “Protect and Enhance Watersheds”
Section 11 Strategies (pg 39): “Support and expand communication and outreach activities”

Better quantitative data about flows is a foundational step in protecting and enhancing the watershed. This project will meet Section 4 and 6 goals by integrating quantitative flow monitoring into water storage and delivery management for the Left Hand Ditch system which supplies water to irrigate up for primarily farms that grow grass, alfalfa, and corn. Flow data will ensure that water rights for irrigated agriculture are protected while also helping identify opportunities to stretch water availability to enhance other beneficial uses such as recreational and environmental uses. This project will meet Section 11 strategies by developing and distributing a mailer to adjacent neighbors in three neighborhoods about the project, including type of data collected by the flow measurement devices, where data can be viewed, and how data related to water resource management.

Related Studies

The activities proposed by this project are supported by the St. Vrain and Left Hand Stream Management Plan (SMP) and the St. Vrain and Left Hand Water Conservancy District’s (SVLHWCD) Five-Point Water Action Plan (5-Point Plan). The SMP identifies gauging and diversion structure enhancements and improved management as priorities to improve water use and management in the St. Vrain Watershed (including Left Hand Creek). This project will directly support these SMP priorities.

The voter-funded 5-Point Plan includes five key points: protect water quality in drinking water sources; maintain healthy rivers and creeks; safeguard and conserve drinking water supplies for local communities and local food production; protect forests that are critical to water supply; and reduce the risk of wildfires. This project will directly support all of these priorities.

The Left Hand Ditch Company has already installed more than 20 flow monitoring devices throughout the watershed. The data collected by these five new proposed devices will complement other flow monitoring devices for a more comprehensive understanding of flows throughout the watershed. Notably, these devices will help fill critical information gaps about storage and flows coming down Left Hand Creek at and near the headwaters of Left Hand Creek.

This project also supports the Watershed Center’s Adaptive Management at Scale Plan and Process, which highlights more quantitative flow information as a priority for improving how monitoring and assessment of watershed health for can support current and future ecological and geomorphic function (habitat, native plant communities, and needs of aquatic life), the needs of consumptive users (domestic, agriculture, industrial), and recreation.

Taxpayer Bill of Rights

There are no relevant TABOR issues that would impact this application.