



Colorado Ag Water Alliance

"Committed to the preservation of agriculture through the wise use of Colorado's water resources"

Colorado Ag Water Alliance	
Date:	December 3, 2021
Name of Grantee:	Colorado Ag Water Alliance
Name of Water Project:	Outreach and Capacity Building for Ag Water Projects
Type of Report:	Final Report

Tasks	
Task 1 – Regional Meetings	
Deliverable	7 regional workshops
Progress to date (7/7 completed)	Fort Morgan - 2/24/2020 Carbondale - 5/5/2020 Mesa County (virtual) - 12/3/2020 Craig - 12/7/2020 Wellington – 8/13/2021 Greeley – 10/19/2021 Sterling – 3/2/2021
Task 2 – Master Aquifer Program	
Deliverable	A series of small workshops for producers in the San Luis Valley
Progress to date (11 meetings)	Meetings with Groundwater Subdistricts 1-5 Meeting with Rio Grande Water Conservation District Board Five (5) meetings with Program Advisory Committee for Master Irrigator Program
Task 3 – Small Organization Outreach	
Deliverable	Presenting at 4 meetings for agricultural organizations
Progress to date (8/4 completed)	Colorado First Conservation District Annual Meeting Colorado Fruit and Vegetable Growers Annual Conference Conejos Water Conservancy District Rio Grande Water Conservancy District San Luis Valley Water Conservancy District Southwestern Water Conservancy District Colorado Wheat Growers Colorado Dairy Farmers
Task 4 – Water Quality Ditch & Landowner Outreach	
Deliverable	At least 20 presentations to ditch companies on Regulation 85 and water quality issues impacting agriculture in the basin.
Progress to date: (25/20 completed)	Highland Ditch Coal Ridge Ditch Central Colorado Water Conservancy District Uncompahgre Water Users – 2/4/2020 Various Larimer County ditches @ Johnson's Corner 2/5/2020 Bijou Irrigation District – 2/12/2020 Weld County Livestock Association 2/13/2020

	Western Mutual Ditch 3/11/2020 Farmers Independent Ditch 3/12/2020 North Platte Water Conservancy District 3/14/2020 Jackson County Stockgrowers 3/14/2020 Colorado Association of Conservation Districts Board 4/8/2020 Boulder Valley & Longmont Conservation Districts Peterson Ditch 3/2/2021 Highline Ditch 3/2/2021 Settlers Ditch 3/2/2021 Bravo Ditch 3/2/2021 Farmers People's Ditch 3/2/2021 Iliff Ditch 3/2/2021 Lowline & Sterling No 1 Ditches 3/2/2021 Wray 9/8/2021 Holyoke 9/9/2021 Yuma 9/21/2021 Stratton 9/29/21 Idalia 9/30/21
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Significant Results

- Engaged with over 1,045 agricultural producers throughout the state.
- Organized stakeholders to implement a Master Irrigator Program in the Rio Grande River Basin. Funding has been secured and the program will begin January 2022.
- Gathered support and interested landowners to participate in a 3-year research study on nutrient management and hayfields. Funding for this study was secured through EPA's 319 program and will begin early 2022.

Task 1 – Regional Meetings

Regionally, we focused our workshops with local efforts to establish long-term projects that benefit the ag community and meet the goals in the Water Plan. In most of the workshops, we discussed the specifics and possible benefits of irrigation and ditch inventories, how those can be implemented and what sort of improvements they can lead to. We also outlined the various opportunities for grants and loans, and provided our grant guide to all workshop attendees. In some workshops, we also held longer discussions on water quality issues. These included Regulation 85, water quality best management practices (BMPs), increasing salinity in surface water, and what irrigators can do related to water quality that also benefits their bottom line.

An unplanned topic we discussed was abandonment. In 2020, the State Engineer's office released their decennial abandonment list. We devoted an entire workshop to discussing abandonment and the process to get a water right removed from the list, or contest a water right being placed on the list. The presentations from this workshop along have been viewed hundreds of times online and have become a valuable resource for agricultural producers throughout the state.

Task 2 – Master Aquifer Program

CAWA worked with the Rio Grande Water Conservancy District (RGWCD) to implement outreach and a series of workshops that discussed possible strategies to better manage the aquifer in the San Luis Valley and secure agricultural production into the future. All of these meetings focused on one topic: the Master Irrigator Program which has been implemented in the Republican River Basin, and if a similar program would be a benefit to agricultural water users and the aquifer. In these meetings we did the following:

- Described the basics of the Republican River Master Irrigator
- Gauged local interest in designing and implementing a local program
- Identified people who would be interested in participating in an advisory committee for the program

Subdistrict 1 of the Rio Grande Water Conservation District decided to move forward with a program, and support an application to the Water Plan Grant to help fund a 3-year Master Irrigator Program in the basin. The application was approved September 2021

CAWA was also able to coordinate a Program Advisory Committee (PAC) of local water experts in the San Luis Valley. This committee met five times the second half of 2021 to design and plan the first Master Irrigator Program in the basin.

At the time of this report, there has been so much interest in the Master Irrigator Program that there will be two classes of 25 irrigators each in 2022.

This grant, Outreach and Capacity Building for Ag Water Projects, gave CAWA the capacity to organize stakeholders to apply for and secure funding. It also allowed up to work with stakeholders to plan and design the new Master Irrigator Program.

Task 3 – Small Organization Outreach

There are many small agricultural organizations throughout the state that would benefit for presentations and discussion about water quality, stream management planning, and how to navigate and fund multi-beneficial projects. Meeting directly with producer organizations allowed us to have longer discussion on selected topics, learn more about their issues, and engage producers we have never engaged before.

Task 4 – Water Quality Ditch & Landowner Outreach

This task might have been some of the most effective and significant outreach we have done to date. Meeting in small groups directly with ditch companies and other agricultural organizations. Through this process we met with over 600 agricultural producers.

The focus of our conversations was Regulation 85 and what work agricultural producers are doing to voluntarily implement best management practices to better manage nitrogen and phosphorus. At most one or two producers in each meeting were even aware of Regulation 85 and how nonpoint sources of pollutions are regulated in Colorado. The majority (>95%) were unaware of current water quality regulations for agriculture and what voluntary measures agricultural producers are currently being encouraged to take.

The small group setting allowed us to have a lot of good discussion with producers, answering their questions, and gave us the time to have long, detailed discussions about what voluntary efforts agricultural producers can make. Many producers have already been making advances in managing nutrients, using the following practices:

- Sprinkler irrigation
- Split application of fertilizer or use of slow-release dry fertilizer
- Conservation tillage (strip till or no-till)
- Fertigation
- Grass buffer strips
- Crop residue management

One of the main obstacles preventing producers from implementing the above practices is if they are using flood and furrow irrigation. The process to create furrows makes it much more difficult to implement conservation tillage or maintain a level of crop residue on the field. However, there are still some producers who are experimenting with crop residue and furrow irrigation in Weld and Boulder Counties.

One issue that came up in most meetings, were producers' concerns about the quality of water they are diverting. Many producers in the South Platte Basin are downstream of municipalities and wastewater treatment plants. The specific water quality concerns were:

- Salinity from wastewater treatment plants – increased salinity can have a negative impact on many crops, like corn and dry beans
- Trash from upstream urban areas – Trash can be an issue for many downstream ditches. Ditches are often used as places to dump trash. One ditch had to call in assistance to deal with the trash clogging their diversion because of the amount of hazardous material (i.e., hypodermic needles).
- E. coli from upstream sources – In order to grow specific crops (i.e., leafy greens) producers must receive certification under the Leafy Greens Marketing Agreement to be competitive. Period spikes in the content of E. coli from upstream stormwater occurs enough to keep some producers from receiving certification.

The most significant outcome from this task is that during our outreach, we were able to begin discussion around CAWA implementing our own study to collect baseline data of nutrient management and agricultural operations, and what practices impact nitrogen and phosphorus runoff. These meetings gave us the opportunity to ask our members and producers, if it would be appropriate for CAWA to engage in this work, if it is needed, and if producers would be interested in participating.

Beginning in 2022, CAWA will be working with three agricultural producers and one conservancy district to implement a 3-year water quality study. This study will use edge-of-field monitoring equipment to collect data on nitrogen and phosphorus from irrigated hayfields. We will collect baseline data and the impact of specific best management practices. The outreach and conversation we had with producers around the state on Regulation 85, led directly to this work.