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	Orphan Boy Restoration Project
Grant Request Amount	**$191,473.04**
Primary Category	$191,473.04
Watershed Health & Recreation	
Total Applicant Match	**$108,404.82**
Applicant Cash Match	$71,000.00
Applicant In-Kind Match	$37,404.82
Total Other Sources of Funding	**$83,525.98**
Park County Land and Water Trust Fund	$53,298.98
Park County Land and Water Trust Fund	$30,227.00
Total Project Cost	**$383,403.84**

Applicant & Grantee Information

Name of Grantee: Trout Unlimited_Denver
Mailing Address: 1777 N Kent Street, Suite 100 Arlington VA 22209
FEIN: 381,612,715

Organization Contact: Jason Willis
Position/Title: Western AML Program Manager
Phone: 719-221-0411
Email: jason.willis@tu.org

Organization Contact - Alternate: Katrina Hettinger
Position/Title:
Phone:
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Grant Management Contact: Jason Willis
Position/Title: Western AML Program Manager
Phone: 719-221-0411
Email: jason.willis@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 400 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. This profile is for National Trout Unlimited staff based in Colorado.

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	39.278097
Longitude	-106.101781
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	Seeps, springs, groundwater, and a draining mine adit form a large wetland complex that flows into the headwaters of Mosquito Creek. This is a sub-drainage to the Middle Fork of the South Platte.
Basins	South Platte
Counties	Park
Districts	23-Upper South Platte

Water Project Overview

Major Water Use Type	Environmental
Type of Water Project	Construction / Implementation
Scheduled Start Date - Design	
Scheduled Start Date - Construction	9/9/2024

Description

The Orphan Boy mine site is approximately two miles west of Alma, CO and 0.5 miles north of upper Mosquito Creek near its headwaters. Water flows continuously out of a collapsed mine portal/adit and then across an extensive waste rock and tailings pile. This process introduces a large amount of zinc and more moderate amounts of cadmium and manganese to the receiving wetlands and downstream Mosquito Creek. This

abandoned mine land (AML) cleanup project will focus on two main construction-related tasks. The first task would regrade 1,600 cubic yards (CY) of unstable mine wastes to an average 3:1 slope. This would be followed by in-situ treatment of the mine waste with limestone, fertilizer, compost, clean fill, and subsequent revegetation with native seed. Task two would construct a diversion channel 458 linear feet in length that would route adit water around the reclaimed waste pile. To accommodate proposed channel slopes between 1 and 9.35%, a combination of locally sourced logs and boulders will be incorporated into the natural step-pool channel that will sustainability connect to the existing wetland complex. This approach will help restore the wetlands and native riparian vegetation that have been degraded by past mining activities.

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)
458	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)
5	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

While this project is not part of the South Platte BIP, or on the corresponding list of pre-qualified projects, it has been included in a CDPHE Nine Element Watershed-Based Plan for the Middle Fork of the South Platte. This document was completed by the Coalition of the Upper South Platte (CUSP) on January 31, 2020. Water quality impacts from abandoned mines were identified in CUSP's original strategic plan (2001) as a critical issue for watershed protection and continue to be the focus of Trout Unlimited's (TU) abandoned mine land (AML) program. It should be noted that CUSP is a project proponent and supporter of TU's application for this project. In the Nine Element plan referenced above, the Orphan Boy project is mentioned on pages 22, 36, and 38. In addition to being part of past watershed-based plans, this project need is justified through its nexus with improvement of adjacent and receiving riparian and wetland habitats. By reducing the contamination present on-site, downstream water quality and risk of future non-point source loading will be mitigated. This work will ultimately benefit ecological and other riparian-dependent plant communities.

Related Studies

In addition to being included in CUSP's Nine Element Watershed plan, the EPA has completed two phases of water and soil chemistry studies that have helped justify the need for AML reclamation at this site.

Taxpayer Bill of Rights

TABOR does not apply for this project.