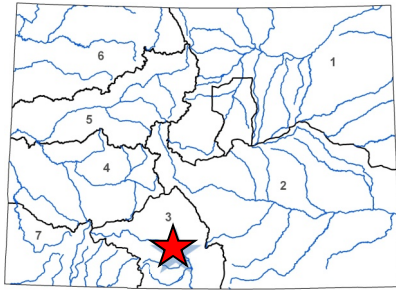


Water Plan Grant Application

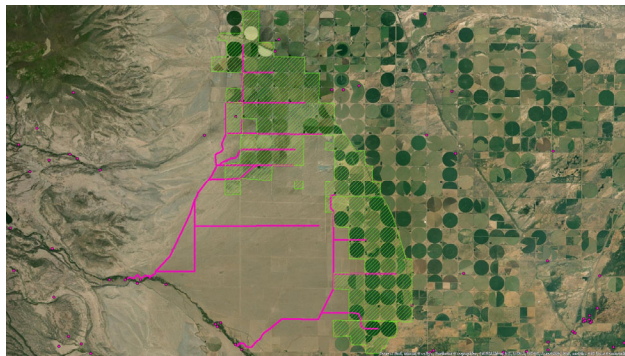


D E T A I L S	
Total Project Cost:	\$1,018,799.46
Water Plan Grant Request:	\$463,094
Other CWCB Funding:	\$0
Other Funding Amount:	\$0
Applicant Match:	\$555,705
Project Type(s):	Construction
Project Category(Categories):	Agricultural
Measurable Result:	Install 5,880 feet of pipe to improve delivery of irrigation water to 9,000 acres of farmland.

L O C A T I O N	
County/Countries:	Rio Grande
Drainage Basin:	Rio Grande

Colorado Water Plan grant funds will be used to install 5880 feet of pipeline to increase efficiency of irrigation water delivery along Creek Canal and lateral on a Terrace Main Canal. The goal of the project is to allow water users to better utilize surface water and decrease pumping in an over pumped region which is extremely stressed by drought and challenges with groundwater management. Increased efficiency with the installed pipeline would allow irrigators to more fully use surface water. The project has potential increase safety by closing the canal and reduce labor by eliminating the need for vegetation management.

The project is aligned with the Basin Implementation Plan goal to “manage water use to sustain optimal agricultural economy throughout the Basin’s communities.” Success of the project will result in farms better utilize surface water and reduce groundwater pumping.



Map of Terrace Irrigation Water Efficiency Project

Funding Recommendation:

Staff is not recommending approval of the grant request. The review matrix score was low relative to the other applications reviewed this round. Feedback from the Agriculture Review Committee suggested that the request scored low in several Water Plan Grant criteria, primarily in the areas of multi-benefit objectives, collaboration, innovation, and scalable impact.



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources

Terrace Irrigation Water Efficiency Project
Terrace Irrigation Company
September 2022 Board Meeting



Last Updated: May 2021

<h2>Water Plan Grant - Exhibit A</h2>

Statement Of Work	
Date:	11/20/2021
Name of Grantee:	Terrace Irrigation Company
Name of Water Project:	Terrace Irrigation Water Efficiency Project
Funding Source:	CWP Grant and NRCS EQIP Program
Water Project Overview:	



Last Updated: May 2021

This project is to increase safety and efficiency within the Terrace Irrigation System along the Creek Canal and a lateral on a Terrace Main Canal. The project will work to improve the infrastructure by installing 5880 feet total pipeline to increase efficiency. The efficiency gained in this project will allow water users to better utilize surface water and decrease pumping in an over pumped region. The region is extremely stressed and new projects like this will increase the viability of agriculture within the Terrace system which is approximately 9,000 acres of irrigated farmland. The pipeline installation on the Creek Canal will allow all the Creek Canal priorities to be delivered to farmers without putting pressure on current infrastructure which causes sections to be washed out. It will also prevent the use of low efficiency dirt ditches. If all priorities can be used to their fullest on each day of the irrigation season, pumping will be decreased. The other benefit of this project is increasing safety along the Creek Canal where it runs through a rural residential area.

The lateral on the Main Canal is currently a dirt ditch which has extremely high ditch loss due to evapotranspiration. Vegetation management is difficult and costly due to overgrown vegetation and invasive plants. Installing pipe on this lateral will reduce ditch loss and will make shrink more equitable for all farmers on the Main Canal.

The Creek Canal (Site 1) project will include 3,050 feet of 36” 80 psi PVC Pipe, inlet structure, and outlet structure.

The Main Canal Lateral (Site 2) project will include 2,820 feet of 21” 80 psi PVC Pipe, inlet structure, outlet structure as well as a measuring device.

Project Objectives:

The main objective of this project is to increase efficiency within the Terrace Irrigation System to enable Family Farms to better use surface water ultimately decreasing pumping throughout the area. The aquifer and river system in this watershed is under stress due to the prevailing drought in the area. Changes in the climate have caused melt off changes within the basin. One of the objectives of this project is to enable the ditch company to fully utilize every drop of this valuable resource when it is available during the irrigation season.

Being able to fund new solutions like this project to this area is key to being able to meet the Basin Implementation Goals including: “Manage water use to sustain optimal agricultural economy throughout the Basin’s communities”. Sustaining the confined and unconfined aquifers is key objective to this project that falls under the BIP Goals.

Tasks

Task 1 – Pipeline Planning



Last Updated: May 2021

Description of Task:
The pipeline will be planned and engineered by the NRCS engineer and planner. NRCS staff will also survey both sites, draw plans and oversee construction as an in-kind task and matching expense. NRCS Staff have provided preliminary costs which include a pipeline for site 1 which will carry a maximum of 36.5 cfs. Site 2 includes a pipeline which will carry a maximum of 10 cfs.
Method/Procedure:
NRCS staff will use standard survey tools as well as AutoCAD to develop plans for project.
Deliverable:
Detailed plans of project to ensure that construction standards are met and that the highest efficiency possible is gained.
Task 2 – Site Preparation and Earthwork
Description of Task:
This task will prepare the site which will include clearing and grubbing of the site. This will also include earthwork for the trench. Trash racks, inlet structures and outlet structures will be installed for both sites.
Method/Procedure:



Last Updated: May 2021

Heavy equipment including an excavator, trencher and other equipment would be used for clearing, grubbing and trenching.

Deliverable:

Prepared site for installation of pipeline at site 1 and site 2. This will include a prepared pipe pad as designed by NRCS.

Tasks

Task 3 – Install, Concrete and Reinforcement

Description of Task:

Site 1 will have 3,050 feet of 36" 80psi PVC Pipe installed along with inlets and outlets. The structure will be concreted and reinforced per NRCS guidelines and engineering standards.

Site 2 will have 2,820 feet of 21" 80 PVC Pipe installed along with inlets and outlets. This structure will also be reinforced and concreted.

Method/Procedure:

Prepare the pipe bed, remove large rocks, grade the bed and lay pipe. The pipe will be bedded with suitable stone free backfill. The pipe and trench will be buried using heavy equipment. The inlet and outlet structures will also be installed using concrete to secure the structures including measurement device on site 2.

Deliverable:

Last Updated: May 2021

This task will complete the project by providing two complete pipelines laid to deliver water with better efficiency. The task will reinforce the inlet structure, outlet structure and pipeline to ensure that no issues arise with the new system during the irrigation season.

Budget and Schedule

This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format.

Reporting Requirements

Progress Reports: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Report: At completion of the project, the applicant shall provide the CWCB a Final Report on the applicant's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

The CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

Payment



Last Updated: May 2021

Payment will be made based on actual expenditures and must include invoices for all work completed. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

Costs incurred prior to the effective date of this contract are not reimbursable. The last 10% of the entire grant will be paid out when the final deliverable has been received. All products, data and information developed as a result of this contract must be provided to _____ as part of the project documentation.

Performance Measures

Performance measures for this contract shall include the following:

- (a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit C. Per Water Plan Grant Guidelines, the CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.
- (b) Accountability: Per Water Plan Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per Water Plan Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.
- (c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.
- (d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.

Last Updated: May 2021