COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan

Water Project Summary

Name of Applicant	Alex Brown
Name of Water Project	Keller Water Conservation Project
Grant Request Amount	**$60,000.00**
Primary Category	$60,000.00
Agricultural Projects	
Total Applicant Match	**$60,000.00**
Applicant Cash Match	$60,000.00
Applicant In-Kind Match	
Total Other Sources of Funding	**$0.00**
Total Project Cost	**$120,000.00**

Applicant & Grantee Information

Name of Grantee: Alex Brown
Mailing Address: 8318 County Road 37 Yuma CO 80759

Organization Contact: Alex Brown
Position/Title: Owner/Operator
Phone: (970) 630-4230
Email: silverfarmsllc@gmail.com

Grant Management Contact: Alex Brown
Position/Title: Owner/Operator
Phone: (970) 630-4230
Email: silverfarmsllc@gmail.com

Description of Grantee/Applicant

No description provided

Type of Eligible Entity

- ☐ Public (Government)
- ☐ Public (District)
- ☐ Public (Municipality)
- ☐ Ditch Company
- ☐ Private Incorporated
- ■ Private Individual, Partnership, or Sole Proprietor
- ☐ Non-governmental Organization
- ☐ Covered Entity
- ☐ Other

Category of Water Project

■

- [x] Agricultural Projects
  Developing communications materials that specifically work with and educate the agricultural community on headwater restoration, identifying the state of the science of this type of work to assist agricultural users among others.
- [ ] Conservation & Land Use Planning
  Activities and projects that implement long-term strategies for conservation, land use, and drought planning.
- [ ] Engagement & Innovation Activities
  Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website.
- [ ] Watershed Restoration & Recreation
  Projects that promote watershed health, environmental health, and recreation.
- [ ] Water Storage & Supply
  Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap.

Location of Water Project

Latitude	40.089344
Longitude	-102.831285
Lat Long Flag	Precise coordinates: Project coordinates are readily definable and precisely define the location of the project
Water Source	Northern High Plain Aquifer
Basins	South Platte
Counties	Yuma
Districts	49-Republican River

Water Project Overview

Major Water Use Type	Agricultural
Type of Water Project	Construction / Implementation
Scheduled Start Date - Design	3/20/2026
Scheduled Start Date - Construction	4/30/2026

Description

Proposed water activity is to reduce the amount of gallons per minute (gpm) from 1,550gpm to 1,250gpm for a one well, two pivot irrigation sprinkler application. This will require a new 250hp high efficiency motor , new variable frequency drive (VFD), replacing the existing pump, replacing the sprinkler end gun with a “spray nozzle” , and replacing the drop down nozzles for each sprinkler to water at a rate of 625gpm (1,250gpm total). A large reason for this change is the soil type, Platner Loam, which has high water capacity, the permeability is slow, and surface run-off is slow. From one of our studies with a similar plan and soil type, we reduced the water by 200gpm (from 1450gpm to 1250gpm) and improved the energy efficiency at this irrigation well. Based on our study, this plan reduced our electrical needs by 29% and the reduction in water has not injured our crop yields. Based on a 5 year average of irrigating 1,250 hours per season, water being left in the Ogallala Aquifer is ~70 ac-ft per year.

Measurable Results

New Storage Created (acre-feet)
New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
Existing Storage Preserved or Enhanced (acre-feet)

	New Storage Created (acre-feet)
	Length of Stream Restored or Protected (linear feet)
	Length of Pipe, Canal Built or Improved (linear feet)
$10,000	Efficiency Savings (dollars/year)
70	Efficiency Savings (acre-feet/year)
	Area of Restored or Preserved Habitat (acres)
	Quantity of Water Shared through Alternative Transfer Mechanisms or water sharing agreement (acre-feet)
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning
	Number of Coloradans Impacted by Engagement Activity

Other

No additional measurable results provided

Water Project Justification

This project will be committed to conserving, innovating, and stretching water supplies for irrigated agriculture land in the Northern High Plains Aquifer (page 9 of Colorado Water Plan). The words that really stuck with me as I read the Colorado Water Plan (CWP) were “become more engaged and take action to advance the vision” (page 6 of CWP). The overall vision of the CWP is incredibly powerful and we, as residents’ of this great state, have the opportunity and responsibility to assist in creating this vision for the future. Activities that will create this vision can be as simple as implementing water efficiency and conservation, attending public water education programs, collaborating in groups, and developing innovated solutions to unique challenges (page 153 of CWP). As the organizer and applicant of the Keller Water Conservation Project, I truly believe this project will meet AND advance the CWP’s water plan and robust agricultural vision. This project meets 3 out of the 6 actions from the Robust Agriculture section on page 176: Meeting Future Water Need, Wise Water Use, and Healthy Lands.

The Keller Water Conservation Project’s overall plan is to reduce the current flow rate, 1,550 gallons per minute (gpm), to 1,250 gpm, which is approximately a 20% reduction in water use. In acre-feet (ac-ft) terms, we would be approximately saving 70 ac-ft per crop season. The main reason for this change is the soil type on this irrigated land, which is Platner Loam. Platner Loam has high water capacity, the permeability is slow, and surface run-off is slow. From one of our studies with a similar plan and soil type, we reduced the water by 200gpm (from 1450gpm to 1250gpm) and improved the energy efficiency at this irrigation well. Based on our study, this plan reduced our electrical needs by 29% and the reduction in water has not injured our crop yields. In order to complete this project a variable frequency drive (VFD), new 250hp high efficiency motor and new pump for the irrigation well is needed. The VFD allows the operator to control the speed of the motor which directly influences the flow rate; the faster the motor the more flow rate, the slower the motor the less flow rate. The VFD also allows the operator to develop an effective crop rotation plan from high water use crops to low water use crops to further stretch water supplies.

Thank you for taking the time and consideration to read about the Keller Water Conservation Project. I hope this project shows that it is in alignment with the Colorado Water Plan and committed to stretching water supplies for the future in the Northern High Plains Aquifer.

Related Studies

No Related Studies provided

Taxpayer Bill of Rights

N/A