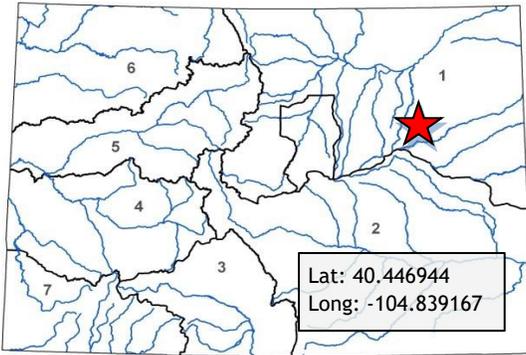




Water Plan Grant Application

Lower Cache la Poudre Priority Reach Design Project Coalition for the Poudre River Watershed March 2023 Board Meeting



L O C A T I O N	
County/Counties:	Larimer
Drainage Basin:	South Platte

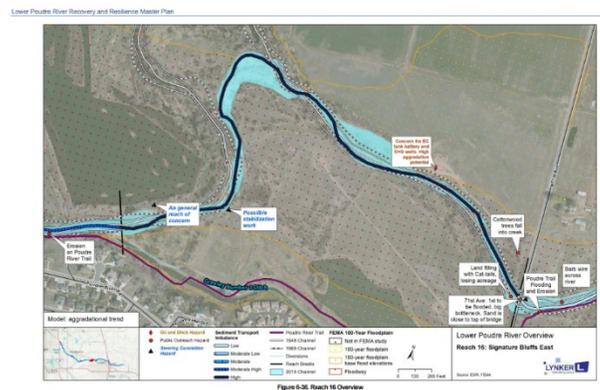
D E T A I L S	
Total Project Cost:	\$153,228
Water Plan Grant Request:	\$114,740.50
Recommended amount:	\$114,740.50
Other CWCB Funding:	\$0
Other Funding Amount:	\$38,487.50
Applicant Match:	\$0
Project Type:	Design
Project Category:	Watershed Health & Recreation
Measurable Result:	50 Coloradans impacted by engagement and 11,000 linear ft of stream

In 2016, the Coalition for the Poudre River Watershed (CPRW) initiated an effort to develop a river flood recovery & resiliency master plan for the lower Cache la Poudre River (east of I-25 to the confluence w/the South Platte). The focus of the master plan was to prioritize reaches of the river with the greatest need for restoration and resiliency. The master plan has been finalized and CPRW uses this master plan to help identify priority reaches of the river corridor for design/implementation to increase river resiliency.

Last year CPRW completed a 30% design for “Reach 13,” a 1.2-mile high priority reach. This fall, a 60% design for the upstream half of Reach 13 was completed. To continue making progress towards increasing the resiliency of the lower Poudre, there is a need to not only complete the 60% design for all of Reach 13, but to also work towards a

creating a design for another priority Reach. With the Lower Poudre Steering Committee, CPRW identified “Reach 16” as the next priority for restoration. This project has CPW support and has been identified through a collaborative planning process.

CPRW is requesting \$114,741 of Colorado Water Plan grant funding to complete the 60% design for the remaining portion of Reach 13 and develop a 30% restoration design for Reach 16. CPRW has 25% match funding totaling \$38,488 and 75% of this project will be funded by WPG. They have secured grants from the City of Greeley Natural Areas for \$15,000, Might Arrow Family Foundation for \$10,000, Patagonia for \$6,000, and Lower Poudre Steering Committee for \$7,487.50. The applicant has received 6 past CWCB grants and CPRW is familiar with what is required to successfully meet WPG requirements.



This project has three major goals: to complete the 60% design for the downstream half of Reach 13, develop a 30% restoration design for priority Reach 16, and facilitate/build landowner and community understanding around watershed health & river resiliency. To complete these designs CPRW will engage Reach 13 and Reach 16 landowners, managers and stakeholders and develop a realistic timeline for design, permitting and construction for Reach 13.

Funding Recommendation: Staff recommends Board approval of \$114,741 for full funding to the Coalition for the Poudre River Watershed for the Lower Cache la Poudre Priority Reach Design Project.



COLORADO

Colorado Water Conservation Board

Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Coalition for the Poudre River Watershed
Name of Water Project	Lower Cache la Poudre Priority Reach Design Project
Grant Request Amount	\$114,740.50
Primary Category	\$114,740.50
<i>Watershed Health & Recreation</i>	
Total Applicant Match	\$0.00
<i>Applicant Cash Match</i>	
\$0.00	
<i>Applicant In-Kind Match</i>	
\$0.00	
Total Other Sources of Funding	\$38,487.50
<i>City of Greeley Natural Areas</i>	
\$15,000.00	
<i>Might Arrow Family Foundation</i>	
\$10,000.00	
<i>Patagonia</i>	
\$6,000.00	
<i>Lower Poudre Steering Committee</i>	
\$7,487.50	
Total Project Cost	\$153,228.00

Applicant & Grantee Information

Name of Grantee: Coalition for the Poudre River Watershed
Mailing Address: 320 E Vine Drive, Ste 317 Fort Collins CO 80524
FEIN: 462,850,042

Organization Contact: Hally Strevey
Position/Title: Executive Director Email: hallys@poudrewatershed.org
Phone: 9702225754

Grant Management Contact: Hally Strevey
Position/Title: Executive Director Email: hallys@poudrewatershed.org
Phone: 9702225754

Grant Management Contact - Alternate: Cory Dick
Position/Title: Watershed Project Manager Email: cory@poudrewatershed.org
Phone:

Description of Grantee/Applicant

No description provided

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	40.446944
Longitude	104.839167
Lat Long Flag	Stream location: Coordinates based on general location on stream
Water Source	Cache la Poudre River
Basins	South Platte
Counties	Weld
Districts	

Water Project Overview

Major Water Use Type

Type of Water Project Design / Engineering

Scheduled Start Date - Design 4/1/2023

Scheduled Start Date - Construction

Description

In 2016, the Coalition for the Poudre River Watershed (CPRW) initiated an effort to develop a river flood recovery & resiliency master plan for the lower Cache la Poudre River (east of I-25 to the confluence w/the South Platte). The focus of the master plan was to prioritize reaches of the river with the greatest need for restoration & resiliency building, analyze sediment transport issues, and to develop a steering committee to support decision making. Last year we completed a 30% design for "Reach 13," a 1.2-mile-high priority reach. This fall, a 60% design for the upstream half of Reach 13 was completed. To continue making progress towards increasing the resiliency of the lower Poudre, there is a need to not only complete the 60% design for all of Reach 13, but to also work towards a creating a design for another priority Reach. With the Lower Poudre Steering Committee, we

identified “Reach 16” as the next priority for restoration.

This project has three major goals: to complete the 60% design for the downstream half of Reach 13, develop a 30% restoration design for priority Reach 16, and facilitate/build landowner and community understanding around watershed health & river resiliency.

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)
11,000	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
50	Number of Coloradans Impacted by Engagement Activity
Other	
	No additional measurable results provided

Water Project Justification

This proposal supports many of the goals articulated in the Colorado’s Water Plan and the South Platte Basin Roundtable Implementation Plan. The project will contribute measurable outcomes related to several Colorado Water Plan Goals outlined in Chapters 6 and 7 and to the South Platte BIPP goals that relate to protecting and enhancing watershed function and environmental and recreational attributes and broadening communications, outreach, and education.

Colorado Water Plan Alignment:

Section 6.2 (pg 15): “Colorado’s Water Plan uses a grassroots approach to formulate projects and methods that avoid some of the undesirable outcomes of the supply-demand gaps. The plan addresses the gaps from multiple perspectives—such as water storage, reuse, recycling, integrated water management, restoration, and conservation.”

This section acknowledges the goals and measurable outcomes of the Basin Implementation Plans, including:

- Meet Colorado’s environmental and recreational water needs.
- Meet Colorado’s water quality management needs.
- Protect and restore watershed health.
- Continue participation, education, outreach, and communication.

Our Lower Poudre Steering Committee was established in 2016 to assist with the development of the Lower Poudre Resiliency Master Plan. The committee includes multiple perspectives with representatives from the local municipal utilities including the City of Greeley and Town of Windsor, Northern Water Conservancy District, Colorado Parks and Wildlife, researchers, non-profits, and local landowners. The steering committee will meet bi-monthly throughout the project to help guide and provide input on the design. The scope proposed in this project also meets the BIPP goals to “protect and restore watershed health,” and “participation, outreach and education.” The first part of this project will build off of an existing restoration design. In 2020 with the steering committee, we selected Reach 13 from the Master Plan as our first priority reach of focus. We now have a 30% design for the entire 1.2-mile Reach, and a 60% design for the upstream half of the Reach. This scope includes completed the design for the downstream half of the Reach. The Reach is privately owned by three landowners,

two of which are actively gravel mining. Because of this, the eventual implementation of this project will be timed around the completion of the gravel mining operations. Another component of this project will include bi-monthly meetings with the Reach 13 landowners to understand their development plans for the Reach that have the potential to impact the design and timing of implementation. This fall, we selected Reach 16 as our next priority reach of focus. Reach 16 landownership includes the City of Greeley Natural Areas and another gravel mining company. For this design, we will coordinate closely with Greeley and the private landowner around the restoration concepts included in the 30% design.

Section 6.6 Goals (pg 6-157): “Understand, protect, maintain, and improve conditions of streams, lakes, wetlands, and riparian areas to promote self-sustaining fisheries and functional riparian and wetland habitat to promote long-term sustainability and resiliency”

Since 2017, we have used our Lower Poudre Resiliency Master Plan to help identify priority reaches of the river corridor for design/implementation to increase river resiliency. The Master Plan identifies threats to critical infrastructure including the Poudre River Trail, roads/bridges, state & local parks etc. Both Reaches have varying levels of alteration, including gravel mining, confinement by infrastructure, bank armoring, historical cattle grazing, and berms that disconnect the river from its floodplain. Moreover, the popular Poudre River Trail will also be incorporated into both designs. It is at risk in future flood events and or has been undermined in several locations along both Reaches. The project will aim to balance the existing benefits of the trail for recreation while reducing the risk of damage and impact to natural riverine health and function. Finally, the designs for both reaches aims to increase the overall resiliency of the Lower Poudre River and protect river ecosystem services and critical infrastructure, which directly addresses the Section 6.6 (pg 6-157) objective to “Maintain watershed health by protecting or restoring watersheds that could affect critical infrastructure and/or environmental and recreational areas”.

Section 7.1 (pg 7-3) Watershed Health & Management Goal to “[Promote] watershed health and [support] the development of watershed coalitions and watershed master plans that address the needs of a diverse set of local stakeholders through identified actions such as (pgs 7-10):

- Identify watersheds that are critical to water supply.
- Work toward a long-term goal of developing watershed master plans for watersheds critical to consumptive and non-consumptive water supply.
- Prioritize and implement projects identified in master planning
- Coordinate statewide watershed-coalition and partnership plans, projects, monitoring, and adaptive management strategies

The Lower Poudre Resiliency Master Plan and subsequent projects identified in the plan directly addresses the goals from Section 7.1. The Plan identified the priority reaches of the lower Poudre River corridor for restoration and since its completion, we have worked with steering committee, select priority reaches for restoration design and implementation. Reach 13 was selected as our first priority reach because it encompasses both municipalities of the Town of Windsor and City of Greeley. The Reach 13 design and restoration approaches includes the use of both active and passive techniques with adaptive management to guide future efforts. The current design recommends monitoring the active vs. passive restoration to determine which approach is most effective and/or for which desired improvements. A similar adaptive management framework will be incorporated into the 30% design for Reach 16.

Chapter 7.1 (pgs 7-3) also notes: “While forests are vital to overall watershed health, lower elevation rangelands comprise the remaining lands in the watershed. Rangelands, wetlands, and riparian corridors play a substantial role in water storage, transport, sediment control, water quality, wildlife habitat, and streamflow...,” in addition, Section 7.3 Goals state “Colorado’s Water Plan promotes waters that fully support their classified uses by 2050 through strategies designed to meet Colorado’s current and future consumptive, recreational, and environmental water needs. These strategies incorporate the protection and restoration of water quality as a key objective”.

The proposed restoration for Reach 13 includes components that focus on floodplain connection including strategically located and designed large wood features with the aim to improve geomorphic stability (i.e., allowing

for adjustment through time), improved localized sediment and nutrient storage, flood flow attenuation, groundwater recharge, water quality, and aquatic and riparian habitat. We intend to include similar components in Reach 16 30% design.

South Platte Basin Implementation Plan Alignment:

The proposed project aligns with several goals from the 2022 South Platte BIP (pg 25) including:

- Protect and enhance watershed function
- Protect and enhance environmental attributes
- Protect and enhance recreational attributes

Specifically, this project addresses Goal #6, “Protect and enhance watershed function” (pgs 33-34); including Goal 6A, “Protect and improve water quality throughout the watershed.”

Applicable sub-goals that this project incorporates includes:

- 6.A.2: Control erosion and sedimentation.
- 6.A.3: Consider holistic impacts to water quality and watershed health during project development and implementation.
- 6.A.6: Conduct restoration projects and promote innovative strategies to improve water quality in impaired areas and downstream impacts.

The 30% design for Reach 13 incorporated a sediment transport model that was modified from the Lower Poudre Master Plan. The design incorporates features that are intended to improve watershed health, including water quality through simulated beaver structures, large wood floodplain connection, and restoration that will allow for localized sediment and nutrient storage. Similar elements will be incorporated into the design for the Reach 16 project.

The proposed project also addresses Goal #7, “Protect, and enhance environmental attributes” (pgs 36-37), specifically Goals 7A and 7C.

Goal 7.A states: Continue to develop, promote, and apply best management practices, tools, and methodologies to adequately assess what is needed to maintain, increase, or enhance the following throughout the South Platte Basin:

- General river health
- Aquatic, riparian, floodplain, wetland, and wet meadow habitats
- Water quality and impacts associated with temperature and other pollutants
- Riverine connectivity, including biological, hydrological, geomorphological processes, and stormwater impacts

The purpose of the Lower Poudre Master Plan was to help identify and prioritize future restoration needs, current hazards, and opportunities to improve river resilience and river health. The master plan informed the selection of both Reach 13 and Reach 16 as our priorities for restoration. The current design of Reach 13 proposes concepts to maximize the utility of natural approaches like native vegetation, connecting the river to its floodplain, installing large wood jams and simulated beaver structures, and allowing the river to perform natural geomorphic processes of erosion and sedimentation as the means to improve river health, resiliency, and function. The Reach 16 design will incorporate similar features, while considering any land use or other constraints.

The project also addresses Goal 7.C: “Identify, assess, and implement actions, programs, and measures that aim to protect, maintain, and improve conditions and long-term sustainability of streams, lakes, floodplains, riparian areas, wetlands, and wet meadows for self-sustaining fisheries and functional waterfowl, beaver, and other aquatic habitats.”

When implemented, the project will improve and enhance floodplain connection and riparian habitat, while promoting habitat for native fish, waterfowl and beaver along ~2.1 miles of river. Included in Reach 13 design are simulated beaver structures to improve water quality and provide off-channel beaver habitat. While not a part of this project, Reach 13 also includes the Jones Diversion Structure owned by Central Colorado Water Conservancy District. There is a bypass channel that goes around the structure that if improved, would provide

native fish passage. The 30% design investigated the potential for fish passage around Jones Ditch diversion structure using this channel, however, the design and for fish passage at Reach 13 will be further explored in a later phase of the project.

Finally, the project addresses Goal 8 of the South Platte BIP to “Protect and enhance recreational attributes” (pg 37), specifically Goal 8.A: “Continue to develop, promote, and apply best management practices, tools, and methodologies to adequately assess what is needed to maintain or improve recreational opportunities derived from water-related ecosystems throughout the South Platte Basin.”

The City of Greeley Natural Areas has been exploring options to reroute the Poudre River Trail in several locations along the lower River corridor, including Reach 13. The Poudre River Trail along Reach 13 is currently being undermined along a large outside bend following large runoff events and has now been temporarily stabilized with sheet pile and riprap. The Poudre Trail at this location is impacting both river health and function with limited options for repair. The 30% design for Reach 13 considered several approaches to protect the trail including an option to realign it to the opposite side of the river vs. implementing measures in the floodplain to reduce pressure on the bank to protect the trail.

The Poudre Trail has many daily users throughout the year and is an important recreational feature for the local community. The designs for both Reach 13 and 16 will focus on balancing the existing benefits of the trail for recreation while reducing the risk of damage and impact to natural riverine health and function.

Related Studies

- Lower Poudre River Recovery & Resilience Master Plan, January 2017. Prepared for CPRW by Lynker Associates. 139 pgs.
- Cache la Poudre River Watershed- Based Plan, April 2020. Prepared for CPRW by LRE Water, Inc. 131 pgs.
- Lower Poudre Reach 13, 30% Basis of Design Report, December 2021. Prepared for CPRW by Stillwater Sciences. 60 pgs.

Taxpayer Bill of Rights

As a non-profit entity, we are not affected by TABOR.