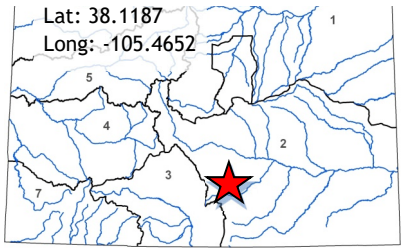
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Round Mountain Reservoir #2 Construction Project

Upper Arkansas Water Conservancy District

September 2022 Board Meeting

Water Plan Grant Application



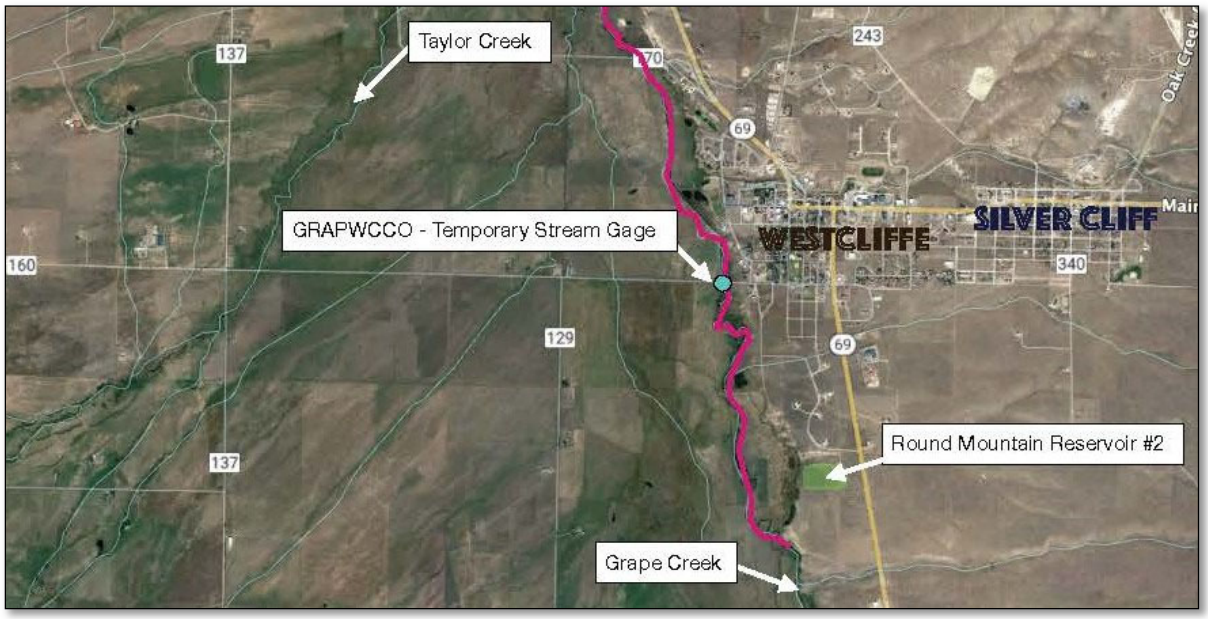
LOCATION	
County/Counties:	Custer
Drainage Basin:	Arkansas

DETAILS	
Total Project Cost:	$2,844,706
Water Plan Grant Request:	$500,000
Other CWCB Funding:	$0
Other Funding Amount:	$1,629,804
Applicant Match:	$714,902
Project Type(s):	Construction
Project Category:	Water Storage and Supply
Measurable Result:	150 AF created

The Upper Arkansas Water Conservancy District (UAWCD) has partnered with the Round Mountain Water and Sanitation District (RMWSD) to develop a new off-channel reservoir adjacent to Grape Creek. RMWSD provides water and wastewater services to roughly 1,200 residents in Westcliffe and Silver Cliff, while UAWCD provides augmentation services to municipal and rural populations that primarily rely on individual domestic wells, many of whom do not have the financial or technical resources to develop their own augmentation plan. The reservoir will help RMWSD meet the State Engineer's Office requirements of its augmentation decree and provide water to help a growing community, while also providing UAWCD a source to augment additional constituents.

The reservoir will be constructed on land owned by RMWSD and will hold fully consumable domestic groundwater. This grant will be used to finalize design and construction drawings, perform environmental permitting, and construct the reservoir including the infrastructure necessary to operate it, including inlet and outlet works, a pumpstation, a sediment forebay and telemetry.

Funding Recommendation: Staff recommends approval of the full request in the amount of $500,000 from the Water Storage and Supply Category. This is approximately 18% of total project costs. This project aligns with the Water Plan's measureable goal of creating 400,000 AF of water storage by 2050 by providing new storage in the Arkansas basin.



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Water Plan

Water Project Summary

Name of Applicant	Upper Arkansas Water Conservancy District	
Name of Water Project	Round Mountain Reservoir #2 Construction Project	
Grant Request Amount		**$500,000.00**
Primary Category		$500,000.00
Water Storage & Supply		
Total Applicant Match		**$714,902.00**
Applicant Cash Match		$714,902.00
Applicant In-Kind Match		
Total Other Sources of Funding		**$1,629,804.00**
Round Mountain Water and Sanitation District		$1,629,804.00
Total Project Cost		**$2,844,706.00**

Applicant & Grantee Information

Name of Grantee: Upper Arkansas Water Conservancy District
Mailing Address: 339 E. Highway 50
PO Box 1090 Salida CO 81201
FEIN: 840,817,067

Organization Contact: Gracy Goodwin
Position/Title:
Phone: 719-539-5425
Email: projects@uawcd.com

Organization Contact - Alternate: Ralph Scanga
Position/Title: General Manager
Phone: 7195395425
Email: manager@uawcd.com

Grant Management Contact: Gracy Goodwin
Position/Title:
Phone: 719-539-5425
Email: projects@uawcd.com

Grant Management Contact - Alternate: Ralph Scanga
Position/Title: General Manager
Phone: 7195395425
Email: manager@uawcd.com

Engineering Contact: Clint Brown
Position/Title: Engineering Analytics
Phone: 9704883111
Email: cbrown@enganalytics.com

Description of Grantee/Applicant

District - Water conservancy or water conservation district

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	38.118675
Longitude	-105.465227
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	Grape Creek which is a tributary to the Arkansas River
Basins	Arkansas
Counties	Custer
Districts	13-Wet Mountain Valley

Water Project Overview

Major Water Use Type	Municipal
Type of Water Project	Construction
Scheduled Start Date - Design	
Scheduled Start Date - Construction	4/1/2023

Description

Upper Arkansas Water Conservancy District (UAWCD) has partnered with Round Mountain Water and Sanitation District (RMWSD) to construct the Round Mountain Reservoir #2 developing a new storage vessel in the

Arkansas Basin. The feasibility study and the design have been completed and construction drawings are in development for a lined off-channel reservoir, diversion structure, pump station with wet well, and sediment forebay, creating 150 AF of new storage (equivalent to 1500 AF of domestic water supply) on a critical reach of Grape Creek in Custer County which is a tributary to the Arkansas River. This grant request is for the construction of the reservoir on a parcel of land owned by RMWSD, drastically reducing permitting requirements. The creation of this reservoir will build long-term resilience to drought while improving water management to address the water supply and demand gap. For UAWCD, the extra storage will increase efficiency, increase operational flexibility, and increase augmentation water availability in a key area year-round. For RMWSD, building this reservoir will meet the SEO requirements of its water augmentation decree, as well as, maximize its availability to provide water services to support a growing community while improving water quality and habitat to a critical portion of Grape Creek during low flow conditions. Meanwhile, the collaboration of UAWCD with RMWSD will increase the beneficial uses of water for municipal, commercial, agricultural, and environmental benefits in Custer County, UAWCD's entire district, and the Arkansas Basin as a whole, while ensuring the protection of water rights.

Measurable Results

150	New Storage Created (acre-feet)
1,500	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
	Existing Storage Preserved or Enhanced (acre-feet)
150	New Storage Created (acre-feet)
	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
	Number of Coloradans Impacted by Engagement Activity

Other

This reservoir will make 150 acre-feet per year of fully consumable domestic water supply on a critical reach of Grape Creek in Custer County. That 150 AF of augmentation supply will allow domestic groundwater pumping of 1,500 acre-feet per year, based on a 10% depletion factor. The augmentation releases from the reservoir to the stream will put water into Grape Creek when flows are lowest & temperatures are warmest helping to reduce the stress on the fishery in the 7.5-mile reach above DeWeese Reservoir.

For additional detail and more benefits see Exhibit D- Project Benefits and Connections to Drought Resiliency

Water Project Justification

The construction of Round Mountain Reservoir south of Westcliffe (a rural area) touches many of the main goals of the Colorado Water Plan, Arkansas Basin Implementation Plan, and SWSI.

- Development of new storage in the Arkansas Basin
- Increased storage for M&I
- Increase augmentation supply which protects water rights
- Collaboration and Cooperation (Multi-use project)
- Improve measurements and quantification of stream flows
- Augmentation helps meet CO compact requirements
- Local support

Increasing and maintaining existing storage, as well as developing new storage is a crucial aspect of all water plans for Colorado. According to the Arkansas Basin Implementation Plan “increasing available storage is seen as fundamental to all solutions to the Arkansas Basin's needs. (2015 ABIP p10)” The importance of storage is also confirmed in the Colorado Water Plan as it states “Colorado’s water infrastructure, including water storage, is critical to the ability to maintain stable water supplies; water storage infrastructure allows Colorado to use its legal entitlements before water flows out of the state. (CWP4-14)”

The Round Mountain Reservoir #2 project benefits 4 of the 5 top goals of the Arkansas Basin BIP

• Storage: Goal 1- Continue to develop storage opportunities to support Basin Needs; and Goal 3 – Promote multiple uses at existing and new storage facilities (Ark BIP V2 pg14)
The development of Round Mountain Reservoir creates an opportunity to help meet the basin’s water supply gap, mitigate water supply risks, optimize water resources, and provide multi-purpose benefits. This reservoir will support multiple uses and users such as municipal, industrial, agricultural, and environmental. It will also, allow for water in wet years to be stored and used in dry years supporting resiliency to drought and changing climate conditions.

• Municipal and Industrial: Goal 1 – Meet the projected municipal supply gap in each subregion in the basin, and Goal 2- Support regional efforts for finding cost-effective solutions to local water supply gaps. (Ark BIP V2 pg15)
As seen in the Water Plan and Arkansas Basin BIP there is a big focus to decrease the water supply gap. A new reservoir would allow for the carrying over of storage from year to year which helps support future demands and growth. Building Round Mountain Reservoir will provide critical water supply to RMWSD to support the continuous growth in Westcliffe and Silver Cliff as there is currently a moratorium on water taps. This reservoir will provide protection of water rights in form of augmentation to all rural areas within Custer County and throughout UAWCD’s 3000 sq mile district at the headwaters of the Arkansas River. The efficient operation of this reservoir will reduce the demand on municipal wells and provide a consistent source of augmentation water during drought conditions. The collaboration of UAWCD and RMWSD is a perfect example of how different entities can come together to maximize beneficial use and funding opportunities.

• Agriculture: Goal 3 – Provide augmentation water as needed to support increased farm efficiencies. (Ark BIP V2 pg16)
Developing Round Mountain Reservoir in this critical reach of Grape in Custer County will help to protect senior water rights and establish long-term sources of augmentation water under UAWCD’s umbrella augmentation plan to support increased farm efficiencies.

• Environmental Goal 2 – Maintain or improve native fish populations, and restore habitat for fish species. (Ark BIP V2 pg 17)
Water released from the reservoir to the stream will put water into Grape Creek when flows are lowest & temperatures are warmest helping to reduce the stress on the fish. This helps to protect the fishery habitat while improving water quality to a critical portion of Grape Creek.

Related Studies

2015-2017 DeWeese Irrigation System Efficiency and Improvements Study
Recipient: Bureau of Land Management and Upper Arkansas Water Conversancy District
Conducted by: Colorado River Engineering
This study is complementary to the project due to the call and flows analysis on Grape Creek and recommendations for a flow management program. Understanding the flows on the Grape Creek is pertinent to the Round Mountain feasibility study for exchange purposes.

2017-2022 Groundwater & Surface-Water Interactions and Potential for Underground Water Storage: Phase 2 Wet Mountain Valley -Custer County
Grantee: Upper Arkansas Water Conservancy District
Conducted by: USGS
WSRA Grant – CTGG1 2017-1733

2021-2023 Round Mountain Reservoir Feasibility Study and Design
Grantee: Round Mountain Water and Sanitation District
Applicant: Upper Arkansas Water Conservancy District
Approving RT- Arkansas Basin Roundtable
WSRF Grant- CTGG1 2021-2643

Taxpayer Bill of Rights

Funding will not trigger TABOR limitations.