COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Colorado Mesa University
Name of Water Project	Colorado Mesa University Ruth Powell Hutchins Water Center Outreach, Engagement, and Educational Programming
Grant Request Amount	**$163,991.00**
Primary Category	$163,991.00
Engagement & Innovation Activities	
Total Applicant Match	**$52,760.00**
Applicant Cash Match	$26,500.00
Applicant In-Kind Match	$26,260.00
Total Other Sources of Funding	**$5,500.00**
City of Grand Junction	$3,000.00
Western Colorado Community Foundation	$2,500.00
Total Project Cost	**$222,251.00**

Applicant & Grantee Information

Name of Grantee: Colorado Mesa University
Mailing Address: 1100 North Avenue Grand Junction CO 81501

Organization Contact: Freddy Witarsa
Position/Title: Water Center Director
Email: watercenter@coloradomesa.edu
Phone: 970-248-2037

Description of Grantee/Applicant

Colorado Mesa University Ruth Powell Hutchins Water Center

Type of Eligible Entity

- [x] 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	39.080433
Longitude	-108.558375
Lat Long Flag	Default/Proponent headquarters: If the location cannot be defined with flags above, use location of project proponent headquarters
Water Source	
Basins	Colorado; Yampa/White/Green; Southwest; Gunnison
Counties	
Districts	

Water Project Overview

Major Water Use Type	
Type of Water Project	Education
Scheduled Start Date - Design	9/1/2024
Scheduled Start Date - Construction	

Description

To educate the region about the pressing water issues impacting the basin and beyond, the CMU Water Center plans to continue or introduce the following educational programs: Upper Colorado River Basin Forum; Water Course Seminar; Water Workforce Needs Assessment Study; Water Equity Educator Workshop; and Environmental Science Seminar Series.

These events are a mix of presentations, panel-style discussions, networking, training, and a comprehensive water workforce and curriculum study, all organized with the goal of educating and benefitting CMU students, water professionals, stakeholders, and the broader community in the Western Slope and Colorado. These programs educate the community about water issues and developments, train water professionals, diversify and prepare the regional water workforce, and foster collaborative discussions among various water stakeholders.

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)
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
1,500 Number of Coloradans Impacted by Engagement Activity
Other
No additional measurable results provided

Water Project Justification

The Colorado Mesa University (CMU) Ruth Powell Hutchins Water Center's mission is to perform and facilitate interdisciplinary and collaborative research, education, outreach, and dialogue to address the water issues facing the Upper Colorado River Basin, including Colorado's Western Slope. Our programs and projects are implemented to fulfill the following objectives:
1. Educate, train, and prepare students to work in the 21st century water workforce.
2. Be a neutral educational hub for policy makers, scientists, and practitioners to convene and collaboratively come up with solutions to solve regional water issues.

All Water Center programming benefits both the public and the CMU community. CMU is the foremost post-secondary education provider for a service area of 14 counties, many of which are considered rural. Spanning 30,000 square miles on Colorado's western half--or roughly 30% of Colorado's geographic area--CMU's net captures a very diverse population, including 30% Pell Grant (based on financial need) eligible, 47% first generation, and 30% minority students. Effective engagement and outreach with these individuals promotes an increasingly diverse next generation of water leaders in Colorado.

The Colorado Basin in which CMU resides is equally diverse in terms of land use, geology, climate, population growth, and socioeconomic factors. The basin's water resources not only support the region's agricultural and tourism industries, but they are also relied upon by neighboring in-state basins and the surrounding states west of Colorado (Colorado Water Plan, p. 95). Managing the Colorado Basin's water is not only of the upmost importance to the region itself, but also to many populations downstream. CMU and its Water Center represent one of the largest educational hubs within the basin and strive to be a resource for as many stakeholders as possible.

Although CMU technically sits in the Colorado Basin, it is located just a few miles from the Gunnison Basin. In addition, the Center strives to engage and educate all of Colorado's Western Slope, which also includes the Yampa-White-Green Basin and Southwest Basin. All of these basins are well-represented in the Center's educational content and included in our outreach efforts. For these reasons, all four basins--Colorado, Gunnison, Yampa-White-Green, and Southwest--will be referenced throughout this proposal.

By offering programs that are led by an impressive portfolio of experts, cover a wide range of water topics, and are collaborative in nature to the diverse CMU student body and Western Slope community at large, the Water Center directly addresses many important aims of the Colorado Water Plan (CWP), Colorado Basin Education Action Plan (CB-EAP), Gunnison Basin Education Action Plan (GB-EAP), Yampa-White-Green Basin Education Action Plan (YWG-EAP), Southwest Basin Education Action Plan (SWB-EAP), and Colorado Statewide Water

Education Action Plan (SWEAP). The Center also builds upon key findings from its CWCB-funded 2021 Workforce Needs Assessment (WNA), which aimed to identify knowledge gaps among CMU students entering the water workforce. Relevant goals from the aforementioned plans are identified below; the numbers assigned to each goal are not reflective of any numbering structure utilized within the respective plans from which they were pulled.

CWP #1: Promote diversity in career pathways in water-related fields through education and engagement (CWP, p. 233)
CWP #2: Promote collaboration, new voices, and greater community engagement in water discussions (CWP, p. 15)

CB-EAP #1: Increase collaborations and partnerships with other Colorado basin organizations that wish to promote water awareness, education and engagement (CB-EAP, p. 2)
GB-EAP #1: Collaborate with K-12 educators, especially those involved with water-related activities (GB EAP, p. 2)
GB-EAP #2: Partnering with related higher education facilities to share pertinent water resource information (GB EAP, p. 2)
YWG-EAP #1: Need for outreach and education about Colorado Basin issues such as Colorado River Compact Compliance and Colorado River Drought Contingency Planning (YWG EAP, p. 4)
SWB-EAP #1: Increased coordination between K-12 and higher education curriculum with statewide water education efforts (SWB EAP, p. 2)
SWEAP #1: Incentivize and reduce barriers to participation in training for underrepresented groups and geographic areas (SWEAP, p. 15)
SWEAP #2: Curate and promote a readily accessible source for current, factual information on a broad array of important water topics (SWEAP, p. 15)
SWEAP #3: Train the trainer to build participants' skills in discourse and decision-making (SWEAP, p. 15)

WNA #1: Need for exposure and education related to water law and regulations
WNA #2: Need for networking opportunities for existing and prospective water professionals
WNA #3: Need for improved knowledge of water supply infrastructure and challenges
WNA #4: Need for better understanding of general hydrological concepts and measurements
WNA #5: Need for student exposure to experiential opportunities, such as water-related internships, prior to graduating

TASK #1 - UPPER COLORADO RIVER BASIN FORUM
The annual Upper Colorado River Basin Forum convenes regional water shareholders from myriad water-related professions and interests for a two-day event. The event features speakers from across water backgrounds and careers, including but not limited to: municipal and district managers, journalists, hydrologists, non-profit directors, farmers and ranchers, faculty and researchers, and representatives from various resource management agencies. These speakers share new developments and what they've been working on in their respective fields in order to educate Basin shareholders, CMU students, and interested members of the public about potential new solutions, problems, and other Basin developments. In addition to learning through speakers' formal presentations, attendees are also encouraged to ask questions, network, and facilitate further conversation with the speakers and other attendees. The Water Forum cultivates meaningful conversations that result in the sharing of new ideas and perspectives for a sustainable future of regional water.

The 2023 Forum had nearly 200 attendees. Over half were students from CMU and neighboring Colorado universities. Featured presentations covered innovative uses of artificial intelligence in managing agricultural water supplies, environmental and social considerations for water conservation programs, analysis of streamflow

changes due to urban development, lessons learned from a pilot conservation program, the impact of conditional rights on the prior appropriation system. The event also featured various expert-led panel discussions and a keynote speaker from the Southern Ute Indian Tribal Council.

Goals most directly addressed: CWP #2, CB-EAP #1, GB-EAP #2, YWG-EAP #1, SWEAP #2, WNA #1, WNA #2, WNA #3

TASK #2 - WATER COURSE SEMINAR
The annual Water Course Seminar is a three-evening event for attendees to learn about the basics of water law, hydrology, water quality, best practices, and other established concepts within the water world. The three courses, offered over three weeks and led by subject matter experts and experienced professionals, serve as primers to CMU students and members of the regional water community. Typically, 100-150 attendees show up for each night of the series. CMU students receive academic credit for attending all three nights, and we are actively working to reinstate continuing education credits for water professionals attending under the CO Operators Certification Program and Continuing Legal Education accreditation.

The latest Water Course Seminar featured speakers on hydrology, water quality, laws and regulations (Clean Water Act, Safe Drinking Water Act, Prior Appropriation, Beneficial Use), management practices, and conservation efforts in the Colorado River Basin.

Goals most directly addressed: CWP #1, CWP #2, SWEAP #1, SWEAP #2, WNA #1, WNA #3, WNA #4

TASK #3 - WATER WORKFORCE NEEDS ASSESSMENT FOLLOW-UP STUDY:
As part of its efforts to provide a well-educated, career-ready workforce for employers in the water field, CMU's Water Center conducted a 2021 Water Workforce Needs Assessment (funded by CWCB). This study polled regional water-related agencies and companies to assess what skills and knowledge gaps were prevalent among new employees entering the workforce. While this study successfully identified knowledge and skillset gaps, it remains unknown whether those ideas have been incorporated into CMU and Water Center curricula. A follow-up study will help CMU 1) quantify the progress made since the 2021 study and 2) identify implementable methods at CMU that address the gaps recognized in the previous study.

Goals most directly addressed: CWP #1, CWP #2, CB-EAP #1, WNA #1, WNA#2, WNA #3, WNA #4, WNA #5

TASK #4 - ENVIRONMENTAL JUSTICE AND WATER EQUITY EDUCATOR WORKSHOP:
This novel workshop will be a valuable continuing education opportunity for local educators. Ideally, this event will target both collegiate-level faculty and educators from regional high schools. This one-day event will educate teachers on the Environmental Justice Act of 2021, water equity issues, and other key concepts pertaining to water resource management. Speakers may include CDPHE representatives, speakers from regional tribal councils, and other organizations for whom water equity and environmental justice is a pressing issue. This "train the trainer" approach will strengthen their understanding of the concepts and how to best incorporate them into their classroom curriculum. By teaching local educators about water equity issues and how to best relay those ideas to their students, the Water Center aims to grow the next generation of knowledgeable water leaders.

Goals most directly addressed: CWP #1, CWP #2, CB-EAP #1, GB-EAP #1, SWB-EAP #1, SWEAP #1, SWEAP #2, SWEAP #3

TASK #5 - ENVIRONMENTAL SCIENCE SEMINAR SERIES:
This 16-week seminar series, hosted in conjunction with CMU's Environmental Science department, features weekly speakers representing a wide range of careers, organizations, and skillsets pertaining to natural resource and water management. Students enrolled in the entire 16-week series receive academic credit, but unenrolled attendees both from the student body and community at large are encouraged to stop by for free. Attendance has historically hovered around 40-45 students from a wide range of degree types (Environmental Science, Journalism, Biology, Outdoor Recreation Industry Studies, History, and Political Science, among others) and about 5-7 community members per event. Speakers field questions and spark conversations throughout their presentations, thus facilitating insightful discussions and instilling water-related interests in students from a multitude of academic backgrounds.

In the Spring 2024 16-week series, topics included uranium mill tailings groundwater remediation efforts, relevance of the National Environmental Protection Act (NEPA) in resource management careers, instream flow management for endangered fish species in Western Colorado, pollution in tribal nations' resources, and Shoshone Dam water rights preservation initiatives.

Goals most directly addressed: CWP #1, CWP #2, CB-EAP #1, SWEAP #2, WNA #1, WNA #2, WNA #3, WNA #5

Plans referenced:

Colorado Water Plan, 2023. Colorado Water Conservation Board.
https://dnrweblink.state.co.us/CWCB/0/edoc/219188/Colorado_WaterPlan_2023_Digital.pdf

Colorado Basin Education Action Plan, 2021. Colorado Basin Roundtable.
https://dnrweblink.state.co.us/cwcbsearch/0/edoc/215504/ColoradoBasin_EAP2021-23.pdf?searchid=6e109f0c-0b9

Gunnison Basin Education Action Plan, 2021. Gunnison Basin Roundtable.
https://dnrweblink.state.co.us/cwcbsearch/0/edoc/215728/GunnisonBasin_EAP2021-2023.pdf?searchid=8d3581d9

Yampa-White-Green Basin Education Action Plan, 2020. Yampa-White-Green Basin Roundtable.
https://dnrweblink.state.co.us/cwcbsearch/ElectronicFile.aspx?docid=211589&dbid=0

Southwest Basin Education Action Plan, 2021. Southwest Basin Roundtable.
https://dnrweblink.state.co.us/cwcbsearch/0/edoc/214653/Southwest_EAP_2021-22.pdf?searchid=6680599d-796c-

Statewide Water Education Action Plan for Colorado 2020-2025. Water Education Colorado.
https://www.watereducationcolorado.org/wp-content/uploads/2020/02/Statewide-Water-Education-Action-Plan-for-C

Related Studies

CMU Water Education Needs and Capacity Assessment (funded by CWCB)
$14, 539.00
Awarded November 20, 2019

Taxpayer Bill of Rights
No Tax Bill of Rights provided