

# Grand Valley Water Users Association

## Conserved Consumptive Use Pilot Project (CCUPP) Development: Process, Procedure and Lessons Learned

*Final Draft*

### Water Banking – Next Steps Part II



March 2017

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## Glossary

<b>Term</b>	<b>Definition</b>
GVWUA	Grand Valley Water Users Association
CCUPP	Conserved Consumptive Use Pilot Project
OMID	Orchard Mesa Irrigation District
BOD	Board of Directors
ESA	Endangered Species Act
CU	Consumptive Use
CCU	Conserved Consumptive Use
NRCS	USDA – Natural Resources Conservation Service
FSA	USDA – Farm Service Agency
WBWG	Water Bank Working Group
CDWR	Colorado Division of Water Resources

## 1.0 INTRODUCTION

This brief report is intended as a document for project partners, proponents and other interested entities to use in developing further conversations, projects and policies regarding a compact water bank on the Western Slope. The information contained is informed mostly by the experiences of J-U-B Engineers and the Grand Valley Water Users Association (GVWUA or Association) in developing the 2017 Conserved Consumptive Use Pilot Project (CCUPP). 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.

This document does not contain information pertaining to the “price” of western slope agricultural water. At no point were the actions undertaken during this project intended to seek or set a price for Western Slope irrigation water under lease/fallow programs at any point beyond the 2017 CCUPP. Compensation for participation in the CCUPP is of course one element of the project. However, the value exchanged is money for participation not money for water.

## 2.0 PURPOSE

It should be noted that the idea of a “Water Bank” created and administered by the GVWUA was undertaken for three reasons: protection, benefit and a seat at the table for Western Slope agriculture.

**Protection** of the water rights associated with the GVWUA and the Grand Valley Project and, to an extent, the full suite of water rights associated with the Cameo Call and Western Slope agricultural as a whole. The perception of a need for protection stems from an understanding of the intertwined and complicated issues present in the Colorado River Basin including increased demand, uncertain climate, the Endangered Species Act (ESA), potential legislative changes, compact issues, etc.

**Benefit** from the continued beneficial use of western slope agricultural water rights. If, at times and in limited amounts, irrigation water appurtenant to the land within the GVWUA service area could or should be utilized for other purposes as a means of protection, there must be short and long-term financial motivations for farmers and the greater Association.

In developing the CCUPP, the Board of Directors (BOD) and GVWUA management tried to ensure that the Association would be compensated for its time in administering the program and for lost revenue, and that additional benefits would accrue to the Association and all of its shareholders.

The continued profitability of Western Slope agriculture is also a significant motivator for this work. The next generation of Western Slope agricultural producers faces a number of challenges including, but not limited to water supply. If Western Slope agriculture can capitalize on its unique position amongst the water users of the Upper Colorado River basin

to reduce economic risk and increase long-term agricultural profitability through demand management, it is at minimum a useful exercise to explore the idea further.

**A seat at the table for Western Slope agriculture** in conversations and potential negotiations related to demand management as a drought resiliency measure. If demand management is going to be necessary to avoid or delay the consequences of low reservoir storage levels in the Upper Colorado River Basin then Western Slope irrigators must be a part of the conversations throughout the process.

### 3.0 PROCESS AND PROCEDURE

A significant amount of work had been undertaken by the Water Bank Working Group (WBWG), project partners, contractors, Colorado State University, and others prior to the development of the 2017 CCUPP. This previous work focused generally on the larger river basin and the scale and location of agricultural demand management necessary to impact the Colorado River Basin within the borders of Colorado. Our goal was to develop a water-banking pilot project controlled and administered by the GVVUA.

The process began by hiring a contractor (Luke Gingerich of J-U-B Engineers, Inc.) in 2015 to complete an operational assessment of the infrastructure, operations, management and administration of the GVVUA. The purpose of the operational assessment was to determine the feasibility of a demand management program within the service area of the GVVUA. Limited follow up work was required and completed by the contractor after the operational assessment to further understand certain infrastructure capacity issues identified.

The project development process continued into the spring of 2016 by hiring the contractor to complete a large portion of the time-consuming tasks associated with creating the pilot project. The myriad unknown tasks and extensive internal (to the GVVUA) outreach that was required during this project put the burden of program creation far beyond the capabilities of the limited staff of the Association.

It was also essential that the GVVUA legal counsel be an integral part of project development. There has been significant legal work associated with project development and there is on-going legal due diligence associated with the CCUPP.

#### 3.1 Agricultural Water User Interviews

At the beginning of this project, the GVVUA management, with permission of the BOD, made the decision to move forward with investigating and potentially creating a pilot project. However, individual board members remained skeptical and agricultural water users served by the GVVUA were either only peripherally aware or completely unaware of the idea. It was imperative that the message be taken to a slightly wider audience of Association membership. It was also important to build confidence among individual board members that moving forward with a pilot project was in the best interests of the Association. The concept of water banking was largely viewed negatively by members of the BOD and this negative perception

extended well into the agricultural community as a whole.

The decision was made to take the message to a limited group of agricultural producers. Included in the group were individuals who met one or more of the following criteria:

- Current or past BOD membership or other Association or “water community” involvement
- Large landowner farm operator
- Large tenant farm operator
- Small landowner operator
- Home owner’s association representative
- Specialty crop farm operator
- Outspoken opposition to the idea of water banking

Eleven initial participants were chosen and contacted. The participants were hand selected by the contractor and GVWUA management for various reasons including those listed above. Participants were selected with whom the process would not be starting at “level zero”. Because of the complicated nature of the water rights discussion, the limited history of water banking discussions, and short time frame in which to work, it was important that participants have a baseline understanding of the water rights, operations, and history of the GVWUA.

Selecting the participants in the initial interview process was intentionally opaque. Conversations with the selected group were held one-on-one in a traditional “hood of the pickup” style. This allowed the conversation to extend into the wider association under a moderately controlled format. Our conversations were sensitive, but not confidential in nature.

Conversations focused loosely on the following components and roughly in the order listed:

- Big picture thinking and answering the “why” (drought, CO River compact, protection and use of the water right, Reclamation, etc.)
- Agronomic possibilities, farm profitability, program extent (term, impact), etc.
- Externalities of demand management (community issues, association issues, scale, term, etc.)
- Price discovery, what would it take to participate?

The interview process was time consuming and took a considerable effort, but was essential to directing the water banking conversation towards a condition that would be palatable to those most directly affected.

### **3.1.1 Big Picture Thinking**

During the agricultural water user interviews the first thing our conversations focused on

was how the GVVUA is connected with the larger issues associated with water use in the Colorado River Basin. It was important to begin the conversation around water banking by addressing the question of “why are we doing this?” Demand management simply for the sake of profit and/or temporarily transferring water for municipal use is an unpalatable idea amongst the agricultural community. Significant effort was made to educate the group to the risks of sitting idly by as water use issues in the Upper Colorado River Basin continue to develop, and solutions are investigated by others. The solutions to problems created by others may greatly affect the Association, and it is in our best interests to have a well thought out position and effective seat at the table during negotiations.

The second item our conversations focused on was the GVVUA water rights and the protection and continued beneficial use of the irrigation water appurtenant to the land within the service area of the GVVUA. Any demand management program that jeopardizes or gives the appearance of potential harm to the value of the water rights is dead on arrival. It was important that our protections were redundant, easily understood, not based on untested legal theory and acknowledged by the Colorado Division of Water Resources (CDWR) division office.

### **3.1.2 Agronomic Possibilities, Farm Profitability**

The next step in the process was determining what type of demand management would be possible within the GVVUA system and how fallowing or other forms of demand management could be of potential benefit to agriculture. Our goal was to create a project that could fit easily within the existing major crop rotations and potentially provide some opportunity for agricultural diversification.

### **3.1.3 Externalities of Demand Management**

It was interesting to discover during the interviews that the externalities of demand management weighed heavily upon the majority of the interviewees. Interviewees were immediately conscious of the potential for negative impacts upon local economies, neighbors, valley-wide aesthetics, etc. For a pilot project there are a number of issues and externalities that the GVVUA BOD and CCUPP Cooperators are unable to address. However, conversations most certainly continue in the community surrounding the impact any long-term demand management may have.

### **3.1.4 Price Discovery: Quantifying the Short-Term Value of an Unmarketable Commodity in an Imagined Market.**

We were very careful in the initial stages of the interviews to direct the conversation towards the larger issues of water banking and away from the potential compensation for participating in the program. This was strategic for a number of reasons including:

- We did not yet have any money for implementation; conversations were only theoretical.

- The understanding that payment for participation should not be a driving factor when discussing the potential externalities of a water-banking program.
- There exists a school of thought within the community that no amount of money is sufficient to justify utilizing agricultural water for other purposes. The right to beneficial use of water for irrigation purposes is a property right. The idea of demand management is potentially a violation of that property right.
- We were unwilling to enter into conversations that would put the Association in a position in which two or more Association members were bidding against each other for the opportunity to participate. The decision to participate must be a yes/no decision with a known and equal payment for participating.

It became apparent during project development that we were not only developing a pilot project, but we also needed to develop a budget for the pilot project. We therefore began to lead the conversations into the realm of “how much money?” During the conversations it was apparent that agricultural producers and the BOD were uninterested in indexing the price of commodity crops to the payment for participation in the program. A few of the myriad reasons for this are listed below:

- The Upper Colorado River basin is limited geographically, transactions are difficult, water is expensive to move, and as a tradable commodity, water is potentially very limited.
- Commodity crops are widely grown, traded globally, and the price varies for innumerable reasons. Water supply in the Colorado River basin has a negligible effect on commodity crop prices.
- Commodity prices will of course be a part of the water banking participation decision for any large agricultural operation. The impact that commodity prices have on any negotiation should rest solely with the producers of those crops.
- Water in the Upper Colorado River Basin is a commodity like no other.

### 3.2 Discussions with the BOD

Throughout the process of creating the CCUPP it was imperative that we maintain open communication with the BOD. The BOD was the final decision-making authority on moving forward with the CCUPP and at no point was it a foregone conclusion that the project would move forward. Members of the BOD remain skeptical of the idea of demand management. Discussions were held in person with board members as well as at regularly scheduled board meetings and special meetings called for the purpose of discussing the CCUPP. Meetings often went long into the evening with more questions raised than answers given. Information gathered during the interview process was aggregated and presented to the BOD for discussion.

### 3.3 Contract, Compliance and Verification

A draft contract was developed by GVWUA counsel and discussed with interviewees and the BOD. The contract created is between the GVWUA and the cooperating shareholder (Cooperator). A sample contract can be seen in Appendix A.

Program compliance criteria and verification procedures were also developed and vetted by the BOD. Exhibit B to the contract can be seen in Appendix B and outlines what each Cooperator can expect during the 2017 CCUPP.

### 3.4 The Lottery

Initially, there was no known 2017 budget for the project under development. There were therefore no acreage goals or limits to the program. Upon receiving indication from project partners that funding approaching \$1 million would be available for the 2017 program, the BOD elected to hold a lottery of willing potential Cooperators. Eligibility criteria were developed by the BOD that met certain needs of the funding entities and BOD. Potential cooperators who met the criteria were contacted and given program details and requirements. Potential cooperators must have met the following criteria to be eligible:

- Actively farming a minimum of 120 irrigated acres served by the Association
- Willing to participate with a minimum of 60 acres
- Ability to demonstrate a 3-year history as the “farm operator” of any acres submitted for the lottery
- Maximum of 240 acres per cooperator allowed in the CCUPP
- Participating lands could not exceed 50% of farmed acres

Twenty-seven potential cooperators were contacted based on their potential eligibility according to GVWUA records. A general meeting to explain the project was held the day before the lottery. Thirteen potential cooperators submitted acreage to the lottery representing 1,700 acres. Each potential cooperator was assigned a number and numbers were drawn at random. After a cooperator’s number was drawn the acres he or she submitted were entered into the program and the total project budget necessary for their participation was deducted from the available funds. The lottery continued until all funds were expended.

## 4.0 THE CCUPP

### 4.1.1 Program Activities

Multiple methods of conserving consumptive use were developed to offer flexibility to potential cooperators; these methods are referred to as “program activities”. The program activities utilized in the 2017 CCUPP require cooperators to begin following at the start of the irrigation season (generally around April 1<sup>st</sup>). Each program activity has a different completion date. A description of the different program activities and the anticipated conserved

consumptive use can be found in Table 1. Other methods of conserving consumptive use were contemplated during project creation. However, the methods listed in table 1 were chosen for the following reasons:

- Ease of administration
- No required instrumentation to measure water use
- Ability to fit within existing crop rotations
- Feasible to implement on short notice in a 1-year program

**Table 1. Program Activity Description**

Program Activity	Criteria	CCU (ac-ft/ac)
FF	No CU throughout Irrigation Season	2.8
WW	No CU until October 1	2.6
SS	No CU until September 1	2.3
AA	No CU until August 1	1.6

A fifth program activity was also developed, but was not utilized by any cooperators for the 2017 CCUPP. The Reduced Delivery program activity allowed for cooperators to apply 2 ac-ft/ac of water to shallow rooted annual crops. Estimated CCU for the reduced delivery option was 1.3 ac-ft/ac.

Estimated CCU varies between program activities, therefore, the payment for participation also varied by program activity. Table 2 demonstrates the per acre payment to the Cooperator for participation in each program activity.

**Table 2. Cooperator Payments by Program Activity**

Cooperator Payments (\$/acre) by Program Activity			
Program Activity	April 1st Payment	Final Payment	Total Compensation
FF	\$312	\$311	\$623
WW	\$295	\$295	\$590
SS	\$256	\$256	\$512
AA	\$178	\$178	\$356

Exhibit B of the cooperator contracts can be seen in Appendix B and further details the requirements of each program activity.

#### 4.1.2 2017 CCUPP Enrollment

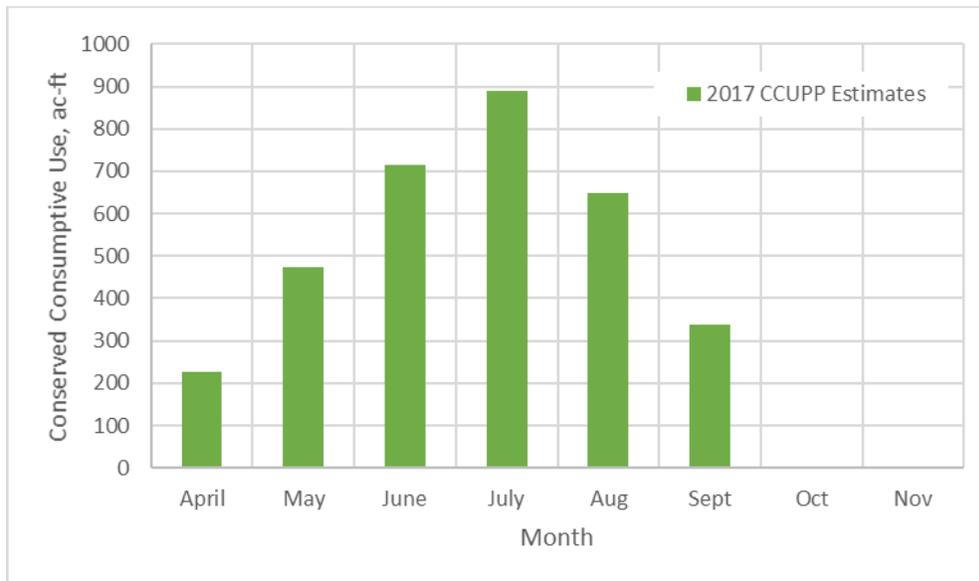
Table 3 provides a breakdown of the acreage enrolled by cooperator. The CCUPP budget and the lottery format limited the program to 10 cooperators.

**Table 3. Program Enrollment by Cooperator**

Cooperator ID	FF (acres)	WW (acres)	SS (acres)	AA (acres)	Total Acres
10	60.8				60.8
11		240			240
12	27.5		35.1		62.6
13		240			240
14		55.9	30		85.9
15			77.1		77.1
16		69.9			69.9
17	234.9				234.9
18	30.8		34.8		65.6
19		57.2	15.5	42.7	115.4
Totals:	354	663	192.5	42.7	1252.2

Figure 1 illustrates the expected CCU per month in acre-feet from the 2017 CCUPP. The season total for water savings is 3,178 ac-ft.

**Figure 1. Expected Conserved Consumptive Use Per Month**



#### 4.1.3 Program Costs

Cooperator payments are the bulk of the costs for the CCUPP (70%). The shareholders at-large will realize benefit from the CCUPP in the form of an infrastructure fund. Items such as administration of the program and foregone revenue also represent costs to the Association and are accounted for in the project budget. Foregone revenue was estimated utilizing the last 3 years of water revenue data for the Association. Project administration was estimated based on the estimated hours to complete program compliance and verification work associated with contracting the 2017 Cooperators and monitoring the CCUPP throughout the 2017 irrigation season. The infrastructure fund is an amount equal to 20% of the Cooperator payments. Table 4 provides a list of the associated costs of the CCUPP program per acre by

program activity. Table 5, below, provides the total project budget for the 2017 GVVUA CCUPP.

**Table 4, Costs per Program Acre for 2017 CCUPP**

Costs Per Program Acre					
Program Activity	Cooperator Payments	Funds to GVVUA, Administration	Funds to Foregone	Funds to GVVUA, Infrastructure (20%)	Total
Full Fallow (FF)	\$623	\$103	\$32	\$125	\$883
Fallow Until October 1 (WW)	\$590	\$103	\$32	\$118	\$843
Fallow Until September 1, (S)	\$512	\$103	\$32	\$102	\$749
Fallow until August 1 (AA)	\$356	\$103	\$32	\$71	\$562

**Table 5. Total Project Budget for the 2017 GVVUA CCUPP**

2017 CCUPP Costs	
Payments to Cooperators	\$725,473
Funds to GVVUA, Administration	\$128,977
Funds to Foregone Revenue	\$40,070
Funds to GVVUA Infrastructure	\$145,095
<b>Total Costs</b>	<b>\$1,039,615</b>

#### 4.1.4 The CCUPP Moving Forward

The Association is currently under contract with the 10 Cooperators. By contract, the program activities will commence when water is available at the head gate that serves each field under contract. It is anticipated that the water-in date will be on or near April 1, 2017. Half of the Cooperator payments will be made on or before April 1<sup>st</sup> and monitoring and verification will commence April 1<sup>st</sup> and continue through the length of the program activity for each field. Three or more inspections will be made for each field enrolled in the CCUPP to determine contract compliance. A procedure has been developed to monitor and record the field inspections, as well as to implement payment reductions for lack of compliance. Full compliance is anticipated, however, we felt it was important to have a system in place to reduce payments in the event of non-compliance. Full payment will be made upon final verification of successful program compliance.

## 5.0 LESSONS LEARNED

Putting together the CCUPP has been a fascinating exercise and one that consistently required nimble thinking. The project began in earnest early in 2016 with the creation of a scope of work document that was necessary in order to frame the potential budget associated with project creation. Conversations with stakeholders, unknown project budgets, Board of Directors reluctance, and discovering the previously unknown complications are just a few of the factors that continually changed the project emphasis. As the conversation and projects related to demand management in Upper Colorado River Basin continue a number of lessons can be learned from our experiences in developing the 2017 CCUPP.

## 5.1 Budget

During project creation one of the most difficult hurdles to overcome was creating a project with an unknown budget. Were we looking for one or two cooperators who might test the concept further on 80 acres? A program of that size would raise fewer questions amongst the community and would not attract significant attention. Were we creating a program that would encompass thousands of acres? A program of this size would be noticeable in the community and require more thorough outreach.

The budget was further complicated because of the unknown payments for participation. Potential Cooperators and interviewees were not able to make decisions about participation in the program because we could not provide sufficient information about the level of compensation.

**Lesson Learned:** Known budgets will allow for easier project creation, and will streamline conversations with potential participants and/or irrigation providers.

““ *Until there is money on the table, you are only visiting.*

- Mark Harris, GVWUA Manager

## 5.2 Timing

Decisions about crop rotations are generally made years in advance and cannot efficiently be adjusted on short notice. Profitability with this season's crop is partially dependent upon decisions made years ago and decisions made now may affect profitability years into the future.

**Lesson Learned:** Contracting for agricultural demand management should take place at a minimum one year in advance of the first date of program implementation. The steps leading up to contracting should take place at a minimum two irrigation seasons prior to any expected water savings.

““ *You don't farm one year at a time.*

- CCUPP Cooperator

## 5.3 Creating Demand Management Projects is Time Consuming

The amount of time and effort necessary to discuss the myriad issues associated with agricultural demand management is significant and will vary among irrigation providers and communities. The need for agricultural demand management is poorly understood and difficult to quantify and explain. The willingness of agricultural producers to participate is low.

**Lesson Learned:** It is necessary that any irrigation provider beginning or participating in a demand management project contract for the necessary outreach within their constituents or designate a full-time employee to complete the task.

## 5.4 Negative Externalities Weigh Heavily Upon Irrigators

There are obvious negative impacts to decreasing the extent of Western Slope irrigated agriculture. The negative impacts to the community, the state of Colorado, individuals, the local economy, overall quality of life, the environment, wildlife, etc. are not lost on the agricultural community. During our project creation we discussed these negative impacts at length, but we were unable to address any of them directly.

**Lesson Learned:** It will be necessary to address the negative externalities within the community in a meaningful manner before any long-term and/or large-scale agricultural demand management program.

## 5.5 Reclamation and USDA Must Be Involved

There is obviously a nexus between Reclamation and the GVWUA and most lower valley irrigation providers on the Western Slope. Because of the nature of the water use the USDA, through the NRCS and FSA, also have some involvement on many of the irrigated acres. Conversations were held with the local Reclamation, NRCS and FSA offices regarding the 2017 CCUPP.

**Lesson Learned:** Long-term programs will need to coordinate with USDA before implementation to ensure that demand management does not conflict with existing federal agricultural programs. Conversations with Reclamation must be on-going.

## 5.6 Marketing

Selling something no one wants to buy is not an easy task. However, Information must be conveyed to those who need it to make informed decisions.

### **Lesson Learned:**

It is important to market the risks of not participating and the benefits that can be realized through participation. The big picture of the Upper Colorado River Basin must be continually sold to the organization and others. Connective tissue between the Association, the community and other organizations must be built, maintained and expanded during the process.

## 5.7 Advocacy and Leadership

As discussed previously in this report, the reasoning behind demand management is poorly understood and viewed critically by many agricultural producers. The issues are complicated and require continued efforts and dialogue with the agricultural producers who will potentially be impacted. There is fear, real and perceived, for agricultural producers associated with the known and unknown consequences of participating in demand management

**Lesson Learned:**

There must be an advocate or advocates within the organization. Someone who understands the potential risks and benefits, and can view the decisions of the group with an understanding of their apprehensions while continuing to lead the conversations and actions of the group. This advocacy and leadership is integral to avoid stalling the process when the end goal is not yet understood.

## 5.8 Trust

Agricultural demand management is a drought resiliency measure that the GVVUA BOD would rather not participate in. If, however, it is a measure that can be undertaken appropriately, and is necessary for the long-term health of the Upper Colorado River Basin and Western Slope agriculture, we found that agricultural producers are willing to participate.

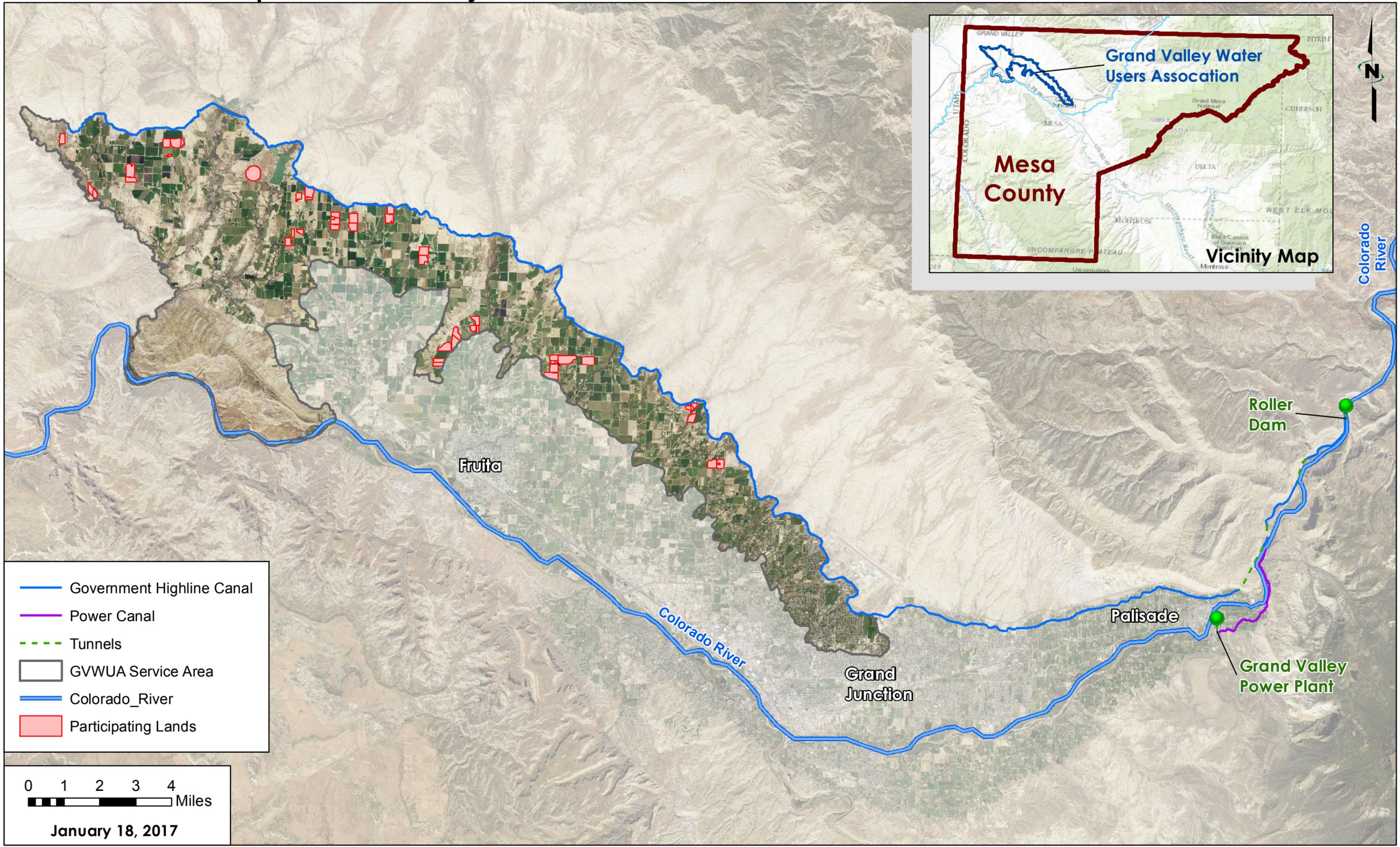
**Lesson Learned:** The GVVUA BOD, shareholders and the agricultural community at large are trusting that this work is necessary and that our involvement early in the process will allow us and Western Slope agriculture to have an influential seat at the table as decisions are made. They are also trusting that demand management will not be utilized as a tool to allow further non-agricultural development within the river basin by means of risk mitigation or direct supply.

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# Map 1: CCUPP Project Overview

# Grand Valley Water Users Association Conserved Consumptive Use Pilot Project 2017

## Overview

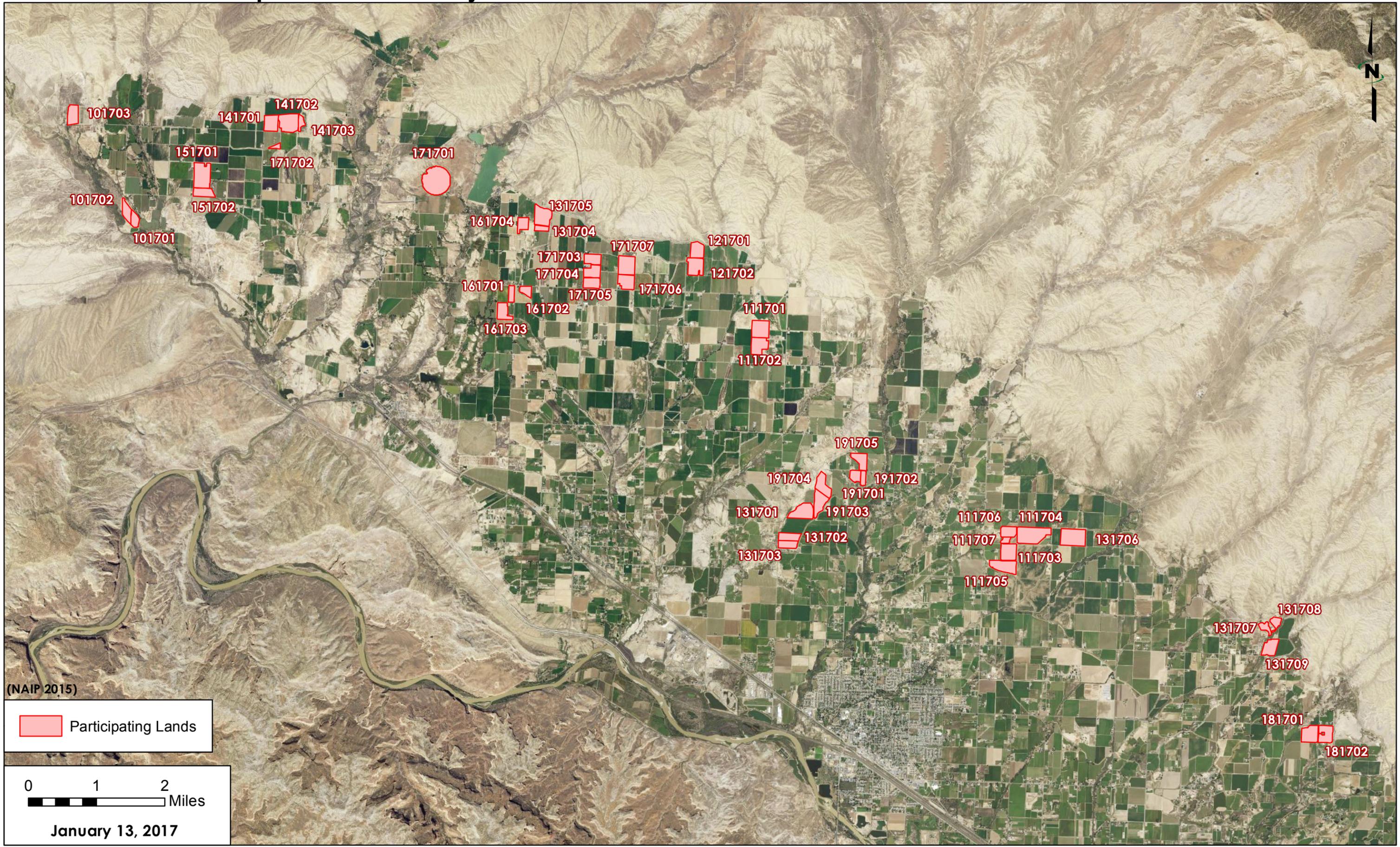


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## Map 2: Participating Lands

# Grand Valley Water Users Association Conserved Consumptive Use Pilot Project 2017

All Participating Lands



(NAIP 2015)

Participating Lands

0 1 2 Miles

January 13, 2017

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# Appendix A: Sample Contract

CONTRACT FOR PARTICIPATION IN  
GRAND VALLEY WATER USERS ASSOCIATION  
CONSERVED CONSUMPTIVE USE PILOT PROGRAM

THIS CONTRACT (the "Contract") is entered into by and between the Grand Valley Water Users Association, 1147 24 Road, Grand Junction, CO 81505 ("Association") and \_\_\_\_\_, \_\_\_\_\_ ("Cooperator"). The parties may hereafter be referred to individually as a "Party" or collectively as the "Parties." The effective date of this Contract is \_\_\_\_\_, 2016 ("Effective Date").

RECITALS

A. The Association operates the Grand Valley Project, a federal reclamation project, pursuant to contracts with the United States Department of the Interior, Bureau of Reclamation.

B. The Association has developed a pilot program (the "Pilot Program") to assist it in determining the feasibility of voluntarily reducing the consumptive use of Grand Valley Project irrigation water in exchange for compensation and making the conserved consumptive use ("CCU") available to supplement flows and increase the amount of stored water in the Colorado River system.

C. Cooperator owns and/or leases land ("Cooperator's Property") within the area served by the Grand Valley Project. Cooperator's Property receives irrigation water from the Grand Valley Project and is identified in the Association's records under Serial Nos. \_\_\_\_\_. Cooperator operates all of Cooperator's Property as one economic farm unit, and has a minimum three-year history of actively farming Cooperator's Property.

D. Cooperator desires to participate in the Pilot Program and the Association is willing to allow Cooperator to participate in the Pilot Program on the terms set forth in this Agreement.

Now, therefore, for good and valuable consideration, the sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Term. The term of this Contract shall commence on the Effective Date and terminate on December 31, 2017.

2. Enrollment of Participating Lands. Cooperator hereby enrolls \_\_\_\_\_ acres of irrigated lands located within Cooperator's Property in the Pilot Program ("Participating Lands"). The location of the Participating Lands is illustrated on Exhibit A, attached to and incorporated into this Contract. The Participating Lands shown on Exhibit A will remain enrolled in the Pilot Program during the entire Term of this Contract.

3. Program Activities for Participating Lands.

A. Cooperator agrees to take the actions described in the following paragraphs with respect to the Participating Lands during the Term of this Contract. The actions that will be taken are identified for specific fields on Exhibit A. Each of the actions described below shall be referred to as a “Program Activity.” For purposes of this Contract, an irrigation season begins on the date that Grand Valley Project water becomes available for the season at the Grand Valley Project headgate that serves the Participating Lands, and it ends on the date that Grand Valley Project water ceases to be available for the season at that headgate. The available Program Activities are described as follows:

i. Full Fallow (FF). Cooperator shall not apply any irrigation water from the Grand Valley Project system or any other source (other than natural rainfall) to the Participating Lands from the end of the 2016 irrigation season through the end of the 2017 irrigation season. Cooperator shall actively manage the Participating Lands to ensure that no active plant growth occurs during the irrigation season.

ii. Fallow Until October 1 (WW). Cooperator shall not apply any irrigation water from the Grand Valley Project system or any other source (other than natural rainfall) to the Participating Lands from the end of the 2016 irrigation season through October 1, 2017. After October 1, 2017, Cooperator may irrigate the Participating Lands with water from the Grand Valley Project or any other source for the remainder of the 2017 irrigation season. Cooperator shall actively manage the Participating Lands to ensure that no active plant growth occurs until after October 1, 2017.

iii. Fallow Until September 1 (SS). Cooperator shall not apply any irrigation water from the Grand Valley Project system or any other source (other than natural rainfall) to the Participating Lands from the end of the 2016 irrigation season through September 1, 2017. After September 1, 2017, Cooperator may irrigate the Participating Lands with water from the Grand Valley Project or any other source for the remainder of the 2017 irrigation season. Cooperator shall actively manage the Participating Lands to ensure that no active plant growth occurs until after September 1, 2017.

iv. Fallow Until August 1 (AA). Cooperator shall not apply any irrigation water from the Grand Valley Project system or any other source (other than natural rainfall) to the Participating Lands from the end of the 2016 irrigation season through August 1, 2017. After August 1, 2017, Cooperator may irrigate the Participating Lands with water from the Grand Valley Project or any other source for the remainder of the 2017 irrigation season. Cooperator shall actively manage the Participating Lands to ensure that no active plant growth occurs until after August 1, 2017.

v. Reduced Delivery (RD). In situations where sufficient water measurement exists and annual shallow rooted crops are planned, Cooperator shall not apply more than two acre-feet of water per acre of Participating Lands.

4. Payments to Cooperator.

A. Subject to the verification provisions set forth in Paragraph 5, below, the Association shall make the following payments to Cooperator for the following actions taken by Cooperator for the Participating Lands:

i. For those fields for which Cooperator chooses “Full Fallow” as the Program Activity under this Contract, the Association shall pay Cooperator a total of \$623.00 per acre of Participating Lands for the 2017 irrigation season. This amount shall be paid to Cooperator as follows:

a. \$312.00 per acre of Participating Lands shall be paid by April 1, 2017.

b. The remaining balance of \$311.00 per acre of Participating Lands shall be paid within thirty days after the Association has verified that Cooperator has performed the Program Activity consistently with the terms of this Contract for the 2017 irrigation season pursuant to Paragraph 5, below.

ii. For those fields for which Cooperator chooses “Fallow Until October 1” as the Program Activity under this Contract, the Association shall pay Cooperator a total of \$590.00 per acre of Participating Lands for the 2017 irrigation season. This amount shall be paid to Cooperator as follows:

a. \$295.00 per acre of Participating Lands shall be paid by April 1, 2017.

b. The remaining balance of \$295.00 per acre of Participating Lands shall be paid within thirty days after the Association has verified that Cooperator has performed the Program Activity consistently with the terms of this Contract for the 2017 irrigation season pursuant to Paragraph 5, below.

iii. For those fields for which Cooperator chooses “Fallow Until September 1” as the Program Activity under this Contract, the Association shall pay Cooperator a total of \$512.00 per acre of Participating Lands for the 2017 irrigation season. This amount shall be paid to Cooperator as follows:

a. \$256.00 per acre of Participating Lands shall be paid by April 1, 2017.

b. The remaining balance of \$256.00 per acre of Participating Lands shall be paid within thirty days after the Association has verified that Cooperator has performed

the Program Activity consistently with the terms of this Contract for the 2017 irrigation season pursuant to Paragraph 5, below.

iv. For those fields for which Cooperator chooses “Fallow Until August 1” as the Program Activity under this Contract, the Association shall pay Cooperator a total of \$356.00 per acre of Participating Lands for the 2017 irrigation season. This amount shall be paid to Cooperator as follows:

a. \$178.00 per acre of Participating Lands shall be paid by April 1, 2017.

b. The remaining balance of \$178.00 per acre of Participating Lands shall be paid within thirty days after the Association has verified that Cooperator has performed the Program Activity consistently with the terms of this Contract for the 2017 irrigation season pursuant to Paragraph 5, below.

v. For those fields for which Cooperator chooses “Reduced Delivery” as the Program Activity under this Contract, the Association shall pay Cooperator a total of \$290.00 per acre of Participating Lands for the 2017 irrigation season. This amount shall be paid to Cooperator as follows:

a. \$145.00 per acre of Participating Lands shall be paid by April 1, 2017.

b. The remaining balance of \$144.00 per acre of Participating Lands shall be paid within thirty days after the Association has verified that Cooperator has performed the Program Activity consistently with the terms of this Contract for the 2017 irrigation season pursuant to Paragraph 5, below.

B. If Cooperator is paid by the Association for progress and/or completion of a Program Activity that Cooperator subsequently fails to complete, Cooperator agrees to reimburse the Association for such overpayment within 30 days of receipt of a bill from the Association.

C. The Association has the authority to make any adjustments to payments made to Cooperator if it discovers an error has been made in prior payments.

## 5. Verification.

A. The Association will verify that Cooperator has performed the Program Activity consistently with the terms of this Contract. The method of verifying performance is set forth in Exhibit B, attached to and incorporated into this Contract. Cooperator agrees to provide any information reasonably requested by the Association to assist in verification, and to provide access to the Cooperator’s Property.

B. Following the initial payment to Cooperator for the 2017 irrigation season, the Association shall make the subsequent payment to Cooperator for that irrigation season only

upon verification and determination by the Association that Cooperator has fulfilled all of the requirements of this Contract. If the Association determines that Cooperator is not complying with or has not complied with any of the requirements of this Contract, the Association shall give written notice of the non-compliance to Cooperator, and the Association may hold back full or partial payment, at the Association's discretion, until Cooperator has cured the non-compliance to the Association's satisfaction. In addition, if Cooperator fails to fully follow all or part of Cooperator's Participating Lands as agreed in Paragraph 3, the Association may deduct from any remaining payments an amount equal to the applicable annual rate from Paragraph 4 times the amount of deficient fallowed acres, as determined by the Association.

6. Land Management Measures. Cooperator shall, at Cooperator's sole expense:

A. Manage and control weeds and plant growth on the Participating Lands. Control measures shall be undertaken by the Cooperator to prevent the growth and spread of plants, their consumptive use of water and associated issues concerning the spread of plant disease, insects and other pests. Weeds and other plants will be controlled using effective measures of Cooperator's choice, including chemical, biological or mechanical methods.

B. Implement wind erosion control measures for the Participating Lands to minimize the creation and blowing of dust from the Participating Lands, using effective measures of Cooperator's choice. Wind erosion control measures shall take one of three forms:

i. Leaving non-living plant residues that are of sufficient height and/or density to prevent wind erosion.

ii. Mechanical tillage that creates conglomerated soil "clods" of sufficient size to prevent wind erosion.

iii. Mechanical tillage that creates soil crusting of sufficient depth, uniformity and durability to prevent wind erosion.

C. Activities undertaken during the term of this Contract on Participating Lands shall be limited to the Land Management Measures required in Paragraphs 6.A. and 6.B. above and normal farming operations associated with Cooperator's Property to the extent such operations do not conflict with the Program Activities for the Participating Lands.

7. Additional Agreements and Representations of Cooperator. In addition to any other agreements or representations set forth in this Contract, Cooperator further agrees and represents as follows:

A. Cooperator shall pay the Association all levies, assessments and other charges for water service or other services levied or imposed by the Association ("Association Charges") on or with respect to the portion of the Cooperator's Property that is owned by Cooperator, including the Participating Lands, when due. If any of the Cooperator's Property is leased by Cooperator from a third party, Cooperator shall be responsible for paying or ensuring payment of the Association Charges relating to the leased property, including the Participating Lands, in a

timely manner. If the lease agreement between Cooperator and the owner of the property provides that the owner of the leased property is responsible for paying the Association Charges, and if the owner does not timely pay the Association Charges, Cooperator shall pay them to the Association within fifteen days after written demand from the Association.

B. Cooperator shall not lease or sublease the Participating Lands to any other person or entity during the term of this Contract.

C. Cooperator shall not sell, convey, transfer or assign (by deed, lease, license, easement, grant, or any other form of agreement, transfer or conveyance) any of the CCU that is created by the participation of the Participating Lands in the Pilot Program. Cooperator shall also not seek to include any of the CCU in an augmentation plan, substitute water supply plan or similar plan or otherwise seek to utilize the CCU for any purpose.

D. Cooperator represents that Cooperator is the fee owner of Cooperator's Property and/or that Cooperator leases some or all of Cooperator's Property under an existing lease that is valid through the term of this Contract. With respect to the portion of Cooperator's Property that is owned by Cooperator, Cooperator represents that Cooperator has the right and authority to enter into this Contract without the approval or consent from any other person or entity, including without limitation any lenders with a mortgage or deed of trust encumbering Cooperator's Property. With respect to any portion of Cooperator's Property that is leased by Cooperator, Cooperator represents that Cooperator has the right and authority to enter into this Contract pursuant to the terms of the lease or other consent or permission obtained by Cooperator from the owner of the leased property, and that any leased property is not owned in part or in whole by any other person or entity acting as a Cooperator during this pilot project.

E. Cooperator makes no representation, warranty, or guaranty with respect to the amount of CCU that may be developed by Cooperator's compliance with the terms of this Contract.

F. Cooperator has had an opportunity to consult with legal counsel regarding this Contract.

#### 8. Miscellaneous Provisions.

A. This Contract shall be governed by and construed and interpreted in accordance with the laws of the State of Colorado and any federal laws applicable to the Grand Valley Project, without giving effect to any choice-of-law or conflicts-of-laws rule or principle that would result in the application of the laws of any other jurisdiction. Venue for any actions relating to this Contract shall be in the Colorado state courts located in Mesa County, Colorado.

B. The Parties do not intend to create rights in or to grant remedies to any third party or others as a beneficiary of this Contract or of any duty, covenant, obligation or undertaking established under this Contract.

C. No Party may assign, delegate, or otherwise transfer this Contract, any interest in this Contract, or the Party's rights or obligations under this Contract without the prior written consent of the other Party, which consent may be withheld at the Party's sole and absolute discretion. Any purported assignment or transfer without the other Party's consent shall be void and without effect.

D. This Contract constitutes the entire understanding of the Parties hereto, and supersedes any previous or contemporaneous agreements or understandings among the Parties with respect to the subject matter of this Contract, whether oral or written. It may not be modified or amended except in writing executed by the Parties.

E. Time is of the essence of this Contract and each of its provisions

F. All notices, requests, demands and other communications under this Contract shall be in writing and shall be hand delivered or sent by certified U.S. mail, return receipt requested, to the Party to whom it is directed at the address set forth in the introductory paragraph of this Contract. In addition, notice also may be sent by e-mail message to the e-mail address of a Party as set forth below. Any Party from time to time may by written notice substitute addresses or persons to whom such notices shall be sent. All notices and other communications shall be effective upon receipt.

Association email: \_\_\_\_\_

Cooperator email: \_\_\_\_\_

G. Notwithstanding anything herein to the contrary, any provisions of this Contract requiring continued performance, compliance, or effect after termination of this Contract shall survive such termination and shall be enforceable by the Parties.

H. Either Party may record this Contract in the records of the Mesa County, Colorado, Clerk and Recorder.

I. This Contract and any amendments to it may be executed in counterparts, each of which shall be deemed an original and all of which taken together shall constitute one and the same instrument.

The Parties have executed this Contract effective as of the Effective Date set forth in the introductory paragraph.

ASSOCIATION:

GRAND VALLEY WATER USERS ASSOCIATION

By: \_\_\_\_\_

COOPERATOR:

[COOPERATOR NAME]

By: \_\_\_\_\_

State of Colorado )ss  
County of Mesa )

The foregoing Contract was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2016,  
by \_\_\_\_\_ as \_\_\_\_\_ of Grand Valley Water Users  
Association.

My commission expires: \_\_\_\_\_

Witness my hand and official seal.

\_\_\_\_\_  
Notary Public

State of Colorado )ss  
County of Mesa )

The foregoing Contract was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2016,  
by \_\_\_\_\_, as \_\_\_\_\_.

My commission expires: \_\_\_\_\_

Witness my hand and official seal.

\_\_\_\_\_  
Notary Public

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## Appendix B: Contract Exhibits

Exhibit B - GRAND VALLEY WATER USERS ASSOCIATION  
Conserved Consumptive Use Pilot Project – 2017 Verification Procedures

For **Full Fallow (FF)** Program Activities: The Association or its designated representative will verify that **no Consumptive Use of water\*** takes place during the irrigation season by transpiration of plant growth within the field boundaries identified in exhibit A as Participating Lands. The Association will further verify that wind erosion measures have been sufficiently undertaken by Cooperator. Verification will be conducted by making periodic site visits to each individual field. Time and date of site visits is at the discretion of the Association. Cooperator should anticipate at a minimum:

- One initial site visit at the start of the irrigation season to verify that all plant growth has been actively terminated prior to the beginning of the irrigation season.
- One mid-season site visit to determine that land management activities are consistent with contract paragraph 6.
- One end of season site visit to determine that compliance was maintained throughout the Program Activity.

Site visits may be made without notification to Cooperator. Timing and quantity of site visits is at the sole discretion of the Association or its designated representative.

For **Fallow Until October 1 (WW)** Program Activities: The Association or its designated representative will verify that **no Consumptive Use of water\*** takes place from the beginning of the 2017 irrigation season through October 1, 2017 by transpiration of plant growth within the field boundaries identified in exhibit A as Participating Lands. The Association will further verify that wind erosion measures have been sufficiently undertaken by Cooperator. Verification will be conducted by making periodic site visits to each individual field. Time and date of site visits is at the discretion of the Association. Cooperator should anticipate at a minimum:

- One initial site visit at the start of the irrigation season to verify that all plant growth has been actively terminated prior to the beginning of the irrigation season.
- One mid-season site visit to determine that land management activities are consistent with contract paragraph 6.
- One late September site visit to determine that compliance was maintained throughout the Program Activity.

Site visits may be made without notification to Cooperator. Timing and quantity of site visits is at the sole discretion of the Association or its designated representatives

For **Fallow Until September 1 (SS)** Program Activities: The Association or its designated representative will verify that **no Consumptive Use of water\*** takes place from the beginning of the 2017 irrigation season through September 1, 2017 by transpiration of plant growth within the field boundaries identified in exhibit A as Participating Lands. The Association will further verify that wind erosion measures have been sufficiently undertaken by Cooperator. Verification will be conducted by making periodic site visits to each individual field. Time and date of site visits is at the discretion of the Association. Cooperator should anticipate at a minimum:

- One initial site visit at the start of the irrigation season to verify that all plant growth has been actively terminated prior to the beginning of the irrigation season.
- One mid-season site visit to determine that land management activities are consistent with contract paragraph 6.
- One late August site visit to determine that compliance was maintained throughout the Program Activity.

Site visits may be made without notification to Cooperator. Timing and quantity of site visits is at the sole discretion of the Association or its designated representatives.

Exhibit B - GRAND VALLEY WATER USERS ASSOCIATION  
Conserved Consumptive Use Pilot Project – 2017 Verification Procedures

For **Fallow Until August 1 (SS)** Program Activities: The Association or its designated representative will verify that **no Consumptive Use of water\*** takes place from the beginning of the 2017 irrigation season through August 1, 2017 by transpiration of plant growth within the field boundaries identified in exhibit A as Participating Lands. The Association will further verify that wind erosion measures have been sufficiently undertaken by Cooperator. Verification will be conducted by making periodic site visits to each individual field. Time and date of site visits is at the discretion of the Association. Cooperator should anticipate at a minimum:

- One initial site visit at the start of the irrigation season to verify that all plant growth has been actively terminated prior to the beginning of the irrigation season.
- One mid-season site visit to determine that land management activities are consistent with contract paragraph 6.
- One late July site visit to determine that compliance was maintained throughout the Program Activity.

Site visits may be made without notification to Cooperator. Timing and quantity of site visits is at the sole discretion of the Association or its designated representatives

For **Reduced Delivery (RD)** Program Activities: The Association or its designated representative will verify that active water measurement is taking place and that all transpiration of plant growth within the field boundaries identified in exhibit A can be attributed to shallow rooted annual crops. Verification will be conducted by making periodic site visits to each individual field. Time and date of site visits is at the discretion of the Association. Cooperator should anticipate at a minimum:

- One initial site visit at the start of irrigation season to verify that adequate water measurement infrastructure exists.
- One mid-season site visit to determine that only shallow rooted annual crops are being cultivated, and to record the total amount of water applied to the Participating Lands.
- One late season site visit determine that compliance was maintained throughout the Program Activity.

\*For all Program Activities, except RD, no active plant growth will be tolerated on Participating Lands including, but not limited to, cultivated annual and perennial crops, weeds, and volunteer crops. All plant growth must be terminated at Cooperator's expense. Cooperator should anticipate, at a minimum, 2 passes with mechanical tillage and 1 chemical treatment.