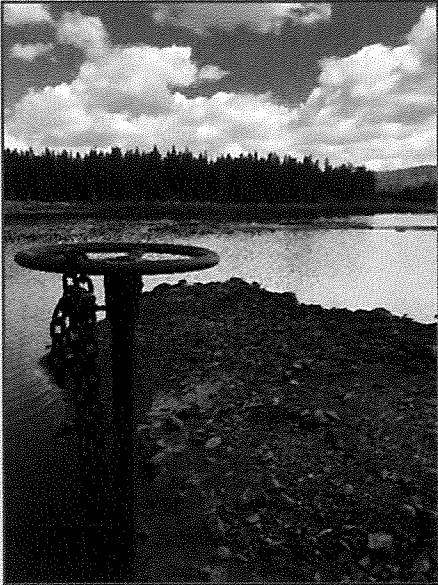


Grand Mesa Water Users' Association Water Efficiency Project



WaterSMART-Applied Science
Grants for Fiscal Year 2021
NOFO No. R21AS00289



Applicant Contact:
Grand Mesa Water Users' Association
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D.2.2.4 TECHNICAL PROPOSAL AND EVALUATION CRITERIA

1. EXECUTIVE SUMMARY

a. Date, applicant, name, city, county, and state.

Date: April 21, 2021

Applicant Name: Grand Mesa Water Users' Association

City, County, State: Cedaredge, Delta County, Colorado

b. Please indicate whether you are a Category A or Category B applicant.

Applicant is Category A.

c. A one paragraph project summary that specifies the work proposed.

Grand Mesa Water Users' Association will produce digitized capacity surveys for 50 reservoirs. An electronic reservoir water level measuring sensor attached to a telecommunications system will be installed at each of these reservoirs. A water distribution control software system will help monitor water supply, manage water deliveries, and administer water rights. Combined, these tools will enhance management of water supplies and reservoir operations. Funds will be used to acquire surveys, installation of sensors, and computer software.

d. The length of time and estimated completion date for the proposed project.

Grand Mesa Water User's Efficiency Project is a two-phase, multi-year project. Each phase will take two years to complete. This funding request is for **phase 1 only** (*any references to phase 2 in this document are outside of the scope of this request for funding for phase 1*) and will commence upon approval of funding.



e. Whether or not the project is located on a Federal facility.

The proposed project is not located on a Federal facility; however, it is in proximity and provides some water to Fruitgrowers Reservoir, a Federally owned Reclamation Project.

2. TECHNICAL PROJECT DESCRIPTION**a. Project scope**

This project services the water administration needs of over 2,000 irrigators and 4 municipalities who provide domestic water to 6,000+ users within the Surface Creek Valley in western Colorado. Snowmelt from the nearby Grand Mesa is stored in over 100 privately owned reservoirs. The reservoirs range in size from less than 100 acre-feet to several thousand acre-feet. The water is delivered down 7 main drainages into several hundred lateral ditches. The accurate and timely administration of this water is a critical function and will be enhanced by the proposed project.

b. Project description

The project is made up of 4 primary components which are divided into 2 phases: 1) digital reservoir capacity surveys, 2) electronic water level recording instrumentation and transmission equipment, 3) a water distribution control software system, 4) a custom, interactive web-based water ordering system. Components 1-3 will be done in phase 1 of the project. This application for funding is for phase 1 only. Component 4 will be done in phase 2 of the project under a separate funding arrangement. If phase 2 is not implemented, the operation of phase 1 will not be negatively impacted.

Drone capacity surveys

Drone technology is a non-invasive method that can be used to acquire data on the water holding capacity of reservoirs. From the reservoir manager's point of view, the only requirement is an empty reservoir. The data produces contours in relationship to the invert of the headgate (bottom of the reservoir, zero elevation). This data is then converted into volume. Reservoir volume is measured in acre-feet of water. Reservoir capacity data for 50 reservoirs will be acquired in phase 1.

Electronic reservoir water level measuring sensors

Electronic sensors will be installed to provide real time data on water level height. A small antenna and solar panel will be installed on the reservoir head block. Data will be communicated to a web-based application for visualization and data archival. Sensors and data transmission equipment will be installed on 50 reservoirs for phase 1.



Water distribution control software system

The water distribution control system will be customized to the Surface Creek Valley drainage. Grand Mesa Water Users' Association (GMWUA) envisions a software system comprised of the following functionality: 1) a reservoir information database cataloging all data pertaining to each of the 100 reservoirs on the Grand Mesa, 2) an interactive map of the reservoirs and their filling decrees, 3) a tool for analyzing priorities, 4) a dashboard of water administration activity (graphs, plots of water usage), 5) a reservoir seep monitor with alerts and alarms, and 6) a forecasting tool to predict future demand and delivery.

3. PROJECT LOCATION

The GMWUA Efficiency Project is located within a 35 square mile area on US Forest Service land on the Grand Mesa in Delta County, Colorado. Located in the Lower Gunnison River Basin, GMWUA services municipal and agricultural users within the Surface Creek Valley. See Maps in Appendices 1A and 1B.

Any spatially explicit data or tools developed as a result of this project will follow industry standard formats that are compatible with Geographic Information System platforms.

4. E.1 EVALUATION CRITERIA

E.1.1 Evaluation Criterion A - Benefits to Water Supply Reliability

1. Describe the water management issues your project will address.

Our goal with this project is to accurately quantify and improve water supply reliability of all the water captured and stored in over 100 reservoirs on the Grand Mesa. The reservoirs on the Grand Mesa were built to capture and conserve available water from snowpack for irrigation and municipal use. We have an asset that needs to be protected and controlled.

Water supply shortfalls can be addressed through accurate assessments of water in the reservoirs. Accurate capacity surveys are critical. If you do not know how much water you have, you are prone to over allocation. Over allocation leads to inaccurate quantification and therefore an unreliable supply. What you think should be there, isn't! Accurate capacity surveys are critical to determining accurate water levels to make accurate appropriations. We must know exactly how much water is in the reservoir before deciding how much is allocated per fractional interest or per share. In a recent



example, a newly conducted survey discovered historical capacity was 100 acre-feet lower than the newly calculated capacity. This effectively increased the available water to the owners.

2. Explain how your project will address the water management issues.

a. Water supply reliability

More accurate reservoir level readings will allow for more accurate calculations of evaporation and other water losses during delivery. Electronic sensors delivering real time data will allow GMWUA to improve the accuracy of evaporation calculation. Currently there is a 10% deduction for evaporation from the gross amount captured in each reservoir. A cool summer at 10,000 feet elevation may result in only 4% evaporation. Contrary, a hot summer may result in more than 10% evaporation. We are taking our best guess at an evaporation number. Installation of water level sensors would provide daily reservoir levels. Data transmitted to our computer program would be organized, compiled, and provide us with a real number for evaporation! This exact measurement could result in a higher reservoir allocation and a more reliable calculation of how much water is actually in the reservoir.

b. Management of water deliveries

Competing demands for water increase through the season. Real time information about water availability and delivery will ensure water is administered in accordance with the priority system. Electronic sensors will provide real time reservoir water levels. Electronic water level sensors will reduce the number of man hours to collect water level readings from each reservoir. The sensors will transmit water level readings almost instantaneously to a water computer program with a dashboard in the central office.

Water administrators are unable to physically visit each reservoir daily. A sudden spike in reservoir level data could warn of risk of dam overtopping. Due to the high concentration of high hazard dams, a system alert could potentially save lives and at the very least prevent other reservoirs down mountain from overtopping as well. A sudden decrease in water level could mean an open gate or a seep that has suddenly gotten larger, suggesting a possible dam breach or that the reservoir has been tampered with. These reservoirs are located on US Forest Service lands and the public is allowed recreational access.

Access for water administration can be difficult. Trails are narrow and rough, riddled with large rocks. Most access is gained only by use of OHV. Fallen trees block trails and



present hazards that must be removed before proceeding. In the winter, access is by snowmobile only. Snow covered, steep terrain awaits the slightest jolt to trigger an avalanche, unexpected live streams run through deep gullies, and thin ice on reservoir edges are only a few of the winter hazards water administrators face when attempting to ascertain the winter fill levels. Electronic sensors would mitigate these risks and reduce potential injury to water administrators. Recovery and transportation of someone seriously injured on the Grand Mesa requires a helicopter.

c. Water marketing activities

This project does not address water marketing activities.

d. Drought management activities

Droughts, such as the one we are currently experiencing, increase pressure on the entire system from increased evaporation to transmission loss. A series of dry years has put intense strain on the Surface Creek Valley watershed. Our reservoirs are suffering from a lack of snowpack and nonexistent rainfall in an arid, increasingly parched landscape. We are facing a risk ridden future and need support in upgrading our aging infrastructure. There are one hundred and forty years of history in the Surface Creek Valley involving resourceful irrigation planning and development to deliver water to the fertile farm grounds and municipalities. Weather patterns seemingly indicate a drought trend and in the arid western Colorado landscape, every drop of water counts. In 2018, a drought year, between May and June, multiple reservoirs inexplicably lost almost one-half of their volume without any releases.

e. Conjunctive use of ground and surface water

Not applicable.

f. Water rights administration

GMWUA has invested in and paid for a decree call-map prototype software system. This software produces a map of the reservoirs by filling priority showing the impact of a downstream early spring "call". When a call is made by a user with senior water rights our water administrators physically go to the Grand Mesa, dig down, often through layers of snow and ice, until they find the reservoir water level. The amount of water stored during the winter months up to the date of the call is calculated. Any water junior to the calling structure below must be released to satisfy the calling senior. Installation of electronic water level sensors integrated with the computer software would make that information available by the touch of a key stroke.



g. Ability to meet endangered species requirements

Not applicable.

h. Watershed health

Not applicable.

i. Conservation and efficiency

Not much has changed since the 1880's with regards to relaying reservoir information. Friday mornings it is commonplace for water administrators to bring their weekly reservoir water numbers into the water office for entry into an antiquated computer database. These numbers are often written in pencil and kept in a notebook carried in a front shirt pocket or back pocket of blue jeans. This is valuable information needed to quantify water used to make management and delivery decisions! It has happened that an administrator was dyslexic, and his numbers were often transposed. Electronic sensors reduce these errors and transmit accurate data to a central computer control system. A live dashboard will allow office personnel a second set of eyes to catch and reduce water delivery errors. Reduction of errors improve efficiency and saves water!

j. Other improvements to water supply reliability

Computer software has the ability to leverage data and forecast products from multiple public sites and retrieve information for forecasting water demand and usage to meet the needs of water managers. Historical usage and weather patterns mirrored against current, will provide for future demand and delivery predictions. This information is useful in determining future water shortfalls. Websites used by our office include but are not limited to: Snotel <https://www.nrcs.usda.gov/>, DWR gauging stations <https://dwr.state.co.us>.

Phase 2 of the GMWUA Efficiency Project (not discussed in this request for funding) proposes integration of a web-based portal for shareholders to order their water thereby getting them more involved in their water and the responsibilities therein. Analysis of [historical] water orders will allow for forecasting of large orders during specific times.

3. Describe to what extent your project will benefit one of the water management objectives listed above.

The impact of these improvements to the water management and distribution system will be felt immediately within the entire Surface Creek Valley drainage. Irrigators and municipalities will know how much water is on the mountain and how to appropriately conserve and stretch their resource throughout the season.



Administrators from GMWUA and local administrators from the State of Colorado Division of Water Resources will know where the water is on the mountain and throughout the delivery system at any time and in real time. This will empower them to make more informed decisions relating to delivery more quickly to ensure its on time and in priority delivery.

Everyone in the system could learn more about the use and management of this precious and finite resource, and lead to its protection and conservation.

4. Explain how your project complements other similar projects applicable to the area where the project is located.

To our knowledge there are currently no other comparable, reservoir efficiency projects in Delta County. However, multiple entities maintain a presence on the Grand Mesa. For example, NRCS Snotel sites and several USGS gauging stations collect data. NASA maintains an active winter presence on the Grand Mesa with SnowEX, a snow water equivalent measuring project. There are other irrigation districts in the area that could possibly benefit from a similar system.

E.1.2 Evaluation Criterion B - Need for Project and Applicability of Project Results

1. Will the project result in an applied science tool(s) or information that's readily applicable, and highly likely to be used by water resource managers in the West?

The applied science and information from this project will immediately meet needs of the users in the Surface Creek Valley. Methodology and technology could be used by other water resource managers in the West.

a. Explain who has expressed the need and describe how and where the need for the project was identified.

The need for improved water resource management tools has been expressed by irrigation users (farmers, orchardists, ranchers), newly arrived residents who know nothing about irrigation water, municipal water users, the Colorado Division of Water Resources, and the Board of Directors of the Grand Mesa Water Users Association.

Shareholders come into the GMWUA water office daily asking the status of their reservoir water. Conversely, the water office wants to show the users the situation on the mountain, particularly as water comes into shorter supply. This information empowers both sides to consider appropriate use and water conservation. Having water



leftover in our reservoirs at the end of our irrigation season is critical for next season's operation. We want to be able to show real time conditions on the Mesa. We feel this will be part of an educational process with our users. There is a need to conserve their water and not use it all by the end of the season. It is imperative we account for and efficiently deliver every drop of water. Municipalities rely on reservoir water to make up their water shortfalls. If we cannot accurately quantify and deliver their reservoir water, it affects everyone, especially in the late season.

The number of support letters is also an indication of the strong expression of need.

b. Will the results of your project inform water resource management actions and decisions immediately upon completion of the project, or will additional work be required?

Yes, the results of this project will have immediate impact on management actions and decisions upon completion. Benefits include more accurate appropriations from more accurate capacity surveys, data will be coming into the office in real time, a dashboard with water information will be displayed on the walls of the water office, alarms will be in place alerting to overtopping or potential water loss. In summary, the control system will be in operation.

c. If applicable, will the results of your project be transferrable to other users and locations?

Digitized capacity surveys and electronic water level sensors can be used anywhere, and computer software can be custom tailored. Methodology and technology is transferrable and could be put in place where water is administered by the prior appropriation doctrine.

E.1.3 Evaluation Criterion C - Project Implementation

1. Briefly describe and provide support for the approach and methodology that will be used to meet the objectives of the project.

Grand Mesa Water Users has performed two feasibility studies with our own money. The first of these projects was collection of several new capacity surveys using drone technology. Digitized capacity surveys were produced. One survey resulted in the discovery of an additional 100 acre-feet over the previous historical survey. Sensors were installed on a major ditch diversion structure north of Cedaredge to test the water level sensing capabilities and data transmission technology and reliability. Additionally, GMWUA contracted a programmer to write a prototype of the reservoir decree call-map.



This implementation demonstrated the effectiveness of having this information available immediately upon a call. These projects were successful in demonstrating to the stakeholders the value and feasibility of this project.

2. Describe the work plan for the project.

Acquisition of capacity surveys and installation of electronic sensors are weather dependent and subject to when a reservoir is empty. We went into the fall of 2020 with many dry reservoirs. To date we have received subpar snowpack and anticipate a large number of empty reservoirs this year. So, while it is difficult to say when work will commence on each reservoir, we will endeavor to do each reservoir as quickly as possible in anticipation of an above average snowpack for 2022 and 2023!

The software control system will require proprietary customization to our needs. The remainder of the resources will go to integration of data retrieval and development of forecasting tools.

The image below illustrates the major phases and milestones of the project.

GMWUA Water Efficiency Project Phase 1 Work Plan

Grand Mesa Water Users' Association

Project Start Date	Q4 2021	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
TASK	2021	2022				2023				
Reservoir Capacity Surveys X 50 Reservoirs		Access is Weather Dependent				Access is Weather Dependent				
Prepare Site										
Fly Site										
Load, edit and calibrate data										
Compute capacity from elevations										
Electronic Sensor Installation X 50 Reservoirs		Access is Weather Dependent				Access is Weather Dependent				
Install sensor receiver unit										
Install transmission electronics										
Test installation										
Software Control System										
Installation and customization										
Integration of sensor data										
Development of AI forecasting										

3. Provide a summary description of the products that are anticipated to result from the project.

The products from this project are digital capacity surveys, archivable database of transmitted water level data, numerous reports from the computer software system including reservoir call-maps, water usage and evaporation reports, reservoir priority fill



instructions, reservoir seep data reports, and reservoir drainage strategies based upon what-if scenario analyses.

The computer control system with 3 high density computer screens will be installed at the water office to display and manage reservoir data.

The products are shown in the table below:

1. Digital capacity surveys for 50 reservoirs
2. Archivable database of transmitted water level data for 50 reservoirs
3. Software products:
a. Reservoir decree call-map
b. Water usage and evaporation reports
c. Seep data reports
d. Reservoir quality factor reports
e. Control system dashboard and other tools

4. Identify staff with appropriate credentials and experience and describe their qualifications.

Cathrin Denise Jackson is the project manager. She will be overseeing the work performed by contractors and all project finances. She has worked in the water office as operations manager for 15 years.

No additional positions will be required by GMWUA. Contractors to do the project have not yet been chosen.

There are no plans at this time to request technical assistance from Reclamation during implementation of the project.

a. Have the project team members accomplished projects similar in scope to the proposed project in the past either a lead or team member?

As the Grand Mesa Water Users office and operations manager, Ms. Jackson has the knowledge and experience to define the requirements needed for software control system and the decree priority system.

The president of GMWUA was head administrator in a recent ditch piping project funded by the Bureau of Reclamation salinity program. Several members of the GMWUA board of directors have overseen projects funded by the Natural Resources Conservation Service, a branch of the USDA.



b. Is the project team capable of proceeding with tasks within the proposed project immediately upon entering into a financial assistance agreement?

Yes, the project team is capable of proceeding with tasks immediately upon entering into a financial agreement.

E.1.4 Evaluation Criterion D - Dissemination of Results

Describe how the tools, frameworks, or analyses being developed will be disseminated, communicated, or made available to water resource managers who may be interested in the results.

a. If the applicant is the primary beneficiary of the project, explain how the results will be communicated internally, and to interested stakeholders and interested water resource managers.

Results will be disseminated and communicated with partners (reservoir shareholders, Grand Mesa Water Users' Association Board of Directors, Colorado Division of Water Resources) through shareholder meetings, water classes, regular traffic to the water office, the GMWUA website and social media platforms.

A software control system dashboard will be displayed via 3 large hi-density format screens on the wall of the water office. The control system will display water information through various windows such as a drainage map, and a dashboard with plots and graphs of water distribution and usage.

Data can furthermore be communicated via reports such as water orders, historical and forecasted usage and evaporation, seep monitor alerts and alarms.

The implementation and use of this system will allow water administrators to demonstrate and educate users via visual aids. As water administrators we desire for users to learn how the overall system works and the complexity involved to deliver water to their property. Users will be encouraged to take more responsibility for their water and understand how it all fits together. Responsibility is not limited to one individual or entity. We all need to conserve and protect this vital and resource.

Results can be disseminated and communicated with water resource managers throughout the Western US via Zoom-type meetings, scheduled tours of the control monitor system in the Cedaredge water office and attendance or presentation of a talk at water conferences.



D.2.2.7 PROJECT BUDGET

1. FUNDING PLAN AND LETTERS OF FUNDING COMMITMENT

a. The amount of funding commitment

The source of the cost share funding is a loan through the Colorado Water Conservation Board (CWCB). A letter from the CWCB is attached. The loan amount will be sufficient to meet all cost share obligations. GMWUA is capable of meeting the loan repayment obligations.

GMWUA is also seeking funding from three additional grant sources in order to decrease the amount of loan funds actually drawn upon. The sources are: 1) Gunnison Basin Roundtable grant, 2) Colorado Water Supply Reserve Fund (WSRF) statewide grant, and 3) Colorado River Districts Partnership Project Funding Program. A grant application has been submitted for the Gunnison Basin Roundtable and WSRF. Colorado River District application is in process.

CWCB Loan

This is a loan. The loan will cover the shortfall from other sources of funding. See Appendix 1 for CWCB pre-qualification letter.

b. The date the funds will be available

Funds will be available upon project award.

c. Any time constraints on fund availability

There are no time constraints on availability of funds from the CWCB Loan. Funding from grants is limited to two years.

d. Any other contingencies...

The approval of the CWCB loan is contingent on approval of the loan feasibility study.

e. Any monetary contributions by the applicant...

There are no additional monetary contributions by GMWUA outside of the CWCB Loan.

f. Any costs contributed by the applicant.

There will be no additional costs contributed by GMWUA.

g. Any third-party-in-kind-costs

There will be no third-party-in-kind contributions.



h. Any cash requested/received from non-Federal entities.

There will be no cash requested from other non-Federal entities other than the pending funding requests listed below.

i. Any pending funding requests.

GMWUA has applied for a Gunnison Basin Roundtable and WSRF grants. Application is pending approval. A grant application to the Colorado River District is in process.

GMWUA has passion and desire to protect our water! We are determined to see this project through.

2. BUDGET PROPOSAL

a. Table 1- Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$200,000.00
Cost to be paid by GMWUA	\$240,000.00
Third party contributions	\$0.00
TOTAL PROJECT COST	\$440,000.00

b. Table 2 – Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
Salaries and Wages				
Project Manager	\$25.00	1200	per hour	\$30,000.00
Fringe Benefits				
Equipment				
Supplies and Materials				
Contractual/Construction				
Digital Capacity Surveys	\$1,100.00	50	reservoirs	\$55,000.00
Electronic Sensors	\$3,600.00	50	reservoirs	\$180,000.00
Computer Software	\$120,000.00	1	system	\$120,000.00
Third-Party-In-Kind Contributions				
Other				
Environmental Permitting	\$55,000.00	1	contract	\$55,000.00
TOTAL DIRECT COSTS				\$440,000.00
Indirect Costs				
TOTAL ESTIMATED PROJECT COSTS				\$440,000.00



3. BUDGET NARRATIVE

a. Salaries and Wages

The project manager is Cathrin Denise Jackson, an employee of GMWUA. The project manager will be paid \$25.00/hr for an estimated 1200 hours.

b. Fringe benefits

No separate fringe benefits are included.

c. Travel

There is no travel included for this project.

d. Equipment

No separate equipment costs, they will be included in the contractual budget.

e. Materials and supplies

No separate materials and supplies costs, they will be included in the contractual budget.

f. Contractual

Contractual costs include the cost of 1) 50 digital capacity surveys, 2) hardware and installation cost of 50 electronic sensors, and 3) software license fees. Costs are based on price estimates from local vendors.

g. Third-party-in-kind contributions

There are no third-party-in-kind contributions.

h. Environmental and regulatory compliance costs

We have budgeted \$55,000 for environmental and cultural compliance costs. Costs are based on compliance costs for Bureau of Reclamation funded ditch piping projects in the area.

i. Other expenses

There are no other expenses included or expected.

j. Indirect costs

There are no indirect costs included or expected.



D.2.2.5 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

1. H.1. ENVIRONMENTAL AND CULTURAL RESOURCE CONSIDERATIONS

a. Will the proposed project impact the surrounding environment?

Earth disturbing work will be minimal or nonexistent. The only construction activities will consist of placing small data transmitting devices on the dams of the reservoirs.

a. Species, endangered or threatened, in project area?

Unknown at this time.

b. Wetlands or Waters of the United States within project boundaries?

It is unknown if the reservoirs where this project will take place are designated as Waters of the United States. No dredge and fill activities are anticipated for the project. No impacts to wetlands are anticipated.

c. Water delivery construction date?

All reservoirs in this project will likely be considered historical structures. Construction started in the 1880's and most were completed by the 1950's. Reservoir maintenance is ongoing.

d. Modification or effects to individual features of an irrigation system?

This project will not modify or effect any irrigation system structures (headgates, canals, or flumes). The modifications to the dams will consist of installation of water sensors on the surface of the embankments and installation of data transmitting devices on the crests of the dams.

e. National Register of Historical Places?

To our knowledge there are no buildings, structures, or features listed on the National Register of Historical Places within the project area. The dams and reservoirs themselves may be eligible for listing. We are unaware of any activities to do so.

f. Archeological sites?

To our knowledge there are no known archeological sites within the project area.



g. Effect on low income or minority populations?

This project will have no disproportionately high or adverse effect on low income or minority populations.

h. Impact on tribal lands?

This project will not limit access to or ceremonial use of Indian sacred sites nor result in any impact on tribal lands.

i. Noxious weeds or non-native invasive species?

No construction is planned nor will there be any heavy construction equipment transported to the reservoir sites.

D.2.2.6 REQUIRED PERMITS OR APPROVALS

Permits will be acquired if needed.

D.2.2.8 LETTERS OF SUPPORT AND LETTERS OF PARTICIPATION

Letters of support are in Appendix 2. Letters of support have been received from:

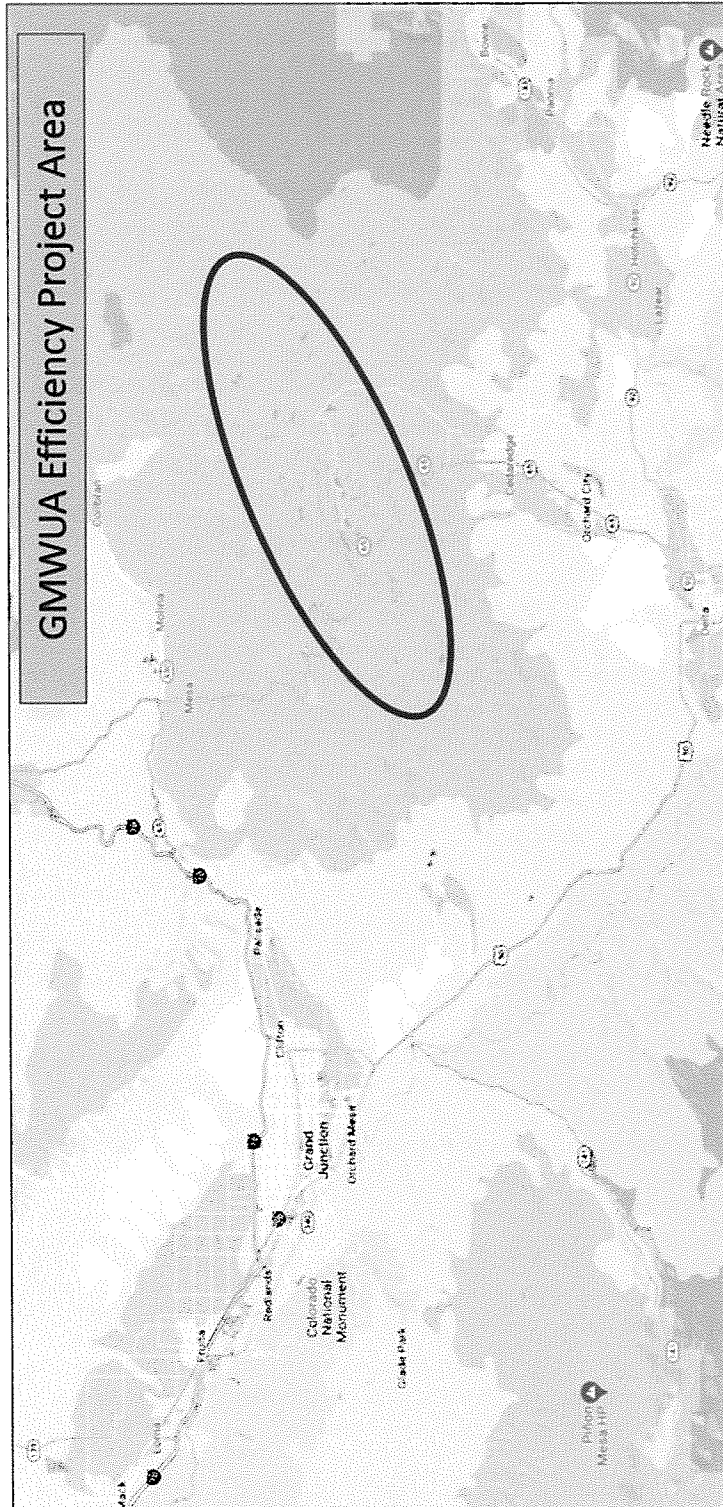
1. Grand Mesa Conservancy District
2. Upper Surface Creek Domestic Water Users
3. Town of Cedaredge

D.2.2.9 OFFICIAL RESOLUTION

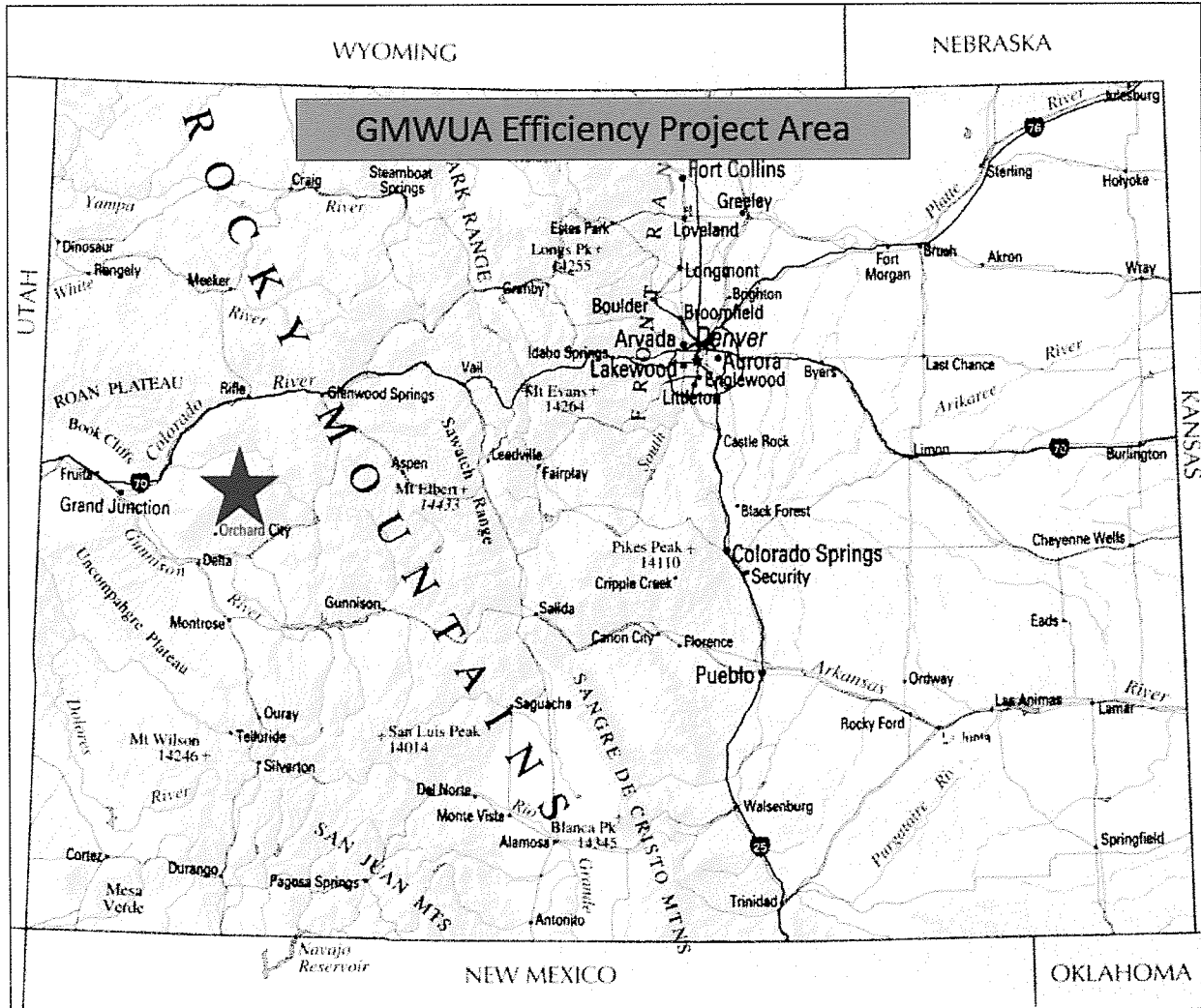
The official resolution will be submitted within 30 days.



APPENDIX 1A: PROJECT AREA MAP

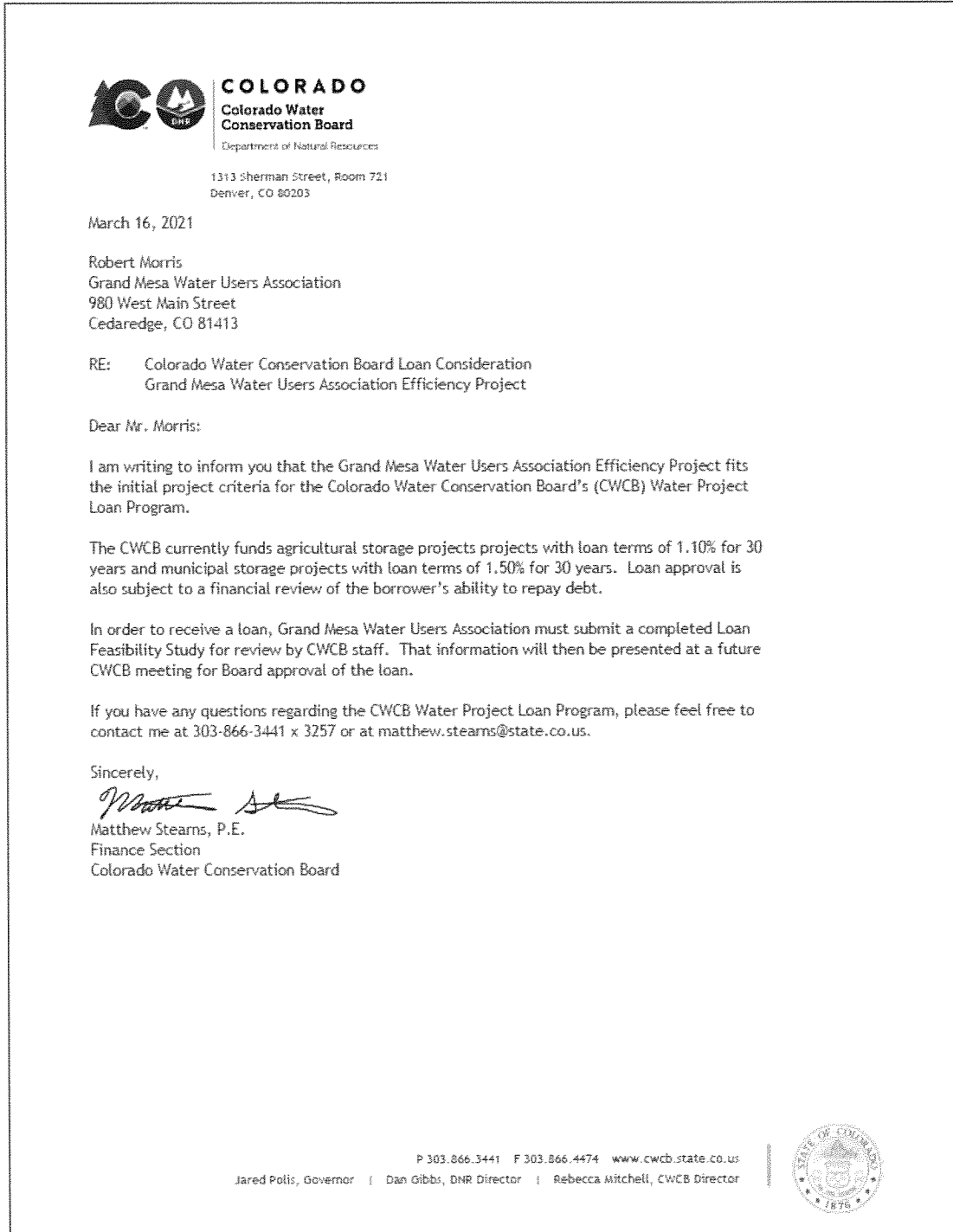


APPENDIX 1B: PROJECT AREA MAP



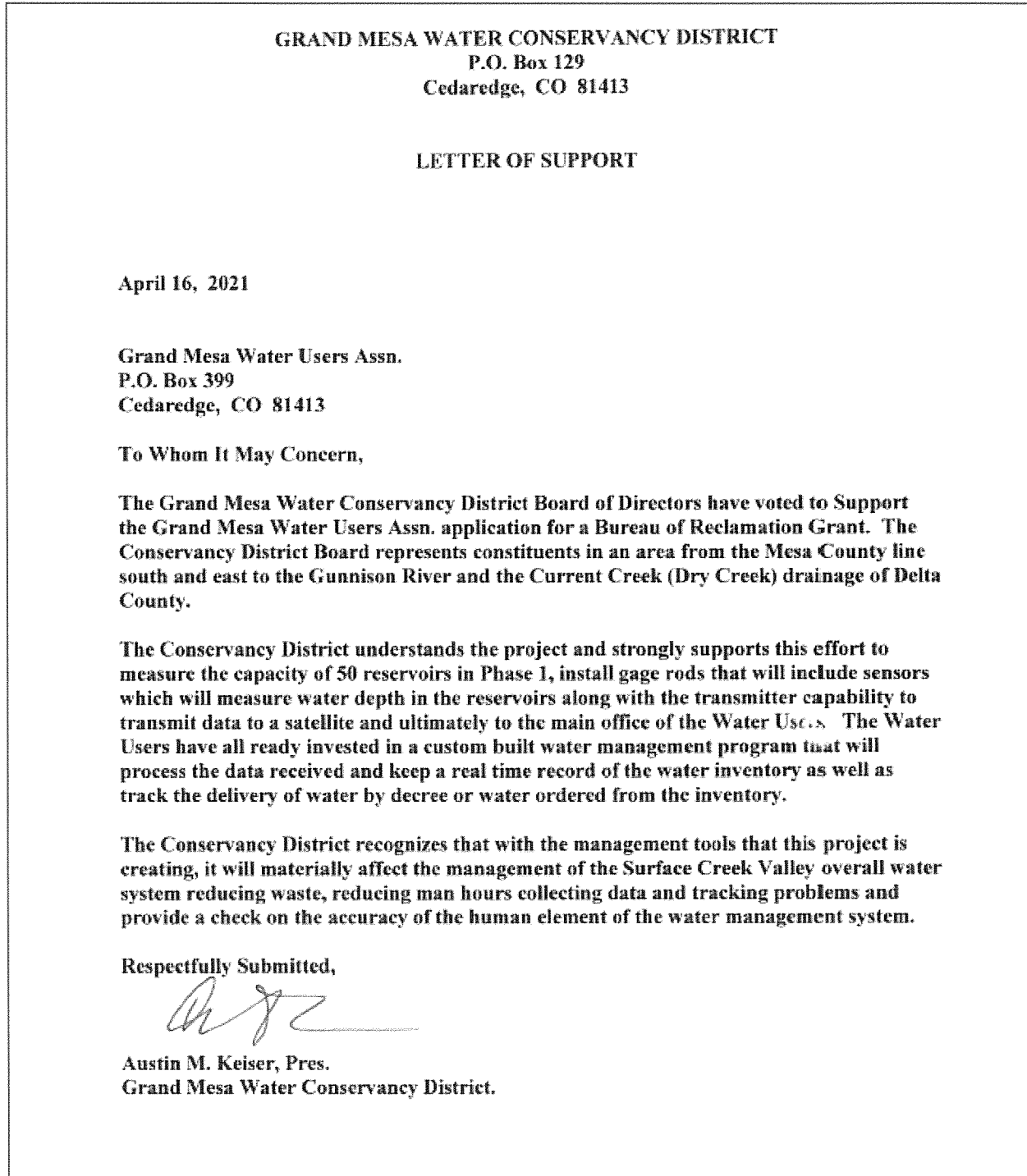
APPENDIX 2: LETTERS OF FUNDING COMMITMENT

The image below is a copy of the CWCB funding letter.



APPENDIX 3: LETTERS OF SUPPORT

The images below are copies of the letters of support.





Upper Surface Creek Domestic Water Users Association

April 15, 2021

WaterSMART Applied Science Grant

RE: GMUA's Efficiency Project

As a municipal shareholder of Grand Mesa Water User Association, we are in total support of GMUA's Efficiency Project. As a private domestic water company, it is imperative that we have accurate information of water that is available for the members of the water company. This information helps the BOD determine if water restrictions will need to be placed on the members during the summer months, if USCDWUA needs to rent additional water to supply current taps, and if we can supply new taps on our system.

Sincerely,

Amber McPherson
Secretary/Treasurer





235 W Main Street | PO Box 398
Cedaredge, Co 81413
970-856-3123
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April 15, 2021

WaterSMART – Applied Science Grant for FY21
Department of the Interior
Bureau of Reclamation
Policy of Administration
Ms. Avra Morgan, Program Analyst
aomorgan@usbr.gov | SHA-DRO-FAFOA@usbr.gov

Dear Ms. Morgan and Members of the WaterSMART – Applied Science Grant Committee,

The Town of Cedaredge writes to lend support to the successful grant application of the Grand Mesa Water Users Association’s Efficiency Project, Phase 1. The Town is a shareholder in several reservoirs that GMWUA manages, and we have a deeply vested interest in supporting the continued work of GMWUA to manage the ever-increasingly sparse water resources in our state.

Phase 1 of the entity’s Efficiency Project aims to produce digitized capacity charts for 50 reservoirs; installs water level sensors at those 50 reservoirs; and will also transmit the data to a computer program in the office. These steps will allow the staff of the Water Users to more accurately monitor and manage water supplies, a vital step to protect the Surface Creek Valley’s water interests for our municipal customers and our agricultural businesses, an important piece of the economic pictured in our area.

Water is life, especially in an agricultural valley like ours. The work that Grand Mesa Water Users Association is doing to support, maintain, monitor and manage water for the life and livelihood of the residents of the Surface Creek Valley is monumentally important. Furthermore, Delta County is an economically disadvantaged community with few financial resources. Healthy, smart and forward-thinking water conservation projects take time, effort and considerable financial resources. The staff and board members of the Grand Mesa Water Users Association have the knowhow, the time and the desire to work to preserve and protect Western Colorado water. What they lack, and how you can help, is with your financial support to this project. This grant will not only give vital support to the Grand Mesa Water Users Association and this project, but will support the many families, businesses, schools, churches, civic groups and nonprofits that depend daily on the water that GMWUA manages for us.

We thank you in advance for your support of the Grand Mesa Water Users Association grant application.


Raymond F. Hanson, Mayor





980 West Main Street | PO Box 399
Cedaredge, CO 81413
970-856-3165

WaterSMART – Applied Science Grant for FY 2021
Ms. Avra Morgan, Program Analyst

Dear Ms. Morgan,

Enclosed herein is application for WaterSMART Applied Science Grant for Fiscal Year 2021.

As per instructions, we will be submitting Official Resolution within 30 days.

SAM registration has been in process for several months and we anticipate having it completed within the 30-day window allowed after the application deadline.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Robert E. Morris".

Robert Morris, Grand Mesa Water Users' Association President