COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Trout Unlimited_Montrose
Name of Water Project	Forest Hill Mill Site Reclamation
Grant Request Amount	**$337,563.12**
Primary Category	$337,563.12
Watershed Health & Recreation	
Total Applicant Match	**$13,823.40**
Applicant Cash Match	$0.00
Applicant In-Kind Match	$13,823.40
Total Other Sources of Funding	**$575,708.17**
USFS	$484,160.33
Gordon and Betty Moore Foundation	$50,170.00
Newmont	$41,377.84
Total Project Cost	**$927,094.69**

Applicant & Grantee Information

Name of Grantee: Trout Unlimited_Montrose
Mailing Address: 264 County Road 4 Montrose CO 81403

Organization Contact: Jesse Bryan
Position/Title: Central Colorado AML Project Manager Email: jesse.bryan@tu.org
Phone: 385-290-0165

Organization Contact - Alternate: Tanner Banks
Position/Title: Colorado Restoration Program Manager Email: tanner.banks@tu.org
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Grant Management Contact: Jesse Bryan
Position/Title: Central Colorado AML Project Manager Email: jesse.bryan@tu.org
Phone: 385-290-0165

Grant Management Contact - Alternate: Tanner Banks
Position/Title: Colorado Restoration Program Manager Email: tanner.banks@tu.org
Phone: (970) 390-9492

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
- [x] 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.
- [x] 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	38.923796
Longitude	-106.604148
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	Trail Creek
Basins	Gunnison
Counties	Gunnison
Districts	62-Upper Gunnison River

Water Project Overview

Major Water Use Type	Environmental
Type of Water Project	Construction / Implementation
Scheduled Start Date - Design	6/1/2023
Scheduled Start Date - Construction	7/1/2025

Description

The Forest Hill Mill site reclamation will provide 11 acres of wetland, riparian, and upland habitat enhancement through the removal of 7000 cubic yards of mine waste in the Upper Taylor Park watershed. The project, located entirely on NFS land, is one mile from the Taylor River, sits adjacent to Trail Creek and is downstream of previous wetland restoration the Forest Service and partners completed. Construction will commence in July 2025 with completion in 2026. Trout Unlimited (TU), through an agreement with the Forest Service, will complete the removal action by restoring a historic wetland and secondary channel to Trail Creek. The project will

complement the Adaptive Silviculture for Climate Change work that is surrounding the site by creating an area of wildfire refugia. Targeted treatments include microtopography, off-channel Post Assisted Log Structures (PALS), and native revegetation which enhance project durability and success. Local plant and construction material will be used to limit the need for importing. Seed and willow collected on-site will be grown out to increase the efficacy of planting. Collaboration between partners will meet objectives by restoring habitat, facilitating the return of a normal hydrologic pattern, enhancing forest resilience, and reducing impacts to human and ecological health.

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)
11	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
200	Number of Coloradans Impacted by Engagement Activity

Other

3000 willow, 1800 bog birch, 1800 shrubby cinquefoil, 5000 grass and sedge plugs, 3500 sage, and 100+ lbs high elevation wetland and riparian seed, and 40 low tech erosion structures.

Water Project Justification

Taylor Park, CO lies within the Upper Gunnison River Basin and has a diverse list of management goals that will be addressed during the restoration of the Forest Hill Mill Site. The areas unique history of recreation, logging, and mining are a priority to the community and frequent visitors. Trout Unlimited's (TU) mission aligns with the Colorado Water Plan vision to support thriving watersheds and vibrant communities. The collaborative approach has received support and input from a diverse array of interests that seek to achieve a variety of goals. The project also aligns with Gunnison Basin Identified Projects that have been listed by the Colorado Water Conservation Board, and multiple outcomes as described below, are an integral component of the Colorado Water Plan.

-Balance all needs and reduce conflict – The project will promote healthy ecological conditions in a frequently used multi-stakeholder location in Taylor Park, CO. An EPA Time Critical CERCLA Removal Action will restore 11 acres of mine waste that is subject to frequent visitor interaction via camping and ATV use.

- Support and implement education and outreach efforts to the diverse communities of Southwest Colorado to create a water-fluent public by providing relevant local and statewide water information - Through stakeholder meetings, field trips, public outreach and educational events, the project will increase the awareness and understanding of a functioning floodplain. Project implementation will require community involvement, which will provide education on planting techniques. LTPBR, and different species propagated and supported throughout the area.

- Water quality has the potential to decrease through sediment loading during the spring freshet and

high-intensity rainfall events. Issues can arise through metal loading and turbidity. Wetland enhancement and erosion control structures, in additional to mine waste removal can address these concerns.

-Meet recreational water needs - Reasons behind recreating in the outdoors are diverse but can include solitude, beauty, and relaxation. The mill site has denuded 11 acres of wetland, riparian, and upland habitat and is in stark contrast to the beautiful surrounding environment. The area is frequented by anglers, hikers, ATV users, campers, and hunters, and the values behind these activities are impacted due to the unfinished project.

-Maintain, Protect, and Enhance Recreational Values – This request for funding will ultimately enhance goal-related outcomes for visitors to the area by increasing ecological function throughout the project footprint.

- Meet environmental water needs - The project will increase environmental health by restoring the wetlands above the Taylor River floodplain, reconnecting wetlands and perennial streams, and providing protections through the symbiotic relationships lotic, riparian, and upland systems exhibit.

- Encourage and support restoration, recovery, and sustainability of endangered, threatened, and imperiled aquatic and riparian-dependent species and plant communities. Riverine and wetland function, coexistence, and restoration in the Upper Gunnison Watershed may benefit the Boreal Toad, Gunnison Sage Grouse, Canada Lynx, Grey Wolf, Beaver, Mule Deer, and Elk amongst numerous other species.

- Support efforts to protect, maintain, monitor, and improve the condition and natural function of streams, lakes, wetlands, and riparian areas to promote self-sustaining fisheries, support native species and functional habitat (aquatic and terrestrial ecosystems) in the long term and adapt to changing conditions - This project directly aims to improve condition and function in high elevation wetlands and in the Upper Gunnison River Watershed.

-Promote healthy watersheds - This project directly aims to increase health of the Upper Gunnison Watershed by enhancing riparian corridors and wetland habitat through process-based restoration work.

-Support efforts to enhance and maintain watershed health by protecting and/or restoring watersheds to ensure sustainable water supply, water quality, critical infrastructure, and/or environmental and recreational areas - The main goals of the project are to protect and restore the Upper Gunnison Watershed through the process-based restoration of riparian areas and coexistence with existing

Although this project meets the requirements of CWCB, it has not been listed on the IPP list. However, a overview of the project with a presentation and request to be listed by the Gunnison Basin Roundtable will occur in January. Also, the project aligns with the Daisy Mine Reclamation Project-00280, Fen Protection at Cement Creek Project-00293, and Bank Stabilization & Fish Habitat Improvement Project-01815. Each of these listed projects has a component of the Forest Hill Mill Site reclamation. The reduction in contaminated material being mobilized into Trail Creek will ultimately benefit all aquatic ecology, which aligns with basin-wide needs identified in Project 01815 and Project 00280. Restoration and protection of a wetland, with some Fen-like characteristics as described by the wetland delineation from USFS Watershed Program, coincides with the protection of other fen and wetlands in the Upper Gunnison Basin, similar to project-00293. This project also aligns with many of the identified basin goals, such as maintaining and, where necessary, improving water quality and quantifying and protecting environmental and recreational uses.

Our primary goal of this project is to reduce the impacts of mine waste to human and ecological health. In 2019, the USFS contracted Applied Intellect to develop an Engineering Evaluation and Cost Analysis (EE/CA), which assessed the concerns and feasibility of mine waste removal. The EE/CA detected high levels of lead and arsenic across the site, covers 11 acres. Frequent human interaction through camping and UTV use occur on the

site and the surrounding area and both metals can be absorbed through ingestion and respiratory pathways. Trail Creek, a tributary to the Taylor River, also runs through the site, as does Forest Service Road 748. and the ease of access and ongoing public use shows the necessity for cleanup.

The removal of the mine waste (tailings) will allow wetland, riparian, and upland vegetation to re-establish. Because the tailings have acid-generating characteristics, the soil pH, as identified in the EE/CA, has decreased enough that vegetation is unable to grow, surface water leaches metals and mobilizes tailings, and the site no longer has wetland conditions. A wetland delineation conducted by the USFS identified hydric soils across the site, which is suggestive of at a minimum, seasonal inundation. The proposed restoration activities would enhance the site's soil capillary soil function and absorption abilities so that native plants would thrive in an area that once had diverse plants and wildlife.

The establishment of vegetation would also help facilitate a more natural hydrologic regime, which would decrease erosion by lowering surface water velocities from rainfall and snowmelt in a landscape currently lacking topography and surface roughness. The use of willow trenches, woody debris, thousands of rooted stock plant species, low profile off-channel erosion structures, and the removal of metal-laden tailings will enhance this project site and provide wildlife habitat, a future seed bank, an area of wildfire refugia, and enhance water quality. These project outcomes are essential to creating a thriving wetland and riparian environment.

A biochar pilot project conducted with the USFS and Rocky Mountain Research Station occurred in June of 2024. This assessed the feasibility of creating biochar from slash piles due to logging operations. The biochar is then used in the restoration of the mill site to adsorb metals, increase soil moisture, and retain beneficial microbes and nutrients. Study plots have also been installed, and future soil and surface water analysis will provide insight into the success and use of biochar in mine-related restoration work. Collaboration with Western Colorado University and Coldharbour Institute will provide volunteers and community members learning opportunities on different restoration techniques. The Taylor Park adaptive management group (AMG), which consists of stakeholders throughout the Gunnison Valley, is also supportive of the project

Because of the substantial resources and commitments that have been invested in this project, TU felt a partnership with the CWCB could support bringing this project to implementation in the summer of 2025. The EE/CA, requested by the EPA's Comprehensive Environmental Response, Compensation, and Liability Act, provided a sound environmental analysis, the equivalent of a NEPA document, and a financial feasibility study. The site's conceptual designs and ongoing studies provided enough assessment and understanding of the project. Six proposals were received from interested contractors during the third week of November. The budget that has been outlined has been developed based on the potential winning bid, and TU feels confident that the project can be completed for the proposed amount. Currently, TU has secured a total of $589,531.57 that will be used as match to the requested CWCB Water Plan Grant amount of $337,563.12, with a total project cost of $927,094.69.

- USFS has provided $484,160.33 through the Forest Hill Agreement,
- The Gordan and Betty Moore Foundation has provided $50,170,00 through the Colorado River Sustainability Campaign for monitoring and design,
- Newmont Legacy Mines Program has provided $41,377.84 and,
- TU in-kind match of $13,823.40.
- Volunteer support from Western Colorado University, Coldharbour Institute, and the Taylor Park Adaptive Management Group
- Upper Gunnison River Water Conservation District and USFS Letter of Support

On-going monitoring and future collaboration with community members is a key component to TUs mission and

commitment to funding from the Colorado River Sustainability Campaign and the potential funding from the CWCB. Success of the project will be identified by acres of restored wetland, riparian and upland habitat, community members involved, ground water modeling, and the involvement of all interested stakeholders. Post construction work will ensure success at the site if on-going improvements and planting are needed. Continued documentation, reporting and maintenance, of the site through the end of the USFS agreement in 2027 is anticipated.

Related Studies

There are no known related studies at this time.

Taxpayer Bill of Rights

There are no TABOR grant limitations on Trout Unlimited.