COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Jefferson Conservation District
Name of Water Project	Lower North Fork Sediment Stabilization
Grant Request Amount	**$368,196.00**
Primary Category	$368,196.00
Watershed Health & Recreation	
Total Applicant Match	**$0.00**
Applicant Cash Match	$0.00
Applicant In-Kind Match	$0.00
Total Other Sources of Funding	**$368,196.00**
Denver Water	$368,196.00
Total Project Cost	**$736,392.00**

Applicant & Grantee Information

Name of Grantee: Jefferson Conservation District
Mailing Address: PO Box 261205 Lakewood CO 80226

Organization Contact: Margo Yousse
Position/Title: Watershed Project Manager
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Organization Contact - Alternate: Garrett Stephens
Position/Title: Director
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Grant Management Contact: Margo Yousse
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Grant Management Contact - Alternate: Garrett Stephens
Position/Title: Director
Phone:
Email: garrett.stephens@jeffersoncd.com

Description of Grantee/Applicant

Jefferson Conservation District helps landowners implement and fund forestry projects on private lands.

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	39.407653
Longitude	-105.172069
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	North Fork of the South Platte River
Basins	Metro
Counties	Jefferson
Districts	8-South Platte Cheesman to Denver Gage; 80-North Fork of South Platte

Water Project Overview

Major Water Use Type	Environmental
Type of Water Project	Design & Construction
Scheduled Start Date - Design	3/23/2023
Scheduled Start Date - Construction	9/15/2025

Description

The Lower North Fork Sediment Stabilization Project addresses bank erosion, sediment transport, and riparian vegetation health at the confluence of the North Fork of the South Platte and South Platte Rivers, upstream of Strontia Springs Reservoir. The project employs a hybrid approach of process- and form-based restoration to reduce sediment loading, enhance channel function, and increase floodplain connectivity.

Key project components include creating in-channel areas that slow water flow and trap sediment, promoting natural vegetation succession to stabilize sediment on floodplains and side channels. Grading and bank stabilization will target erosion caused by channel confinement, with locally sourced large woody materials used

where possible.

This work aims to improve overall channel function, reconnect floodplains, and reduce excess sediment in the North Fork of the South Platte. By decreasing sediment transported downstream, the project protects Strontia Springs Reservoir from capacity loss and water quality degradation, while enhancing resilience to future wildfires and high-intensity rainfall events.

The project aligns with goals of the Colorado Water Plan and the South Platte Basin Implementation Plan, fostering watershed health, ecological resilience, and sustainable water resource management for downstream communities.

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)
10,000	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)
1	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

No additional measurable results provided

Water Project Justification

This project addresses critical watershed vulnerabilities in the North Fork of the South Platte Watershed, particularly the threats posed by post-wildfire erosion and sedimentation, which jeopardize water quality and infrastructure downstream. These risks are significant for Strontia Springs Reservoir, a key water drinking water facility for the Denver metropolitan area. Eighty percent of Denver Water's supply and 90% of Aurora's supply is transported through Strontia Springs Reservoir.

The Colorado Water Plan prioritizes enhancing watershed health and improving resilience to climate-induced disturbances, including wildfires. This project directly supports these goals:

Thriving Watersheds Action Area: The project stabilizes eroding banks, reduces sediment transport, and improves habitat through nature-based designs such as sediment deposition zones, floodplain reconnection, and riparian revegetation. These measures align with the Plan's emphasis on holistic watershed restoration to protect water quality and ecosystem function (Colorado Water Plan, Chapter 7, Section 7.1, pp. 7-15).

Resilient Planning Action Area: By intercepting sediment before it reaches Strontia Springs Reservoir, the project safeguards vital water infrastructure, ensuring long-term operational capacity and reducing costly dredging operations. This action addresses the Plan's call for proactive measures to mitigate wildfire-related impacts on water supply systems (Colorado Water Plan, Chapter 6, Section 6.6, pp. 6-141).

The South Platte Basin Implementation Plan (BIP) also emphasizes the need to protect and enhance watershed function and environmental attributes. This project addresses these priorities by targeting sediment stabilization and habitat restoration in the North Fork South Platte Watershed, a critical area identified in both:

The North Fork of the Upper South Platte Wildfire Ready Action Plan (WRAP), which highlights this watershed as vulnerable to wildfire-induced sedimentation and flooding, and

The 2021 Strontia Springs Watershed Sediment Management Plan, which prioritizes sediment reduction at this site based on historic and new Watershed Assessment of River Stability and Sediment Supply (WARSSS) analyses.

These plans underscore the need for addressing sedimentation and erosion at this location to reduce downstream impacts on water quality and storage infrastructure.

In addition, this project uses nature-based solutions, which offer cost-effective, scalable, and sustainable methods to address sedimentation while fostering long-term watershed health and resilience. By leveraging these approaches, the project provides multiple co-benefits, including improved aquatic and riparian habitat, enhanced floodplain connectivity, and increased resilience to future wildfires and high-intensity rain events.

Related Studies

This water project is complementary to the North Fork of the South Platte Wildfire Ready Action Plan (WRAP), which in part informs the importance of this project.

This project also falls under the umbrella of Denver Water's Strontia Springs Watershed Sediment Management Program:

In 2019, at the direction of Denver Water executive leadership, staff from Denver Water and Aurora Water participated in a week-long event to discuss and select the most advantageous and cost-effective long-term strategy for sediment management in Strontia Springs Reservoir. The result was a combination of upstream watershed sediment management and periodic sediment removal to preserve the facility and avoid the need for dam replacement. Three modified Watershed Assessment of River Stability and Sediment Supply (WARSSS) analyses were completed between 2019 and 2020 to understand watershed sources and opportunities for sediment reduction. With these assessments, other historic watershed and post-wildfire reports, and a desktop sediment transport risk analysis, Denver Water completed the first Strontia Springs Watershed Sediment Management Plan in 2021. Additional project-related studies and reports have also been completed. A list of the recent documents are below:

SWCA Environmental Consultants (SWCA). 2019. Strontia Springs Watershed Sediment Study: WARSSS Reconnaissance Level Assessment. December 2019.

SWCA. 2020. Strontia Springs Watershed Sediment Study: Lower North Fork and Buffalo Creek Modified WARSSS Predictive Level Assessment. August 2020.

SWCA. 2020. Strontia Springs Watershed Sediment Study: Wigwam Creek and Upper South Platte Modified WARSSS Predictive Level Assessment. December 2020.

SWCA. 2021. Strontia Springs Reservoir Watershed Sediment Management Plan. December 2021.

Matrix Design Group (Matrix). 2022. Lower North Fork Restoration Feasibility Analysis: Field Assessment Report: July 19, 2022 Site Visit.

Matrix. 2022. Lower North Fork Restoration Feasibility Analysis: Conceptual Design Report. October 2022.

Matrix. 2023. Lower North Fork Sediment Retention and Riparian Buffer Design, Site 1: 30% Design Report. May 2023

Taxpayer Bill of Rights

N/A