

WaterSMART: Water Marketing Strategy Grants for FY 2017

Funding Opportunity Announcement # BORDO17F014



Grand Valley Water Users Association Beyond Conserved Consumptive Use: Creating Productive Water Market Strategies

APPLICANT

Grand Valley Water Users Association
Mark Harris, General Manager
1147 24 Road
Grand Junction, CO 81505

PROJECT MANAGERS

Mark Harris, General Manager
1147 24 Road
Grand Junction, CO 81505
p (970) 242-5065
mharris@gvwua.com

Luke Gingerich, Project Manager
305 Main St., Ste. 6
Palisade, CO 81526
p (970) 462-6868
lgingerich@jub.com

Table of Contents

Table of Contents	1
Technical Proposal and Evaluation Criteria.....	2
Executive Summary	2
Applicant Info	2
Project Summary:.....	2
Schedule.....	3
Federal Facility	4
Background Data	4
Geographic location:.....	5
Water Supply	5
Relationships with Reclamation.	7
Project Description.....	8
Evaluation Criteria	11
Evaluation Criterion A— Water Marketing Benefits	11
Evaluation Criterion B—Level of Stakeholder Support and Involvement.....	16
Evaluation Criterion C—Ability to Meet Program Requirements	18
Evaluation Criterion D—Nexus to Reclamation	20
Environmental and Cultural Resources Compliance	22
Required Permits or Approvals.....	23
Project Budget.....	23
Funding Plan and Letters of Commitment.....	23
Budget Proposal	27
Budget Narrative.....	28
Existing Analysis Contributing to the Water Marketing Strategy (if applicable)	29
Letters of Support	29
Official Resolution.....	Error! Bookmark not defined.
Figures/ Tables	
Figure 1 Project Location Map	5
Table 1 Stakeholder Involvement	16
Attachments	
Attachment A Project Location Map	
Attachment B Conserved Consumptive Use Pilot Project Report	
Attachment C Cash Match Letters	
Attachment D Letters of Support	

Technical Proposal and Evaluation Criteria

Executive Summary

Applicant Info

Project Name: Beyond Conserved Consumptive Use: Creating Productive Water Market Strategies

Date: April 18, 2017

Applicant Name: Grand Valley Water Users Association (GVWUA)

City, County, and State: Grand Junction, Mesa County, Colorado

Project Manager:

Name: Mark Harris, General Manager, GVWUA

Address: 1147 24 Road, Grand Junction, Colorado 81505

Phone: 970-242-5065

Email: office@gvwua.com

Project Funding Request: Funding Group I – Total Project Cost \$265,900. Funding Request \$128,000.

Project Summary:

The Grand Valley Water Users Association (GVWUA) has been deeply involved in exploring the supply side of water marketing in the GVWUA Conserved Consumptive Use Pilot Project currently underway. The GVWUA application request is titled “**Beyond Conserved Consumptive Use: Creating Productive Water Market Strategies**” (Beyond Project). The proposed Beyond Project will investigate approaches to addressing the risk and uncertainty around water supplies in the Colorado River system, which do not require the permanent sale or transfer of existing agricultural water rights. GVWUA believes that the water marketing conversation needs to go beyond the use of conserved consumptive use by developing outreach and discussions with other water users, as well as key State and Federal partners. To accomplish this, strategies will be identified that avoid the separation of water from the land, potentially created by a water crisis. At the same time, needs of other water users in the basin will be considered. The Beyond Project will build upon GVWUA work to date by accomplishing the following:

- Conduct outreach on three separate fronts: agricultural, M&I, regulatory, legal, and governmental. Including both advocates and critics of proactive water supply planning
- Continue scoping and planning activities with diverse geographical areas, resources, and economic perspectives
- Develop potential water marketing strategies that increase drought resiliency, improve water supply risk mitigation, reduce water related conflicts, improve the productivity and benefit of crisis plans, and avoid the separation of water from agricultural lands.

- The results of the Beyond Project activities will be documented in a written report reviewed by the involved stakeholders and made available to Reclamation on behalf of the GVWUA Board of Directors.

Schedule

The length of time and estimated completion date for the proposed water marketing strategy

The Beyond Project is ready to move forward and has already started some of the activities outlined in the Outreach tasks. Outreach with Reclamation started in April 2017 and GVWUA intends to continue to move forward with the Beyond Project by providing tours to interested groups and individuals representing water agencies, the state of Colorado and other interested and vested stakeholders during the 2017 irrigation season.

At the time of award (June – September 2017) GVWUA will develop the detailed scope of work in conjunction with Reclamation and select collaborators. The planning process will be completed within the required two-year time frame with a completion time of July – August 2019 and will allow for the 30-day review by Reclamation before the final approval of the Report. A more in-depth schedule will be developed with the detailed scope. The following is an estimated schedule based on the planning tasks:

ESTIMATED PROJECT SCHEDULE																									
April 2017 September 2019		Apr 2017	Oct 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	July 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	July 2019	Aug 2019	Sep 2019
Milestone/Task		Apr	Oct	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep
Contract, Develop Detailed Scope, and Stakeholder Groups																									
Outreach Activities																									
Outreach Phase 1 Conduct Outreach with Reclamation																									
Outreach Phase 2 Conversations with Others																									
Outreach Phase 3 Conversations with Agricultural Water Providers																									
Scoping Planning Activities																									
Assessment of Potential Organization																									
Outreach to State Engineers office (SEO) and																									
Develop the framework of Drought Resiliency																									
Description of Implementation																									
Description of Legal Framework																									
Description of Monitoring																									
Prepare Draft Report																									
Reclamation Review of Draft Report																									
Final Report Approval and Project Closeout																									

Federal Facility

Indicate whether or not a Reclamation project, facility, or activity is located within the geographic area to be addressed in the proposed water marketing strategy

GVWUA water marketing strategy encompasses numerous Reclamation projects, facilities and activities. The GVWUA operates the Grand Valley Project, a Reclamation project located in the Grand Valley near Grand Junction, CO. Many of the water users on the Western Slope of Colorado receive water directly or indirectly from a facility operated and/or owned by Reclamation. The Beyond Project will conduct outreach to a number of users who are directly affected by Reclamation activities within the Upper Colorado River Basin in Colorado.

Background Data

The Colorado River Basin supplies water to seven western states and the Republic of Mexico.

The Basin provides domestic water supplies to more than 36 million people and irrigates more than five million acres of agricultural lands. It also supports diverse wildlife and fish not found anywhere else in the world and fuels a multi-billion dollar recreational economy. However, the Basin has experienced a severe drought since the late 1990s. While the region has had some “wet” years, the trend has been one of declining water supplies. In 2009, The Water Bank Work Group (WBWG) was **formed to explore the use of a voluntary and compensated market approach to temporarily reduce consumptive uses** in the Colorado River Basin in Colorado. The WBWG’s effort is aimed at avoiding long-term agricultural dry up and water supply disruption on the west slope of Colorado while minimizing risk for all water Colorado River users.

Photo 1 Colorado River



In 2015, the Grand Valley Water Users Association with assistance from the WBWG developed a Water-Banking pilot project to be managed by the GVWUA. The pilot is called the “Conserved Consumptive Use Pilot Project” (CCUPP) and is on-going during the 2017 irrigation season and will conserve over 3,200 acre-feet of water. The GVWUA is also currently involved in developing a second year of the CCUPP that will take place during the 2018 irrigation season.

The CCUPP is a pilot demand management project intended to test the mechanisms necessary for a Western Slope irrigation water provider to intentionally reduce consumptive use in a voluntary and compensated manner. The process of creating the CCUPP has allowed the GVWUA to better understand the reluctance and concerns of the GVWUA Board of Directors and shareholders as well as understand the mechanics, timing and logistics of developing demand management projects administered and managed by irrigation districts. The previous work has helped form a baseline understanding of what the GVWUA is capable of in regards to demand management. However, it is unclear to them of the possible contribution of other

The Roller Dam diverts water into the Government Highline Canal for irrigation and hydropower purposes under senior water rights that collectively with other diversions in the Grand Valley make up the “Cameo Call” from the Colorado River. The irrigation water associated with the Grand Valley Project is provided to four irrigation entities: GVVUA and the

Photo 2 Roller Dam



Orchard Mesa, Palisade and Mesa County Irrigation Districts (Irrigation Districts), which provide irrigation water to approximately 39,000 acres of land in Grand Valley. The hydropower water is used to produce hydropower at the GVPP, which has a capacity of approximately 800 cfs and a current electrical generation capacity of about 3.5 MW.

The water rights of the Grand Valley irrigation systems that comprise the “Cameo Call” are diverted from the Colorado River and, along with the water rights of the Shoshone Hydropower Plant upstream near Glenwood Springs, control

administration of the main-stem of the Colorado River within Colorado.

The current water uses and the number of water users served: (water is primarily used for describe major crops and total acres served)

Current water users are mostly agricultural users. GVVUA delivers irrigation water to approximately 23,500 irrigated acres within their service area. There are no direct municipal uses associated with the water in the canal. However, irrigation water is delivered to urban/suburban customers.

The crops irrigated include corn, dry beans, alfalfa, grass hay, pasture, small grains, and seed crops. Fruits and vegetables raised on Grand Valley Project lands include apples, pears, peaches, wine grapes and a variety of truck crops.

Current and projected water demand:

The GVVUA does not expect significantly increased irrigation demand under their system moving forward. However, unknown climate change impacts may increase water use and/or shift the timing of irrigation demand within the system. Water demands from endangered species issues, drought, and population related pressures are concerns as well. Although not fully understood, the Colorado River compact issues may also affect water use within the GVVUA system. Future demand for irrigation water in the Upper Colorado River Basin of Colorado will likely mimic estimated water demand in the GVVUA. The pressures for future use seen within the GVVUA will be similar across the basin.

Relationships with Reclamation.

GVWUA has been working with Reclamation staff for many years as part of the continued operation of the Grand Valley Project and its facilities. Reclamation has designed and constructed several significant salinity control projects on the Government Highline Canal. The following are a few of the most recently completed and ongoing cooperative projects:

- » GVWU Top 500 Feet Canal Lining Project: Partially funded through the 2016 WaterSMART: Water and Energy Efficiency Grant Program (ongoing)
- » Grand Valley Water Users Water Management Plan: Partially funded through the 2015 Reclamation Water Conservation Field Services Program (WMP project began in fall 2015 and is anticipated to conclude in early 2017)
- » Government Highline Canal – Reach 1A Lower Section Lining Project: Partially funded through the 2015 Reclamation Salinity Program (project began in October 2015 and is anticipated to conclude in March 2018)
- » The Reach 1A Salinity Lining Replacement project (project undertaken in FY 2015 and the remainder will be done in approximately equal parts in FYs 2016 and 2017)
- » Roller Dam and Related Facilities Rehabilitation Master Plan Phase 1 (complete 2016)
- » Roller Dam and Related Facilities Rehabilitation Master Plan Phase 2 (currently underway)

Other Projects: Government Highline Canal Lining and Improvements Projects

- » The Government Highline Canal – Stage 1 (project was constructed in the early 1980's)
- » The East End Government Highline Canal – Stage 2 (project was constructed in the early 1990's)

Salinity Control Projects (approximately 130 miles of laterals branching from the Government Highline Canal have been piped over the years)

Previous Water Marketing Work

The GVWUA has been working with Reclamation's Western Colorado Area Office throughout 2015 and 2016 in order to keep local Reclamation staff informed of the GVWUA water marketing work. GVWUA understands that they must work collaboratively with Reclamation on all water-marketing strategies. Local Reclamation staff have been supportive of the work and have provided critical feedback throughout the process. GVWUA provided Reclamation with copies of all of the final reports and relied upon Reclamation's expertise and knowledge of the GVP. The reports can be found at the following links: [Operational Assessment](#), [GVPP Capacity Report](#), [CCUPP Report Lessons Learned](#). Not linked to this document are numerous memorandums and other information shared with local Reclamation staff and developed by the GVWUA and other stakeholders

The GVWUA 2017 CCUPP has also received over \$500,000 from the System Conservation Pilot Project (SCPP). The SCPP is an effort funded by the Central Arizona Project, Denver Water, the Metropolitan Water District of Southern California, Southern Nevada Water Authority and Reclamation. The projects are intended to demonstrate the viability of cooperative, voluntary projects to reduce demand for Colorado River water.

Project Description

The Beyond Conserved Consumptive Use: Creating Productive Water Market Strategies Project proposal is for Funding Group I. The GVWUA has been involved in exploring and implementing water-marketing activities since 2014. Over the past five years the GVWUA has also been consistently involved with the work of the Water Bank Working Group (WBWG) as the WBWG have explored concepts and mechanisms of drought resiliency and water marketing on the Western Slope of Colorado.

The Grand Valley Water Users Association has created and begun implementation of a Conserved Consumptive Use Pilot Project during the 2017 irrigation season. The purpose of the CCUPP is to test the mechanisms of demand management in the Upper Colorado River Basin managed and administered by a large irrigation water provider. GVWUA undertook the CCUPP for three reasons: protection of water rights, benefit from continued beneficial use of irrigation water, and establish a seat at the table for Western Slope agriculture in drought resiliency discussion. (See Attachment “B” Conserved Consumptive Use Pilot Project Report)

Demand management is potentially a critical part of drought resiliency in the Upper Colorado River Basin. However, the GVWUA cannot address demand management alone, or without collaboration from the multiple entities involved in a water marketing transaction intended to increase drought resiliency amongst all water users of the Upper Colorado River Basin.

In order to further the idea of larger scale demand management, the GVWUA requires further input from and discussion involving the U.S. Bureau of Reclamation, other irrigation providers, municipal and industrial water users, the State of Colorado, environmental and recreation groups, and Water Conservation Districts. The GVWUA proposes to expand upon their CCUPP work by expanding the conversation to include the above stakeholders in a conversation about the next steps of water marketing.



Photo 3 Western Slope Agriculture Land

The effort of creating a water market to address the larger river basin issues is immense and not something the GVWUA can take on themselves. However, it is in their best interest as an organization, and in the best interest of Western Slope agriculture to understand the larger mechanisms necessary for a large-scale water market to exist. The Beyond Project is one more step in the direction of an upper basin water market and a phase of the larger work proposes to develop a water market strategy for the Western Slope area. The Beyond Project will consist of:

- 1.) Conduct outreach on three separate fronts
- 2.) Continue scoping and planning activities in a number of areas
- 3.) Continue to develop the framework of a drought resiliency in the future

Outreach Activities

Conversations with Reclamation: The first phase of outreach will be conversations with Reclamation, beginning with the Western Colorado Area Office (WCAO) and expanding to include regional and national staff as appropriate. GVWUA has already begun the conversations with the WCAO, including 3 formal meetings at their offices and numerous discussions over the course of the previous work on this subject. The local Reclamation office is an important partner for the GVWUA. The idea is to investigate how Reclamation views water marketing as a drought resiliency measure as it relates to project, facilities and activities. As pressure builds within the Colorado River basin GVWUA and stakeholders want to understand how to best ally themselves with Reclamation through the process. They will also expand the conversation to include the regional offices of Reclamation. Reclamation’s guidance and assistance is vital, and intends to continue their water marketing efforts with Reclamation’s assistance and guidance throughout the process.

Conversations with Others: The second phase of outreach will be conversations with potential municipal and industrial water users and/or their representatives as well as the State of Colorado, Colorado River Water Conservation District and the Southwestern Water Conservation District. A market is a mechanism for an exchange of value. At times and in limited quantities, agricultural water rights must temporarily be made available and utilize a market mechanism to exchange value. The Beyond Project hopes to identify the other side of the exchange (opposite the table from agricultural water rights) and seek answers to questions such as – “Who will provide the value that is exchanged for temporary use of agricultural water?” and “How do they capture value from the transaction?” Please see the current stakeholder collaborators in Table 1 in Evaluation Criteria A of the application.

The questions that must be answered are innumerable. This Beyond Project does not intend to answer them all. The Beyond Project recognizes the position opposite of the negotiation table from agricultural water rights. GVWUA sees significant value in beginning discussions with the other parties considering a water marketing mechanism for exchange of value. GVWUA also understands that local Water Conservation Districts will need to be involved with that discussion and potentially with the transactions. Also, if necessary, the State of Colorado must understand

the mechanism so that the State can utilize the market for Colorado River Compact issues. The state will also play a significant role in the administration of water rights under any water marketing transaction.

Conversations with Agricultural Water Providers: The third portion of outreach will consist of conversations with a limited number of agricultural water providers. The GVWUA does not control enough water to make any measurable reduction in risk, or impact upon water supply, within the Upper Colorado River Basin. They must act in partnership with other agricultural water users. GVWUA must also be cognizant that the needs, priorities and non-negotiable elements of potential market mechanisms may not be the same for all irrigation providers. However, their interests align in many ways including:

- Interest in the future profitability of Western Slope agriculture
- Recognition that water supply may be a competitive advantage for agriculture
- Interest in protection of agricultural water rights
- Understanding that agriculture is better served acting together in drought resiliency measure than as individuals

GVWUA will not be talking to every irrigation district, but a representative sample from at least three sub-basins of the Colorado River.

Scoping Planning Activities

Assessment of Potential Organization: Conversations with irrigation districts will begin to explore the idea of some type of cooperative or association of irrigation water providers. Previous work leads GVWUA to believe that irrigation districts and Western Slope agriculture will benefit from cooperation amongst themselves when considering and potentially implementing a large-scale water market. The benefits to a cooperative could be:

- Increased responsiveness to crisis
- Continuity amongst marketing activities
- Avoidance of “buy and dry” activities by M&I users avoiding crisis
- Ease of market negotiations
- Avoidance of conflict amongst irrigation districts

Outreach to State Engineers office (SEO) and Division 5: The state of Colorado through the State Engineers Office (SEO) administers water within Colorado. GVWUA will discuss with their local division 5 office potential water shepherding options including those already under way for the CCUPP program. The Beyond Project will also facilitate discussions with the State engineer’s office to better understand options for water shepherding under a water marketing strategy that may be affective across administrative divisions. The task of outreach with the SEO overlaps with the other outreach efforts, but in our thinking fits well within the realm of scoping and planning activities as described in *Element 2. Scoping and Planning Activities in the FOA*. Water marketing in western Colorado will most certainly require administrative and legal mechanisms that will affect the type and place of use of marketed water. The SEO and local Colorado Division of Water Resources offices will be the lead administrator of any transfers.

Develop the framework of Drought Resiliency

Description of Implementation: Through the outreach efforts and planning activities, ideas and approaches will be developed associated with a water-marketing strategy. GVVUA will describe their proposed approach to implementing a water marketing strategy on the Western Slope of Colorado.

Description of Legal Framework: Through the outreach efforts and planning activities, GVVUA will develop ideas and strategies associated with a water market. The Beyond Project will describe parts of the legal framework necessary for irrigation districts to market water as a drought resiliency measure on the Western Slope of Colorado. Analyzing and describing the entire legal framework of an Upper Colorado River Basin water market would be an inappropriate task for the GVVUA to undertake, but the work may inform the development of that legal framework down the road.

Description of Potential Contracts: The Beyond Project will develop a concept for what type of contract might exist and what the terms of such a contract might contain.

Description of Monitoring: The Beyond Project will describe the potential avenues for water marketing monitoring. Monitoring and verification of commitments made on both sides of a water market transaction are very important and describe some of the potential methods of verification.

Report writing/editing: Prepare a draft report for review by Reclamation. The draft report will outline the groups collaborated with and the general conclusions and topics discussed during the outreach. Along with this, the Beyond Project will also report on the findings during the scoping and planning activities. The descriptions of possible implementation, legal framework, contracts and monitoring will be addressed. It is important to point out that the work is not intended to fully develop a water-market. GVVUA is investigating and conducting outreach related to a potential Upper Colorado River Basin water bank. However, the GVVUA is only one entity involved in this work and the task of creating a water-market should be reserved for a future date. As more is understood about the risks of drought and the specific purpose and mechanisms of a water-market, it will strengthen the ability to implement a water market. The actual creation of a water-market will involve Reclamation, the State of Colorado, the Upper Colorado River Commission and the water users in the basin.

Evaluation Criteria

Evaluation Criterion A— Water Marketing Benefits

» ***Explain whether the water market/activity will address a specific water supply shortfall and describe the extent of benefits to different sectors, including agricultural, municipal/industrial, tribal and environmental sectors, including:***

- *Will the water marketing strategy address a specific water supply shortfall?*

Yes. This Beyond Project attempts to address the shortfall of supply that is expected in the future resulting from – drought, growth, and the future “water supply gap.” The GVVUA along with

other Western Slope irrigators need to evaluate marketing strategies that will allow them to address the following future water supply shortfalls:

- **Drought:** The water supply shortfall associated with [drought conditions](#) in the Upper Colorado River Basin has substantial and lasting effects on water supplies and availability for years. According to Reclamation’s own reports on the current statuses of the Upper Colorado Region, the Colorado River Basin has experienced the driest 14-year period since 1963, with above-average flows in only three of the last 14-years.

The [2015 Colorado Water Plan](#) (2015 Plan) Chapter 4, describes that both extremes of “drought and dry periods” and “wet years” **can affect water supplies and availability throughout the (entire) state for years.**

- **Growth:** Current indications show that Colorado has one of the fastest growing state economies nationwide and has received the top-growth ranking. Under the high-growth scenario, the state’s population could nearly double by 2050. Such growth will increase water demands. Population projections indicate that even with the latest economic recession, the population may still reach between 8.3 and 9.2 million people by the year 2050, compared to the current population of 5.2 million. This will have a great impact on water and water availability.
- **Water Supply Gap:** In the 2015 Plan, the projected Colorado River Basin water gap ranges from 22,000 to 48,000 AFY, depending upon whether the low to high population projections were applied. This Gap is misleading as it does not account for the environmental and recreational needs and the agricultural shortages within the Basin, many of which exist as a result of the combined effects of the 400,000 to 600,000 AFY of water currently exported out of the headwater counties. Current water demands are being met through the administration and operation of augmentation reservoirs which augment water to the senior agricultural water users mainstem senior calls. A large percentage of these reservoirs are now fully allocated, putting an even greater stress on water supplies and its users.

- *What is the nature and severity of the shortfall and which sectors are affected? Please describe the shortfall.*

The areas that will be affected by the shortfall include agriculture, Municipal and Industrial (M&I), and environmental and recreation uses within Colorado’s Western Slope. The agricultural and M&I users have the ability to divert and use water resources based on the prior appropriation system and often rely on water stored in priority, many times in facilities owned and/or operated by Reclamation. Environmental and recreational users often rely on the natural flow created by the management of the water resource by consumptive water users, leaving recreational and environmental water users in an even more precarious situation during drought. Despite the fact that there are significant water resources in this Basin, the needs in many cases have outpaced the supply. The Colorado River Basin Water Supply and Demand Study that was released in December 2012, concluded that “water use in the Basin has begun to exceed supply, and the gap between demand and water available to meet that demand will widen in the coming decades. Unless current trends change a shortage between now and the year 2050 appears

likely.” GVVUA is beginning to see the certainty of a shortfall of water supply for a number of reasons:

- Agricultural: Within the [Colorado Basin Implementation Plan \(CBIP\)](#), a collaborating plan with the 2015 Colorado Water Plan, it states that a deficit in the agricultural water supply versus demand is estimated to be approximately 100,000 AF short. That estimate was based on the number of acres in production, the water needed to produce a crop, and the water typically available to meet full season demand. This shortage could potentially increase as more senior water rights that were once “conditional”, are developed in other parts of the Basin. This will continue to impact those with junior rights, as well as environmental and recreational uses, who in the past have been vulnerable in dry and even normal years. For some farmers and ranchers in the Colorado Basin with more junior rights, their ability to divert water in the latter part of the season may be curtailed more often and for extended times.

- Municipal and Industrial: Municipal and Industrial water demand forecast focused on a growing population. Within the 2015 Plan municipal water demands were 74,077 AFY in 2015 and the estimated demand for 2050 is 147,305 AFY. This is a gap of 73,228 AFY.

In 2008 the estimated direct water demands for energy development within the Basin were 2,300 AFY and proposed to be between 200 AFY and 10,700 AFY in 2050 due to the variability of the oil and gas industry. Snowmaking water demand in 2008 was estimated at 3,180 AFY with forecast growth to 4,740 AFY by 2050.

This may not sound like much of a gap over a 40-or-so-year time frame, but many of the M&I users lack redundancy of supplies. Even though most of them have a legal supply from augmentation reservoirs to meet in-basin calls, they do not have physical supply from reservoirs above intakes that can protect them in drought periods. According to the CBIP, many M&I users have based their planning for water supplies on the premise of a “firm dry year yield.” Firm dry year yields were based upon historical statistical modeling. The CIB says that “relying upon historical hydrology will not guide them (M&I) in the future based upon recent extended droughts and future climate change.”

- Environmental and Recreation: As stated previously, the environmental and recreation (non-consumptive uses) Gap has not been quantified. But the shortages within the Basin, many of which exist as a result of the combined effects of the 400,000 to 600,000 AFY of water currently exported out of the headwater counties, will have significant impacts that need to be accounted for.

Although the shortfall may not be specific to agricultural water rights, a shortfall that affects the municipal and industrial rights of neighbors will place incredible pressure on agricultural users. The need for firm supplies by M&I users could, during extreme drought, create the need for reactionary policies and remove the control of the water from agricultural interests permanently.

- *How and to what extent will the water market/water marketing activities, once implemented, address the shortfall? Please describe the expected benefits and provide support for your response.*

The proposed water market strategies undertaken by the Beyond Project will have significant and far-reaching benefits to water supply sustainability in western Colorado, Colorado as a whole, and potentially the entire Upper Colorado River Basin. The water marketing activities the Beyond Project is hoping to explore will, once implemented, benefit the water users in western Colorado with a level of certainty in the face of significant drought. Agricultural water users will benefit from increased income to farm operations and confidence by understanding that the pressure placed upon their water supply, for at least the next generation, has been mitigated to a known extent. The GVVUA CCUPP has demonstrated thus far that agricultural water users are open to the idea of, at times, making agricultural water available for other users if the use is voluntary, compensated, and limited in term. The GVVUA has emphasized that water-marketing can be utilized as a tool to increase agricultural productivity and potentially add a competitive advantage to farming on the Western Slope of Colorado.

The agricultural sector will benefit from increased farm profitability, the Municipal and Industrial sectors will benefit from lowered risk during drought. The environmental and recreation sector will benefit from augmented stream flows.

- *Will the water market/water marketing activities benefit multiple and/or types of water? If so, to what extent and which sectors and water uses will benefit? Provide support for your response.*

Multiple sectors will benefit from the water marketing strategy, as water that may have been consumptively used during drought will be utilized for basin wide security and should make its way downstream to storage in Colorado River Storage Project facilities. The use of the water marketed through a water market on the Western Slope would most likely not only be available to agricultural and M&I users. Environmental and recreational uses could also be a part of a transaction as they may see benefit in the secondary effects or could potentially be the primary user at times.

» ***Explain how and to what extent the proposed water market or water marketing activities will improve water supply sustainability:***

- *Increasing resiliency to drought*

Drought resiliency will be increased through the Beyond Project in a way that has, as of yet, been unavailable for numerous reasons and are in some respects creating a “new” supply of water to address drought. After the Beyond Project, GVVUA and stakeholders will be one step closer to a mechanism to move water temporarily from one use to another. GVVUA recognizes the increasing strain on Colorado River resources and wants to be involved in discussions around how to address and protect water rights. GVVUA wants to help create solutions that work for the Western Slope and GVVUA over the long term.

- *Providing instream flows for ecological purposes, species, recreation or water quality objectives*

In-stream flows will be augmented during drought because water that would have previously been consumptively used will travel downstream to reservoirs. Specifically, one outcome of a fully developed water market may include increased inflows to Lake Powell. There is potential for this to be extremely beneficial to water users in western Colorado in supporting the

endangered fish associated with the 15-mile reach through the Grand Valley of Colorado, as well as other environmental concerns.

- *Sustaining agricultural communities while still reducing diversions*

The main goal of the Beyond Project is to sustain agricultural communities. Through this process, GVWUA is hoping to explore: what role agriculture is capable of playing in inevitable Upper Basin drought; how to utilize agriculture's position within the Upper Colorado River Basin to strengthen agriculture; and how to utilize water as a competitive advantage for Western Slope agriculture. These areas of exploration are needed to understand the larger picture of the water market strategy and how it can work on a more wide-ranging scale for the Western Slope agriculture, M&I, and the environmental and recreation users.

- *Reducing the likelihood of conflicts over water*

One important lesson that was learned through the CCUPP project is the conflict over water needs to be addressed with good communication, education of why this is necessary, building trust in the process, and having leadership as an advocate for going through the process. It is anticipated that a water market developed on a larger scale using the CCUPP vision would decrease the likelihood that agricultural water rights and the land to which agricultural rights are attached would be purchased in an attempt to firm up needed supply for other uses during drought. This will have the effect of deferring conflict by decreasing the need for water purchases that disrupt communities that rely on agricultural water supplies.

- *Demonstrating a water marketing approach that is innovative and which may be applied by others.*

This water marketing strategy is incredibly innovative for the Upper Colorado River Basin. An incredible amount of attention has been generated around water marketing. GVWUA intends to do the hard "on the ground" work associated with creating a water market that has not existed.

» ***Explain the extent to which the water market/activity will be ready to proceed upon completion of the strategy, addressing each of the following:***

- *Describe your plans and timeline for implementing the strategy upon its completion.*

Upon completion of the Beyond Project, GVWUA and the stakeholders hope to be one step closer to the development of a water-market in western Colorado. GVWUA does not intend to fully develop a water market, but to expand upon their knowledge gained during their previous work and to better understand what mechanisms will be necessary to develop, so that a water market can exist. The timeline for development of the water market is unknown. However, the market cannot be appropriately developed without the important outreach work associated with the Beyond Project.

- *Are there complex issues, including issues of law or policy, that would need to be resolved before the strategy could be implemented?*

There are complex legal issues that must be resolved. In the Beyond Project, GVWUA will conduct outreach with state agencies and gain a better understanding of what those legal issues are. They will begin the conversation about how to address the legal issues. Legal issues associated with shepherding water involved in a transaction must be addressed by the state of Colorado. After the Beyond Project, they hope to be able to deliver valuable information to those decision makers who must construct the legal framework for a water market.

- Explain whether previous planning, outreach and/or water marketing activities have been completed, including work on any of the required Project elements (1), (2), and (3), described above.

Significant prior work has been completed, including the significant effort of determining the feasibility of the CCUPP and the administration of that project. The WBWG and The Nature Conservancy have also completed numerous studies and memoranda addressing the big picture issues of a Western Slope water market.

Evaluation Criterion B—Level of Stakeholder Support and Involvement

» **Identify stakeholders in the planning area who have committed to be involved in the planning process:**

- Describe their commitment, e.g., will they contribute funding or in-kind services or otherwise engage in the planning process

Table 1 Stakeholder Involvement

Stakeholder	Interests represented	Supportive of the Beyond Project	Committed to participate
Aurora Water	M&I	✓	✓
Bureau of Reclamation	Multiple	✓	✓
Colorado Cattlemen’s Association	Irrigation	✓	✓
Colorado River District	Multiple	✓	✓
Colorado Water Conservation Board	Multiple	✓	✓
Denver Water	M&I	✓	✓
Grand Valley Water Users Association	Irrigation	✓	✓
Orchard Mesa Irrigation District	Irrigation	✓	✓
Palisade Irrigation District	Irrigation	✓	✓
The Nature Conservancy	Environmental	✓	✓
The Southwestern Water Conservation District	Multiple	✓	✓
Tri-State Generation and Transmission association, Inc.	M&I	✓	✓
Trout Unlimited	Environmental	✓	✓
Uncompahgre Valley Water Users Association	Irrigation	✓	✓
Upper Colorado River Commission	Multiple	✓	✓
Ute Water Conservancy District	Irrigator	✓	✓
Western Resource Advocates	Environmental	✓	✓

» **Describe stakeholders in the planning area who have expressed their support for the planning process, whether or not they have committed to participate.**

GVWUA has broad support amongst the stakeholders. They also anticipate contacting multiple irrigation districts throughout the process whom they have not previously contacted. The Beyond

Project begins the process of outreach and allows GVWUA to properly explain what they are doing with time and budget sufficient to have the difficult conversations associated with the topic of water marketing. Some stakeholders may not support water marketing because they do not have the same understanding of the risks and mechanisms of water marketing.

» ***Is there opposition to the proposed strategy? If so, describe the opposition and explain how it will be addressed. Opposition will not necessarily result in fewer points.***

Any use of agricultural water rights for other purposes is controversial. This fact highlights the importance of the Beyond Project. It also highlights the unique opportunity this project presents. The GVWUA has already undertaken the significant and difficult task of developing a pilot project. GVWUA can utilize their experience to demonstrate to others that they are involved in water marketing as a drought resiliency measure and can see the potential benefits of early adoption and understanding the risks. There is an advocate in the agricultural community that can take this idea forward, and the Beyond Project will capitalize on that leadership. GVWUA continues to seek out and include critics of and those with concerns about Water Banking and water marketing strategy planning.

» ***Do any separate planning efforts express support for the proposed water market/ transaction? Or, will the proposed water marketing strategy complement other ongoing or recent planning efforts within the area?***

WaterSMART Basin Study

Colorado Basin Implementation Plan – This plan was developed in collaboration with the 2015 Colorado’s Water Plan. It is the Vision for the Basin and how they will fit into the 2015 Plan.

Water management plan

Grand Valley Water Users Association Water Management and Conservation Plan – The plan was developed in 2015. This plan addresses the need for further investigation of water marketing and water banking.

Water conservation plan

Colorado Drought and Water Supply Update 2007 – Developed by the Colorado Water Conservation Board, this plan addresses conservation methods and focuses on municipal and urban water providers.

Drought contingency plan

2013 Updated State Drought Mitigation & Response Plan - The updated plan provides a blueprint for how Colorado will monitor, mitigate and respond to drought.

State water plans

Colorado’s Water Plan 2015 - Colorado’s Water Plan is the state’s framework for solutions to their water challenges. It guides future decision-making and sets forth the measurable objectives, goals, and critical actions needed to ensure the state’s most valuable resource is protected and available for generations to come. The Planning process of the 2015 Plan brought together 175 participants from across the state to identify water user’s voluntary alternatives transfer methods by 2030.

Other planning efforts

Upper Colorado River Commission Demand Management Planning; in progress.

WBWG Planning: Many studies and pilot projects have been developed over the past few years that support this proposed Beyond Project. In 2009, the WBWG was formed to assess the feasibility of a water bank as a mechanism to address the risks associated with the Colorado River Compact. Since then they have developed or participated in six different studies. These include:

- Colorado Water Bank Feasibility Study, Phase I, June 2012
- Colorado Water Bank Feasibility Study, Phase II, March 2013
- Water Bank Phase IIB: Qualitative Assessment of Water Banking, October 2015
- Agronomic Responses of Grass and Alfalfa Hayfields to No and Partial Season Irrigation, Update March 2016
- Water Bank Phase IIC: Agronomic Impacts and Measurements of Water Savings, February 2017
- System Conservation Pilot Program projects

GVWUA in conjunction with WBWG are focused on building off this strong foundation of work to take it on a larger scale, a larger conversation, and include partners that have not been included in the past.

» *Please describe any relevant planning efforts, including who is undertaking these efforts and whether they support or are complemented by the proposed water marketing strategy.*

No similar projects currently exist. The recent experiences of the GVWUA and the evolution of this proposed Beyond Project may assist the initiation of the water marketing strategy planning currently under consideration in the Gunnison and Yampa Basins.

» *Describe what efforts that you will undertake to ensure participation by a diverse array of stakeholders in developing the water marketing strategy. If specific stakeholders have not yet been identified, or if some sectors are not yet represented:*

GVWUA has broad support amongst the stakeholders. They also anticipate contacting multiple irrigation districts throughout the process whom they have not previously contacted. The Beyond Project begins the process of outreach and allows GVWUA to properly explain what they are doing with time and budget sufficient to have the difficult conversations associated with the topic of water marketing. Some stakeholders may not support water marketing because they do not have the same understanding of the risks and mechanisms of water marketing. However, GVWUA is committed to include all stake holders who would like to participate.

Evaluation Criterion C—Ability to Meet Program Requirements

» *Describe how the three elements of a water marketing strategy will be addressed within the required timeframe. Please include an estimated project schedule that shows the stages and duration of the proposed work including major tasks, milestones, and dates. If prior planning work will be relied on to meet any of the required elements of a water marketing strategy, please explain this and briefly describe that work that will be relied on.*

This Beyond Project is weighted heavily towards *Element 1. Outreach and Partnership Building*. This is strategic and necessary for a number of reasons. The development of an Upper Colorado River Basin water market is in its infancy. The GVWUA and partners have been working diligently for a number of years researching and building an understanding of the risks of drought and the need for a water market to act as a drought resiliency measure in western Colorado. However, the scale of such a program is daunting, not just in terms of acre-feet of water, but in the myriad, legal, economic, infrastructural, agronomic, environmental and social impacts that a water market will entail. Without the communication made possible through this Beyond Project and many other efforts, agricultural water rights are at risk of being thrust into a water market without sufficient scoping, planning and development. For this reason, the GVWUA, as an irrigation water provider, has chosen to move forward with informing and obtaining information from potential water market participants and stakeholders.

GVWUA will communicate with numerous parties to better understand how irrigation water may best be utilized as a drought resiliency tool without causing irrevocable damage to agriculture. The GVWUA will also hold multiple tours of their facilities in order to demonstrate how their CCUPP project is working within their service area. Communication and understanding amongst multiple groups is incredibly important at this stage of an Upper Colorado River water market and that is why this Beyond Project is heavily weighted towards outreach and partnership building.

This Beyond project also includes significant effort addressing *Element 2. Scoping and Planning Activities*. Certain financial and economic analyses have been undertaken by WestWater Research, LLC (Under contract with our project partner The Nature Conservancy) that begin to look at the on-farm and program costs of a western Colorado water market. The Beyond Project will also begin to explore the idea of a cooperative of irrigators that can administratively react with sufficient water rights to increase drought resiliency through a water market. Drought is unpredictable and the scale varies. A cooperative of irrigators may be one avenue to decrease the reaction time of a drought resiliency response by agricultural water as well as serve as a place to equitably share the burden. GVWUA conversations with the SEO will allow them to evaluate certain legal requirements and better understand issues associated with type and place of use of water rights involved in a water market. GVWUA has already completed a number of engineering studies surrounding water marketing. ([See previous linked reports](#))

The Beyond Project also addresses *Element 3. Development of a Water Marketing Strategy*. Much of this work will be completed with information gained through outreach efforts. GVWUA will describe in the report the potential institutional needs of a water market and some options for administrative structure. They will also describe potential legal frameworks. However, as described earlier in this application the legal framework is a task that is outside of the scope of our work because it is most likely not appropriate for the Beyond Project to make too many conclusions surrounding the legal framework of a water market of this scale.

GVWUA has already developed contracts that are utilized by the GVWUA and the farmers cooperating in our 2017 CCUPP project. GVWUA will include drafts of these contracts and those that will have been developed for the 2018 CCUPP. They will also describe potential contract framework amongst other irrigators if appropriate. The Beyond Project will make

recommendations and descriptions of the monitoring activities utilized during the CCUPP and any necessary changes of significant differences that would be expected within a larger scale water market. If further water marketing support tools become apparent to GVVUA during the communications, conversations, and outreach, they will describe these necessary tools. See estimated project schedule above.

- » *Describe the availability and quality of existing data and models applicable to the proposed water marketing strategy.*

Significant modeling and data exist. The modeling and data available is the information utilized to build the confidence that an Upper Colorado River Basin water market is a necessary drought resiliency tool. Currently the Colorado River Water Conservation District is involved in “Phase II” of their Colorado River basin risk study. It is anticipated that this modeling will inform the conversations with stakeholders surrounding the reality and the scale necessary within Colorado. This risk study will be available to GVVUA during the project timeline.

- » *Identify staff with appropriate technical expertise and describe their qualifications. Describe any plans to request additional technical assistance from Reclamation, or by contract.*

Mark Harris, General Manager – GVVUA has been working on water marketing since Mark began working as General Manager of GVVUA. Mark’s understanding of Western Slope agriculture is second to none. Mark has been an advocate and a leader for Western Slope agriculture throughout his career. Mark will be co-managing this project.

Luke D. Gingerich, PE, J-U-B Engineers, Inc. – Luke has been working with the GVVUA since 2015 evaluating their system and creating the CCUPP. Luke has worked in western Colorado as a water resource engineer since 2009. Luke will be co-managing this project. Luke will be working under contract with the GVVUA.

Mark A. Hermundstad, Legal Counsel – Mark has over 36 years of legal experience much of which has been working in water law. Mark is highly regarded by his colleagues and widely respected in the water community. He has served as legal counsel to the GVVUA and other Western Slope water users for many years. Mark’s ability to participate in this project brings significant expertise and credibility to the outreach efforts. Mark will be working under contract with the GVVUA.

Evaluation Criterion D—Nexus to Reclamation

- » *Is there a Reclamation project, facility, or activity within the planning area?*

The planning area includes select irrigation areas on the Colorado main stem, Gunnison, Yampa, and San Juan/Dolores River Basins. There are multiple Reclamation facilities within these areas of the Western Slope of Colorado including: The Uncompahgre Valley Project; Dolores, and Animas-LaPlata projects; The Grand Valley Project which involves the GVVUA, Palisade, Mesa County, and Orchard Mesa Irrigation Districts.

- » *Is the planning area in the same basin as a Reclamation project, facility, or activity?*

With the exception of the Yampa area, Reclamation projects exist in all other portions of the planning area.

» ***In what way will the proposed Project benefit a basin where a Reclamation project, facility, or activity is located?***

The Colorado River Basin, home to several Reclamation projects, will continue to experience increasing pressure on water supplies from environmental changes and growing population pressure. The “Beyond Conserved Consumptive Use” Project has the potential to address these systemic problems in a proactive and collaborative way. Such an approach can benefit the Basin in several ways:

- Proactive: Being proactive can help avoid crisis and at the same time continue to avoid unnecessary water conflicts under increasingly difficult “normal” circumstances
- Better Outcomes: Should crisis management be required, the progress made toward developing productive water market strategies will come from the development of the Beyond Project and will lead to better outcomes for all. Some idea of what and how such mitigation might take place will help protect against the draconian results of poor plans created in the midst of a major crisis
- Broad Perspective: The outreach, collaborative planning, and cooperative strategy discussions that the Beyond Project proposes will involve multiple stakeholders, advocates and critics of such planning activities. Only in such a way can a broad array of perspectives be identified, acknowledged, and included in the conversation resulting in good water marketing and stewardship strategies with the least amount of unintended negative consequences
- Ongoing Support: Continue and support several of the ongoing attempts to deal with drought, climate change, and population pressure noted in the paragraph below.

» ***Will the Project help Reclamation meet trust responsibilities to any tribe(s)?***

The Southern Ute Nation is on the list of contacts as they have been involved with the Water Bank Work Group in the past.

» ***Does the proposed Project support implementation of an Interior initiative? Or, does the Project support a complementary initiative of another Interior agency?***

As is mentioned in other areas of the application, the GVWUA, its associates and partners, including regional Reclamation and the Western Colorado Area Office, have successfully continued to articulate the water marketing and water banking projects and investigations with the stated objectives and implementation plans of State, Regional, and Federal agencies and organizations.

The GVWUA’s 2017 Conserved Consumptive Use Pilot Project is a direct beneficiary of the System Conservation Pilot Program (SCPP). This proposed extension of that operational and agronomic trial based on rotational fallow is the required next step in understanding how such activities that fit into a Colorado Basin wide water supply risk strategy can be developed. The results of this Beyond Project will advance the agenda of the SCPP by

continuing productive planning based upon current gains and explore new areas not currently under investigation.

These proposed activities serve the purposes of the Upper Colorado River Commission Drought Planning process and the related activities of the Upper Basin.

The GVWUA has been involved with Natural Resources Investment Center pursuing new and potentially beneficial approaches to finding solutions to infrastructure and water stewardship that serve not only the needs of the Association, but generally those of Reclamation and the water community. Successful address of these complicated and difficult problems require perspectives that include infrastructure concerns, the law of the River, political and legal realities, and especially those of water users, in all their varieties.

The Grand Valley Project and the GVWUA have been deeply involved in the Upper Colorado River Endangered Fish Recovery Program, and in cooperation with Reclamation, have been able to add an excess of 40,000AF annually to the flows in the 15 Mile Reach, through forgone diversions caused by system improvements. Innovative and well-developed water marketing strategies can support and expand such opportunities.

This proposed Beyond Project supports all Reclamation efforts to develop and implement flexible and resilient climate and population-induced pressure on water supplies in the Colorado River Basin. As stated earlier in the application, the GVWUA is currently participating in a project that has received funding through the Colorado River System Conservation Program. The Beyond Project is a direct furthering of that initiative and is a natural progression of the conservation program. GVWUA expects to take their efforts one step further.

Environmental and Cultural Resources Compliance

1. *Will the proposed impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.*

This is not applicable to the planning project. No environmental impact will occur.

2. *Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the area? If so, would they be affected by any activities associated with the proposed Project?*

This is not applicable to the planning project. No environmental impact will occur.

3. *Are there wetlands or other surface waters inside the Project boundaries that potentially fall under Clean Water Act (CWA) jurisdiction as “Waters of the United States?” If so, please describe and estimate any impacts the proposed project may have.*

This is not applicable to the planning project. No environmental impact will occur.

4. *When was the water delivery system constructed?*

This is not applicable to the planning project. No environmental impact will occur.

5. *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were*

constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

This is not applicable to the planning project. No environmental impact will occur.

6. *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*

This is not applicable to the planning project. No environmental impact will occur.

7. *Are there any known archeological sites in the proposed area?*

This is not applicable to the planning project. No environmental impact will occur.

8. *Will the proposed Project have a disproportionately high and adverse effect on low income or minority populations?*

No.

9. *Will the proposed Project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*

No.

10. *Will the proposed Project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

No.

Required Permits or Approvals

Applicants must state in the application whether any permits or approvals are required for the Project and describe the approach for obtaining such permits or approvals.

No Permits or Approvals will be required.

Project Budget

Funding Plan and Letters of Commitment

Describe how the non-Federal share of Project costs will be obtained. Reclamation will use this information in making a determination of financial capability.

- » ***Project funding provided by a source other than the applicant shall be supported with letters of commitment from these additional sources. Letters of commitment shall identify the following elements:***

- *The amount of funding commitment*

Cash: \$56,900

\$37,500 TNC, \$5,000 WBWG, and \$14,400 GVVUA (See Attachment C Cash Match Letters)

In-kind: \$81,000

\$51,000 GVVUA and \$30,000 Partners

Many stakeholder partners have committed in-kind services of over \$64,000. However, GVVUA is only showing \$30,000 in in-kind from these stakeholders. The amounts committed can be viewed within their Letters of Support. The following is a list of the stakeholders and their in-kind commitments.:

- Aurora Water \$1,500
 - Colorado Cattlemen’s Assoc.\$5,000
 - Colorado River District \$10,000
 - Colorado Water River Conservation Board \$13,500
 - Orchard Mesa Irrigation District \$10,000
 - Palisade Irrigation District \$1,000
 - The Nature Conservancy \$10,000
 - Tri-State Generation & Transmission Assoc. \$6,000
 - Trout Unlimited \$1,500
 - Upper Colorado River Commission \$510
 - Western Resource Advocates \$5,000
- *The date the funds will be available to the applicant*

The funds are available now.

- *Any time constraints on the availability of funds*

No.

- *Any other contingencies associated with the funding commitment*

None that GVVUA is aware of.

How you will make your contribution to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

» ***Describe any in-kind costs incurred before the anticipated Project start date that you seek to include as costs. For each cost, identify:***

- *The Project expenditure and amount*

GVVUA \$10,000 in pre-award costs

- \$5,000 Grant preparation
- \$1,000 Meeting attendance with WBWG at the Office of Aurora Water, in Aurora, Colorado
- \$4,000 Tours of GVVUA Facilities (four tours) during the 2017 irrigation season – this includes meals, travel time and expenses, tour preparation, and advertising.

- *Whether the expenditure is or will be in the form of in-kind services or donations*

The expenditure for the meeting attendance and the four tours during the 2017 irrigation season will be considered as an in-kind cost. GVWUA grant preparation will be a cash expense.

- *The date of cost incurrence*
 - Grant preparation April 18, 2017
 - Meeting attendance April 3, 2017 with WBWG Office of Rural Water
 - Tours (four tours) will take place in May, June, August, and September 2017
- *How the expenditure benefits the Project?*

The meeting attendance and the tours are all part of the public outreach task and will build collaboration and better understanding. They will also open new discussion opportunities about the current pilot program that is underway.

- *Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment.*

See Letter of support for amounts and commitments of cash and in-kind.

Cash: \$56,900

\$37,500 TNC, \$5,000 WBWC, and \$14,400

In-kind: \$81,000

\$51,000 GVWUA and \$30,000 Partners

Many stakeholder partners have committed in-kind services of over \$64,000. However, GVWUA is only showing \$30,000 in in-kind from these stakeholders. The amounts committed can be viewed within their Letters of Support. The following is a list of the stakeholders and their in-kind commitments.:

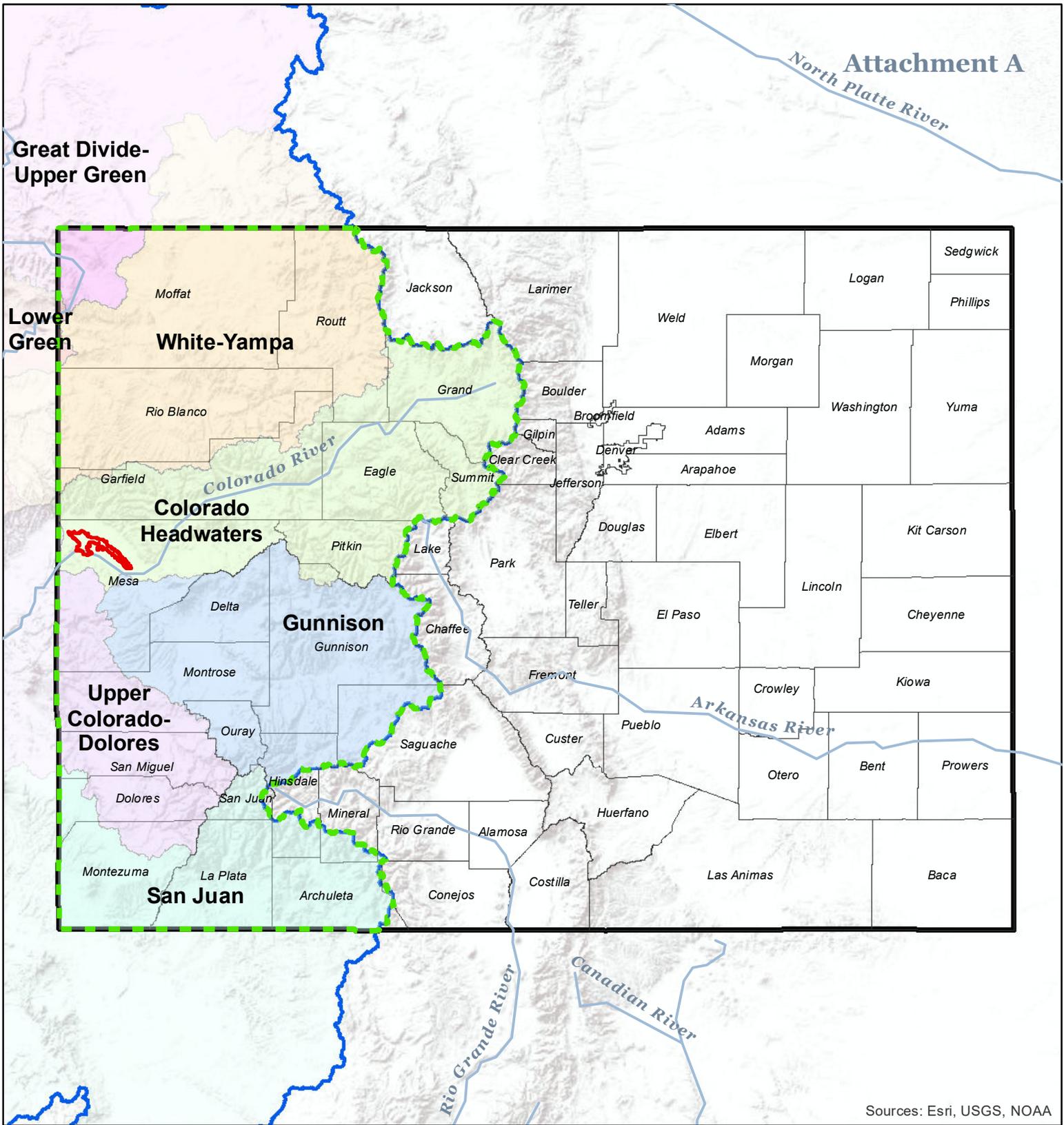
- Aurora Water \$1,500
 - Colorado Cattlemen’s Assoc.\$5,000
 - Colorado River District \$10,000
 - Colorado Water River Conservation Board \$13,500
 - Orchard Mesa Irrigation District \$10,000
 - Palisade Irrigation District \$1,000
 - The Nature Conservancy \$10,000
 - Tri-State Generation & Transmission Assoc. \$6,000
 - Trout Unlimited \$1,500
 - Upper Colorado River Commission \$510
 - Western Resource Advocates \$5,000
- *Describe any funding requested or received from other Federal partners. Note: other sources of Federal funding may not be counted towards the cost share unless otherwise allowed by statute.*

N/A
 - *Describe any pending funding requests that have not yet been approved, and explain how the Project will be affected if such funding is denied.*

N/A

FUNDING SOURCES	FUNDING AMOUNT
Non-Federal Entities	
GVWUA and Partners In-Kind Services	\$81,000
GVWUA Cash and Pre-award	\$14,400
Water Bank Working Group	\$5,000
The Nature Conservancy Cash	\$37,500
Non-Federal Subtotal	\$137,900
Other Federal Entities	\$0.00
Other Federal Subtotal	\$0.00
Requested Reclamation Funding	\$128,000.00
Total Project Funding	\$265,900.00

FUNDING SOURCES	% of Total Project Cost	Total Cost by Source
Recipient Funding	52%	\$137,900.00
Reclamation Funding	48%	\$128,000.00
Other Federal Funding	0%	\$0.00
Totals	100%	\$265,900.00



Sources: Esri, USGS, NOAA

Planning Area

Legend

- Grand Valley Water Users Association Service Area
- Western Slope of Colorado (Planning Area)
- Sub-Basins (color varies by sub-basin)
- Colorado Counties
- State of Colorado
- Colorado River Basin Boundary

