COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Grand County Water Information Network
Name of Water Project	Upper Colorado River Interactive Data Platform
Grant Request Amount	**$82,348.00**
Primary Category	$82,348.00
Engagement & Innovation Activities	
Total Applicant Match	**$21,002.00**
Applicant Cash Match	$7,502.00
Applicant In-Kind Match	$13,500.00
Total Other Sources of Funding	**$6,450.00**
Colorado River Water Conservation District - Community Funding Partnership	$6,450.00
Total Project Cost	**$109,800.00**

Applicant & Grantee Information

Name of Grantee: Grand County Water Information Network
Mailing Address: 610 Center Drive Grand Lake CO 80447
FEIN: 870,726,908

Organization Contact: Mary Price
Position/Title: Executive Director
Phone: (863) 990-5409
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Grant Management Contact: Mary Price
Position/Title: Executive Director
Phone: (863) 990-5409
Email: mary.price@gcwin.org

Description of Grantee/Applicant

GCWIN is a non-profit organization 501(c)3

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	40.072720
Longitude	-106.097480
Lat Long Flag	County centroid: Coordinates based on centroid of county boundary
Water Source	
Basins	Colorado
Counties	Gunnison; Grand
Districts	51-Upper Colorado/Fraser Rivers; 53-Tribs. North of Colorado River; 50-Muddy/Troublesome Creeks

Water Project Overview

Major Water Use Type	Environmental
Type of Water Project	Planning
Scheduled Start Date - Design	6/1/2024
Scheduled Start Date - Construction	

Description

The Grand County Water Information Network (GCWIN) houses approximately 9 million lines of data in its Ambient Water Quality Monitoring System (AWQMS) database. Data include stream temperature, air temperature, sediment, macroinvertebrates, water quality, and lake clarity. The AWQMS platform provides a secure repository to store and organize data, and the data is publicly accessible. However, the complexity, volume, and diversity of these data can make evaluation cumbersome, and difficult to understand and communicate. In addition, there are other valuable data sources within Grand County that need to be integrated into one Data Platform to provide a holistic view of conditions throughout Grand County's watersheds.

Organizing and sharing data is an integral part of GCWIN's mission. Development of the Upper Colorado River Interactive Data Platform will be the final step in the long process of fulfilling this mission by making Grand County's data available in a comprehensive, user-friendly format. The Data Platform will link directly to AWQMS,

as well as other public and private data sources (USGS, CDPHE, Northern Water). This streamlines access to a complete dataset. There will also be customized views for stakeholders who access data regularly to inform water management decisions in the Upper Colorado River watershed.

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
Number of Coloradans Impacted by Engagement Activity

Other

The Data Platform will impact water users throughout the Colorado River Basin potentially impacting millions of people.

Water Project Justification

The proposed interactive Data Platform project aligns with the key objectives outlined in Colorado's Water Plan, specifically addressing the critical needs and goals outlined in the references below. Combining advanced data analytics, visualization, and watershed educational content the Data Platform project directly contributes to the following aspects of the Water Plan:

Water Plan Connections

Water Conservation and Efficiency (Wise Water Use p.180): The Data Platform will empower water users with real-time insights into environmental water patterns, enabling more informed decision-making. The goal of the Data Platform is to help stakeholders identify areas of concern within the watershed by aiding water users in identifying specific areas impacted by high use or environmental stressors. This directly supports the Water Plan's goals of achieving a sustainable balance between supply and demand (Vibrant Communities p.178).

Environmental Concerns (Reference: Colorado Water Plan, Challenges and Risks, p.151): The Colorado Water Plan identifies many challenges and risks we face regarding water in Colorado. The Data Platform will help close the gap on these risks in several ways. The Data Platform will highlight needs for improved monitoring in Grand County promoting environmental stewardship, stakeholder engagement, and public awareness. Through visual representations of water health metrics, the Data Platform will aid in the identification of potential environmental stressors, aligning with the Water Plan's commitment to preserving aquatic ecosystems, and gaining a deeper understanding through closing data gaps.

Drought Mitigation and Response (Reference: Colorado Water Plan, Challenges and Risks, p.148): Users of the Data Platform will have the ability to make data-driven decisions to mitigate the impacts of drought, supporting the Water Plan's emphasis on resilience in the face of changing climate conditions.

Education and Outreach Initiatives p.240: The Colorado Water Plan's "Looking Forward" section specifically highlights the importance of education and outreach for the future success of these plans. Through intuitive visualizations, we aim to engage and inform our community, supporting the Education Action Plan's objectives of enhancing water literacy. The Data Platform directly aligns with this goal by providing access to the wealth of water data from GCWIN and other organizations to the public. The Data Platform will present the data in a way that public users, students, and technical committees can utilize and learn from.

Thriving Watersheds (Healthy Lands- Forest Improvement p.206): Through dynamic visualizations, stakeholders can track changes in stream temperature, sediment, turbidity, and macroinvertebrates, facilitating adaptive management strategies particularly in fire impacted forests and in response to impacts from climate change. Having a comprehensive baseline dataset that is ready and easy to use will lead to better decision making, preparedness, and restoration for impacted areas. The goal is to make all data as accessible as possible through interactive graphics and analytical tools that can cater to the user's specific interests.

Thriving Watersheds (Create a Wildfire Ready Watersheds framework p.210): Both in advance and in response to wildfires, the Data Platform will serve as a vital educational tool, helping communities understand the complex interactions between wildfires and watersheds. By fostering a deeper awareness of interdependencies, the project supports community resilience, aligning with the Education Action Plan's emphasis on public engagement.

The proposed Data Platform project not only aligns with current water management priorities but also anticipates and addresses future challenges, particularly in the context of wildfire impacts on watersheds. The advanced capabilities of the Data Platform are designed to contribute to Grand County's Wildfire Ready Watershed program, aiding in both pre- and post-fire watershed planning. This forward-looking approach is crucial for achieving the long-term sustainability goals outlined in Colorado's Water Plan and the associated Roundtable BIP. The Colorado Basin Roundtables themes are clear: Protect and restore healthy streams, rivers, lakes, and riparian areas. Though this is a broad goal, we believe the Data Platform will provide organizations, local governments, water users, and public citizens with a deeper data driven understanding of our watershed.

Roundtable Basin Implementation Plan Connections

The proposed Data Platform aligns with the goals outlined in the 2022 Colorado Basin Implementation Plan (BIP), catering to the unique characteristics of the expansive Colorado Basin. The Data Platform's advanced capabilities address key themes identified in the BIP, ensuring a holistic approach to water management specifically in the Upper Colorado River Basin.

Below we have outlined how the Upper Colorado River Interactive Data Platform aligns with the themes of the Colorado BIP:

Collaborating on Colorado's Water Plan, Grand County Region, p. 79: One of the most impactful ways we see this Data Platform being used is by the Learning by Doing Operations Subcommittee during the summer months. The LBD Operations Subcommittee utilizes water data from a variety of sources to make decisions on the 5,412 acre-feet water released from Granby Reservoir to a critical reach of the Colorado River (a 15-mile section upstream its confluence with the Gunnison River) to support the Upper Colorado River Endangered Fish Recovery Program. The Data Platform would be an essential tool for this group to make informed decisions due to the platform's capabilities to combine data from multiple sources into one platform and automate reports for decision support. These environmental water releases are a key solution to cooling impacted streams during the peak of summer and impact not only Grand County, but the entire Colorado River corridor.

Protect and Restore Healthy Streams, Rivers, Lakes, and Riparian Areas, Theme 1. p. 56: The Data Platform enables real-time access to water quality and stream temperature data, aiding in the early detection of potential water quality issues affecting aquatic ecosystems. In addition, the data that are included in the Data Platform are key to providing baseline conditions to support restoration activities that restore healthy aquatic ecosystems and riparian areas. Future use of the Data Platform could provide the tools to measure project success by building specific project views that incorporate visualizations for data collected for each project. Ideally, these project views could be linked to the Grand County Stream Management Plan website to not only track success but to inform future projects.

Secure Safe Drinking Water, Theme 2, p. 59: The Data Platform will combine data sources (GCWIN, CDPHE, USGS, Northern Water) so water users can assess water availability and quality, providing essential information to ensure the safety of drinking water sources.

Develop Local Water Conscious Land Use Strategies, Theme 4, p. 60: The Data Platform empowers local authorities with data to make informed decisions about water-conscious land use, aligning with sustainable planning goals. This will play out during the peak times during the summer when water releases are decided upon by local water users. The Data Platform will provide insight on where these water releases will be the most impactful for stream temperature. This will, in turn, benefit the entire Colorado River Basin both in and downstream of Grand County.

Encourage a High Level of Basin wide Conservation, Theme 6, p. 61: The inclusion of a storyboard aimed to educate the public on the importance of water quality and its connection to clean, reliable water supplies, the Data Platform encourages increasing public awareness and inspiring communities and industries to adopt more water-efficient measures.

In summary, the Data Platform project not only addresses current water challenges outlined in the Colorado Water Plan and Roundtable BIP but also positions itself as an innovative solution for future concerns, especially in the context of wildfires. The integration with Grand County's Wildfire Ready Watershed program underscores our commitment to holistic watershed management, ensuring that our efforts contribute to a more resilient and sustainable water future for Colorado.

Related Studies

CWCB's Wildfire Ready Watersheds Program: Grand County recently launched its Wildfire Ready Watersheds program, and the Data Platform will serve as a vital educational tool, helping our community understand the complex interactions between wildfires and watersheds. Having water data before and after fires can lead to better decision making, preparedness, and restoration for future impacted zones. In the future, we intend to build into the Data Platform a "water quality alert" system. Where users can sign up for alerts when water quality is being impacted in fire zones. This could aid water municipalities, and landowners for when extremely turbid water is detected. This feature is a part of our future tasks to consider with LRE once the initial build out is complete.

Grand County Stream Management Plan (GC SMP): The GC SMP was created in 2010 and was the first of its kind in Colorado. Since the inception of the GC SMP, changes have occurred throughout Grand County on both minor and landscape scales that warrant a necessary reexamination of the technical aspects of the SMP to better reflect current river conditions in the Cooperative Effort Area, which includes the Colorado, Fraser, and Williams Fork River basins, upstream of the Colorado River confluence with the Blue River. In addition, a significant amount of new data has been collected that supports a robust watershed assessment to improve

characterization and prioritization of areas of concern. The GC SMP update is focused on river health and river needs and the goal is to make general improvements to the rivers and streams to support stream health for aquatic habitat. The Data Platform will support attaining the goals of the GC SMP.

Taxpayer Bill of Rights
There are no known TABOR issues relevant to the GCWIN Data Platform.